



RATCH-Australia Corporation



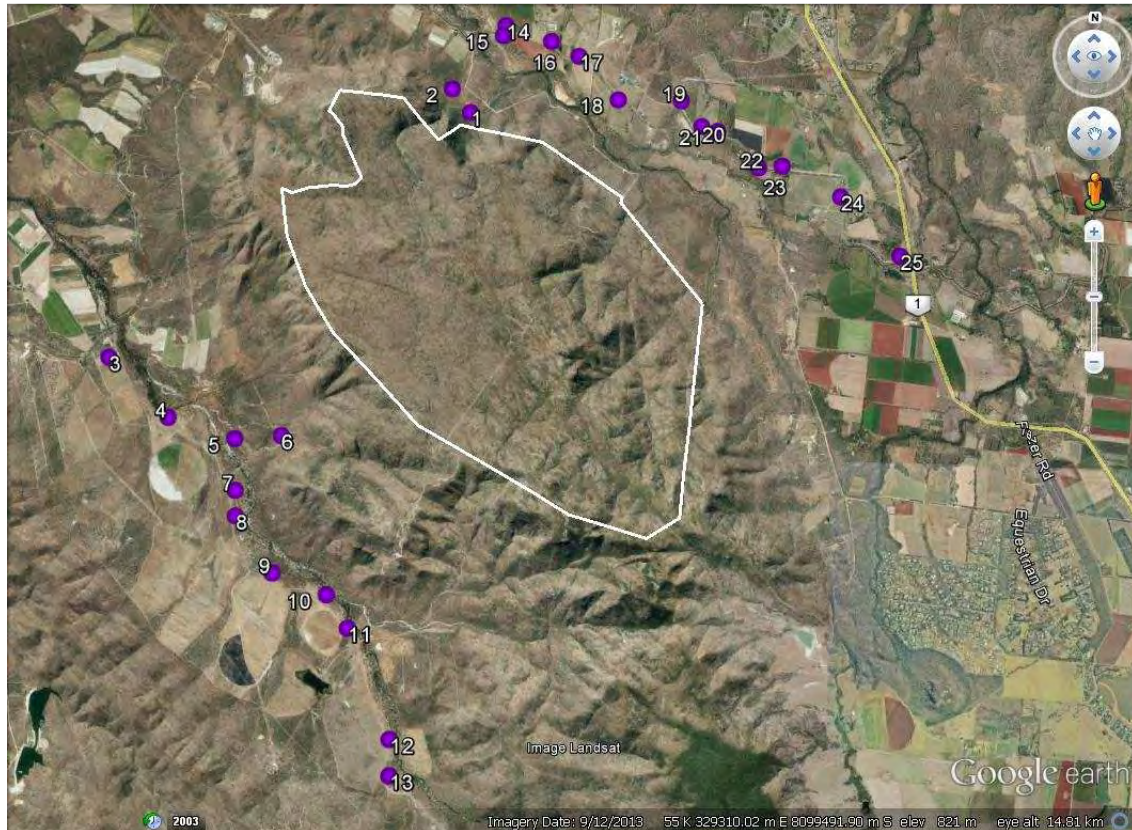
Introduction

As part of the noise impact assessment works the proponent was asked to undertake a review of the dwelling structures in the vicinity of the proposed Mount Emerald wind farm to assist in determining appropriate building sound attenuation levels.

Fieldwork

In undertaking this review a representative batch of dwellings in relative proximity to the wind farm were photographed and an assessment made as to the basic components comprising the structure of each. Confirmation was also made as to whether a dwelling included air conditioning.

The locations of the assessed dwellings are shown in the figure below.



Using this information along with some basic assumptions an estimate of the sound attenuation through the building structure can be made using the method as outlined in Australian Standard AS3671 *Acoustics – Road traffic noise intrusion – Building siting and construction*.

Unless otherwise noted it was assumed for each dwelling;

- Critical room - Bedroom - located centrally within the dwelling with one external wall only (i.e. not a corner of the structure). This typically provides for lower attenuation than for a corner room.
- The size of the room was 5m by 4m with the external wall being 5m
- a ceiling height of 2.7m

The results of the site investigation and the attenuation estimations are provided for each location in the table below, with more detailed

Location	Structure Type	Air-conditioning	Distance to nearest WTG (63 WTG Layout)	Estimated Sound Attenuation with windows open dB(A)	Estimated Sound Attenuation with windows closed dB(A)
1	steel/timber clad		1,407	18	33
2	steel clad		1,668	15	19
3	rendered brick		3,257	21	35
4	rendered brick	YES	2,887	18	34
5	timber clad		2,279	18	33
6	rendered brick	YES	1,739	16	34
7	rendered brick	YES	2,751	15	35
8	rendered brick	YES	2,994	17	34
9	steel clad shed		3,192	15	17
10	rendered brick	YES	2,894	18	34
11	steel clad shed		3,152	13	23
12	rendered brick	YES	4,182	18	34
13	rendered brick	YES	4,613	18	34
14	rendered brick	YES	2,608	16	34
15	timber clad		2,462	19	33
16	masonry block		2,436	17	33
17	timber clad		2,265	18	33
18	timber clad		1,897	19	32
19	timber clad	YES	2,527	15	31
20	masonry block	YES	2,577	18	34
21	rendered brick		2,756	14	33
22	masonry block		2,947	16	34
23	steel clad		3,235	18	33
24	masonry block		3,767	18	34
25	masonry block		4,383	17	33

A summary of the findings can be group into four distinct structure types.

Structure Type	Number	With Air Conditioning	Min. Sound Attenuation with windows open dB(A)	Min. Sound Attenuation with windows closed dB(A)
Cladding (steel, timber or fibre sheeting)	8	1	15	19
Rendered Brick	10	8	14	33
Masonry Block	5	1	16	33
Shed	2	0	13	17
TOTAL	25	10	13	17

Reasonable Outside to Inside Sound Reduction and Appropriate Noise Limit

The *Environmental Protection (Noise) Policy 2008* (QEPP) in Schedule 1 notes an acoustic objective of 50dBA for a dwellings outdoors and 35dBA for a dwelling indoors during the daytime and evening; a difference of 15dBA. While not specifically noting a night-time outdoor value, given the structure of the dwelling will not change from daytime and evening to night-time it is practical to assume the indoor/outdoor 15dBA reduction will remain.

Thus, under the objectives set out in the QEPP a Sound Attenuation Value of 15dBA should be adopted.

Column 1	Column 2	Column 3			Column 4
Sensitive receptor	Time of day	Acoustic quality objectives (measured at the receptor) dB			Environmental value
		L _{Aeq,adj,1hr}	L _{A10,adj,1hr}	L _{A1,adj,1hr}	
dwelling (for outdoors)	daytime and evening	50	55	65	Health and wellbeing
dwelling (for indoors)	daytime and evening	35	40	45	Health and wellbeing
	night-time	30	35	40	Health and wellbeing in relation to the ability to sleep

Environmental Protection (Noise) Policy 2008 - Schedule 1 – Acoustic quality objectives

In noise assessments conducted as part of the development of the Mount Emerald wind farm a conservative assumption has been made for a sound attenuation value (indoor/outdoor noise reduction) of 10dBA, with windows open and 20dBA with windows closed. In determining an appropriate noise limit, only the lower 10dBA reduction is used as there is no way to determine when windows would be open or closed.

From the review of the dwelling types around the wind farm site the worst case is a reduction of 13dBA. It is noted this is less than the assumption made in QEPP but greater than the assumption adopted for the project noise assessments, and as such a 10dBA sound attenuation is considered to be appropriate.

By applying the 10dBA sound attenuation value to the minimum noise limit of 30dBA, as noted in QEPP for inside a dwelling at night, an overall outdoor limit of 40dBA is obtained. This is the value to which the wind farm has been designed and generally aligns with the limit as set out in the other applicable standard *NZS6808:2010 Acoustics – Wind farm noise*.



Location 1	327662 East 8103902 North	
Receptor ID	R78	
Address	Kippen Drive	
Air-Conditioning		
Type	Two storey house; steel/timber clad Bottom storey shielded from view	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1 window 1.2m wide x 0.9m high 6mm sliding glass, single glaze fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm corrugated galvanised iron, timber framework	33
Ceiling	10mm plasterboard	
Walls	timber/steel stud wall, clad externally with fibro sheet/steel clad; internally with 10mm plasterboard	33
Overall Sound Reduction		18 (windows open) 33 (windows closed)



Location 2	327385 East 8104239 North	
Receptor ID	R26	
Address	10 Kippen Drive	
Air-Conditioning		
Type	Single storey house; steel cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1 window 1.2m wide x 0.9m high 6mm sliding glass, single glaze fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel framework	17
Ceiling	assume no ceiling	
Walls	steel stud wall, clad externally with 0.6mm steel trough roofing; internally with 10mm plasterboard	33
Overall Sound Reduction		15 (windows open) 19 (windows closed)



Location 3	322514 East 8100175 North	
Receptor ID	near R03	
Address	50 Oaky Valley Avenue	
Air-Conditioning		
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1 window 0.9m wide x 0.6m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		21 (windows open) 35 (windows closed)



Location 4	323417 East 8099332 North	
Receptor ID	R16	
Address	Oakly Valley Avenue	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		18 (windows open) 34 (windows closed)



Location 5	324402 East 8099053 North	
Receptor ID	R06	
Address	45 Cascade Close	
Air-Conditioning		
Type	Single storey house; timber clad	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm galvanised iron roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	timber/steel stud wall, clad externally with fibro/timber; internally with 10mm plasterboard	33
Overall Sound Reduction		18 (windows open) 33 (windows closed)



Location 6	325084 East 8099119 North	
Receptor ID	R05	
Address	Cascade Close	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.8m wide x 0.9m high; 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		16 (windows open) 34 (windows closed)



Location 7	324438 East 8098311North	
Receptor ID	R07	
Address	Oakly Valley Avenue	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	0.6m wide x 1.8m high x2 5 + 6mm aluminium sash, single glazing fully open no allowance for screens/curtains/blinds	39 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		15 (windows open) 35 (windows closed)



Location 8	324461 East 8097943North	
Receptor ID	R08	
Address	Oakly Valley Avenue	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 1.2m high 6mm sliding glass,, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		17 (windows open) 34 (windows closed)



Location 9	325027 East 8097146North	
Receptor ID		
Address	Oakly Valley Avenue	
Air-Conditioning		
Type	Single storey shed; steel cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	3m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, no glazing fully open no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	17
Ceiling	assume no ceiling	
Walls	0.6mm steel trough roofing, steel/timber framework, assume no internal lining	17
Overall Sound Reduction		15 (windows open) 17 (windows closed)



Location 10	325824 East 8096858 North	
Receptor ID	R11	
Address	Oakly Valley Avenue	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		18 (windows open) 34 (windows closed)



Location 11	326149 East 8096393 North	
Receptor ID		
Address	Oakly Valley Avenue	
Air-Conditioning		
Type	Single storey shed/caravan	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Corner bedroom	Caravan – 4 walls; door 1.8 x 0.45	
Room size	5m x 2m	
Ceiling height	2.0m	
Windows	0.6m wide x 0.3m high x 4 6mm horizontal pivot glass, no glazing fully open no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.6mm steel trough roofing, steel frame (shed)	33
Ceiling	0.6mm steel trough roofing, 10mm foam, 3mm ply or 0.6mm steel - sandwich	
Walls	0.6mm steel trough roofing, 10mm foam, 3mm ply or 0.6mm steel - sandwich	20
Overall Sound Reduction		13 (windows/door open) 23 (windows/door closed)



Location 12	326812 East 8094840 North	
Receptor ID	R12	
Address	Oakly Valley Avenue	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		18 (windows open) 34 (windows closed)



Location 13	326828 East 8094329 North	
Receptor ID	same block as R01	
Address	Oakly Valley Avenue	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		18 (windows open) 34 (windows closed)



Location 14	328138 East 8105207 North	
Receptor ID	R84	
Address	531 Hansen Road	
Air-Conditioning	Yes	
Type	Single storey house; rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.5m wide x 1.2m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		16 (windows open) 34 (windows closed)



Location 15	328105 East 8105059 North	
Receptor ID	R25	
Address	811 Channel Road	
Air-Conditioning		
Type	Single storey house; timber cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	0.9m wide x 0.9m high 6mm glass timber casement, no glazing fully open to 45 degrees no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber framework	33
Ceiling	10mm plasterboard	
Walls	timber stud frame clad externally with 9mm timber; internally with 10mm plasterboard	33
Overall Sound Reduction		19 (windows open) 33 (windows closed)



Location 16	328814 East 8104996 North	
Receptor ID	R28	
Address	728 Channel Road	
Air-Conditioning		
Type	Single storey house, masonry block	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 1.2m high 6mm sliding glass, no glazing fully open no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber framework	33
Ceiling	10mm plasterboard	
Walls	masonry – double skin cavity brick wall	39
Overall Sound Reduction		17 (windows open) 33 (windows closed)



Location 17	329227 East 8104783 North	
Receptor ID	R29	
Address	676 Channel Road	
Air-Conditioning		
Type	Single storey house, timber cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber framework	33
Ceiling	10mm plasterboard	
Walls	timber stud frame clad externally with 9mm timber; internally with 10mm plasterboard	33
Overall Sound Reduction		18 (windows open) 33 (windows closed)



Location 18	329821 East 8104154 North	
Receptor ID	R32	
Address	601 Channel Road	
Air-Conditioning		
Type	Single storey house, timber cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm timber frame, vert pivot, no glazing fully open to 45 degrees no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber framework	33
Ceiling	10mm plasterboard	
Walls	timber stud frame clad externally with 9mm timber/hardboard; internally with 10mm plasterboard	33
Overall Sound Reduction		19 (windows open) 32 (windows closed)



Location 19	330744 East 8104165 North	
Receptor ID	R37	
Address	478 Channel Road	
Air-Conditioning	Yes	
Type	Single storey house, timber cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.8m wide x 1.2m high 6mm timber frame, vert pivot, no glazing fully open to 45 degrees no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber framework	33
Ceiling	10mm plasterboard	
Walls	timber stud frame clad externally with 9mm timber/hardboard; internally with 10mm plasterboard	33
Overall Sound Reduction		15 (windows open) 31 (windows closed)



Location 20	331053 East 8103796 North	
Receptor ID	R38	
Address	422 Channel Road	
Air-Conditioning	Yes	
Type	Single storey house, masonry block	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber/steel framework	33
Ceiling	10mm plasterboard	
Walls	masonry – double skin cavity brick wall	39
Overall Sound Reduction		18 (windows open) 34 (windows closed)



Location 21	331286 East 8103732 North	
Receptor ID	R40	
Address	400 Channel Road	
Air-Conditioning		
Type	Single storey house, rendered brick	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.8m wide x 1.5m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber/steel framework	33
Ceiling	10mm plasterboard	
Walls	rendered brick; assume single leaf rendered both sides	48
Overall Sound Reduction		14 (windows open) 33 (windows closed)



Location 22	331900 East 8103216 North	
Receptor ID	R43	
Address	319 Channel Road	
Air-Conditioning		
Type	Single storey house, masonry block	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.8m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber/steel framework	33
Ceiling	10mm plasterboard	
Walls	masonry – double skin cavity brick wall	39
Overall Sound Reduction		16 (windows open) 34 (windows closed)



Location 23	332241 East 8103249 North	
Receptor ID	R44	
Address	292 Channel Road	
Air-Conditioning		
Type	Single storey house, steel cladding	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.6mm steel trough roofing, steel/timber framework	33
Ceiling	10mm plasterboard	
Walls	timber/steel stud frame clad externally 0.6mm steel trough roofing; internally with 10mm plasterboard	33
Overall Sound Reduction		18 (windows open) 33 (windows closed)



Location 24	333099 East 8102820 North	
Receptor ID	R50	
Address	173 Channel Road	
Air-Conditioning		
Type	Single storey house, masonry block	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 0.9m high 6mm sliding glass, single glazing fully open no allowance for screens/curtains/blinds	27 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber/steel framework	33
Ceiling	10mm plasterboard	
Walls	masonry – double skin cavity brick wall	39
Overall Sound Reduction		18 (windows open) 34 (windows closed)



Location 25	333977 East 8101981 North	
Receptor ID	R53	
Address	14 Channel Road	
Air-Conditioning		
Type	Single storey house, masonry block	
Example Sound Attenuation in accordance with AS3671		
Structure	Note/Assumption	R _w from AS3671 App B (dBA)
Bedroom	Central - 1 external wall	
Room size	5m x 4m	
Ceiling height	2.7m	
Windows	1.2m wide x 1.2m high 6mm aluminium vert. pivot, no glazing fully open to 45 degrees no allowance for screens/curtains/blinds	24 glass 0 opening
Roof	0.5mm galvanised iron roofing, timber/steel framework	33
Ceiling	10mm plasterboard	
Walls	masonry – double skin cavity brick wall	39
Overall Sound Reduction		17 (windows open) 33 (windows closed)

MEMO

Project:	Mt Emerald Wind Farm	Document No.:	Mm 008 R01
To:	RATCH	Date:	9 September 2014
Attention:	<input type="text"/>	Cross Reference:	
Delivery:	email	Project No.:	2012376ML
From:	<input type="text"/>	No. Pages:	12
		Attachments:	No
SUBJECT	Minister's call for information – Question 17: Construction and ancillary infrastructure		

We have carried out a number of review tasks to address Item 17 from the Minister's call for information for the Mt Emerald Wind Farm. Item 17 requests the following:

Noise impact from roads, construction and associated wind farm turbine associated infrastructure, such as power transformers, has not been discussed in the noise report. This should be addressed with recommendations for information to be included in the project EMP. Where Queensland guidelines do not exist for construction noise impact the levels in NZS 6808:2010 may be taken as a guide, or other suitable Queensland EPP criteria for intermittent noise sources.

This document provides information to address the above requests, including relevant criteria and predicted noise levels where appropriate. The specific items addressed in this memo include:

- Noise from construction activities within the wind farm site boundary;
- Noise associated with traffic generated by construction of the proposed project; and
- Operational noise associated with the ancillary power infrastructure.

Noise levels presented in this document consistently adopt the international convention for the notation of weighted decibel information. Accordingly, where a sound level is A-weighted to approximate the human ear's response to sound, the weighting is denoted by a subscript in the symbol. For example, A-weighted equivalent noise levels are reported as dB L_{Aeq} . Other alternative conventions of presenting A-weighting such as dBA or dB(A) are therefore not used within this document.

SITE CONSTRUCTION NOISE

Criteria

To provide an assessment of noise associated with construction activities, reference has been made to related guidance provided by the Queensland Department of Transport and Main Roads publication titled *Transport Noise Management Code of Practice Volume 2 – Construction Noise and Vibration* dated September 2014 (the Code). While the Code is specific to the construction of transport infrastructure, in the absence of alternative Queensland construction noise criteria, the document is referenced for the purposes of the present assessment.

The Code outlines different work periods according to the type of construction work. The work periods defined by the Code for general construction activity and traffic are reproduced in Table 1.

Table 1: Work periods for construction activities

Work Period	Days	Times
Standard hours	Monday-Friday	7:00am to 6:00pm
	Saturday	8:00am to 1:00pm
Non-Standard hours – evening	Monday-Friday	7:00am to 6:00pm
	Saturday	1:00pm to 10:00pm
	Sunday	7:00am to 10:00pm
Non-Standard hours – night-time	Monday-Sunday	10:00pm to 7:00am

The Code defines noise criteria for general construction activities in terms of external facade corrected noise levels at dwelling locations (including hotels and motels). The criteria account for pre-development noise conditions on the basis of a Rating Background Level (RBL); a parameter derived from measurement and analysis of background noise levels $L_{A90,15min}$ in the vicinity of the development site. The Code states that the noise criteria should be used to manage construction noise as follows:

- Standard hours – work within the Standard hours should be encouraged where possible. All reasonable and practicable measures should be implemented to achieve the lower limit. Exceedance of the upper limit requires immediate action and community consultation to determine further mitigation measures.
- Non-Standard hours – all reasonable and practicable measures should be implemented to achieve the lower limit. If exceeded, community consultation should be conducted for further mitigation measures.

The noise criteria outlined in the Code are reproduced in Table 2.

Table 2: External construction noise criteria

Work Period	External Noise Level $L_{Aeq,15minute}$ ^[4] dB	
	Lower Limit	Upper Limit
Standard	$RBL + 10$ ^{[1][2][3]}	75 where: $RBL > 55$
		70 where: $40 < RBL \leq 55$
		65 where: $RBL \leq 40$
Non-Standard hours – evening and night-time	$RBL + 5$ ^[3]	Not applicable

[1] $RBL + 5$ dB should be considered where a facility, equipment and long-term earthworks are required in an area for greater than 6 months

[2] Where the lower limit value exceeds the upper limit value, the lower limit is taken to equal the upper limit value

[3] Minimum lower limit are 50dB for Standard hours and 45dB for Non-Standard hours. A maximum lower limit of 75dB applies to Non-Standard hours

[4] Noise contribution from construction activity

Construction of the wind farm will generally occur within the Standard hours defined in the Code. Works may need to occur outside of standard working hours on some limited occasions. Examples of activities where this may be required include delivery of oversize plant or structures, including turbine nacelle, blades and tower in addition to erection of these structures based on weather constraints.

In terms of the Rating Background Level (RBL) required to establish the guideline lower and upper limit values for construction, reference is made to the background noise monitoring conducted as part of the assessment of the operational noise associated with the Mount Emerald Wind Farm. Consistent with the rural location of the development site, the monitoring demonstrated background noise levels were regularly below 40dB L_{A90} , particularly during low-wind speed conditions relevant to the assessment of construction noise impacts.

Based on the above, the applicable limits referred to in this assessment relate to Standard working hours and RBLs below 40dB. Accordingly, the following construction noise criteria are considered herein:

- Lower limit: 50dB $L_{Aeq,15minute}$
- Upper limit: 65dB $L_{Aeq,15minute}$

Construction Activities

Construction tasks associated with the project include the following:

- Access road and turbine hardstand construction
- Associated Infrastructure construction, such as the substation & site facilities
- Turbine tower foundation construction
- Trench digging to accommodate underground cabling
- Assembly of turbine towers, nacelles and rotor blades.

Equipment required to complete the tasks outlined above include:

- Bulldozers, graders, excavators, dump trucks, rollers, concrete trucks, front end loaders, cranes, pneumatic jack hammers etc
- All wheel drive vehicles and flat-bed delivery trucks.

Construction equipment noise data

It is anticipated that a variety of construction equipment would be used for this project.

Sound power levels for the proposed construction equipment have been determined based on guidance and data sources including Australian Standard AS 2436:2010 *Guide to noise and vibration control on construction, demolition and maintenance sites* (AS 2436:2010), and noise level data from previous projects of a similar nature.

Table 3 summarises the noise emissions used to represent key items of plant associated with construction.

Table 3: Construction noise sources sound power data, L_{WA} dB

Noise source	Sound Power Level
Excavator fitted with pneumatic breaker	118
Excavator (100 to 200kW)	107
Tracked loaders	115
Crane (200t)	105
Crane (500t)	110
Crane (1200t)	115
Delivery Trucks	107
Concrete trucks	108
Dump truck	117
Concrete pump	108
Generator	99
Grader	110
Bulldozer	108
Front end loader	113
Rock crusher	120
Batching Plant	110

Overall sound power levels for equipment items that are likely to operate simultaneously have been estimated for each of the major construction phases, as detailed in Table 4.

Table 4: Overall sound power levels of major construction phases, L_{WA} dB

Construction phase	Plant/Equipment	Total sound Power Level
Access roads	2x Excavator (100 to 200kW), 1x Tracked loaders, 2x Dump truck, 1x Grader, 1x Bulldozer	120
Substation	1x Excavator (100 to 200kW), 1x Crane (500t), 1x Delivery Trucks, 1x Concrete trucks, 1x Concrete pump, 1x Generator, 1x Bulldozer	115
Site Compound	1x Excavator (100 to 200kW), 1x Crane (200t), 1x Delivery Trucks, 1x Concrete trucks, 1x Concrete pump, 1x Generator, 1x Bulldozer	115
Turbine foundations	1x Excavator fitted with pneumatic breaker, 1x Excavator (100 to 200kW), 1x Crane (200t), 1x Delivery Trucks, 1x Concrete trucks, 1x Concrete pump, 1x Generator, 1x Bulldozer	120

Construction phase	Plant/Equipment	Total sound Power Level
Cable trench digging	1x Excavator (100 to 200kW), 1x Dump truck, 1x Generator, 1x Bulldozer	120
Turbine assembly	2x Crane (200t), 2x Crane (500t), 1x Crane (1200t), 1x Generator	120

Predicted construction noise levels

Noise levels during construction have been predicted at the nearest noise sensitive locations during the construction phase to provide an indication of potential noise associated with regular working areas.

The predictions have been determined using the method outlined in AS 2436 Appendix B (the reference standard for the source emission data noted in the preceding section). The predictions account for a mix of soft and hard ground conditions which is considered to be consistent with the type of ground cover typically encountered in rural regions of eastern Australia.

The predictions also assume direct line of sight between all source and receiver locations. Accordingly, in some instances where intervening terrain obscures line of sight in practice, actual construction noise levels would be lower than predicted.

Our assessment of construction noise has been divided up into the six (6) main components during this phase of the development, namely:

- Site compound construction
- On-site substation construction
- Access road construction
- Turbine foundation preparation
- Cable trench digging
- Turbine delivery and assembly

To be conservative, it has been assumed that cable trench digging could occur anywhere along the proposed tracks within the site.

Furthermore, predicted noise levels are based on equipment being operational simultaneously for a full 15 minute assessment period.

Table 5 details the predicted noise levels at the nearest receptor locations for each of the construction activities outlined above. Given that the precise equipment selections and methods of working would be determined during the development of a construction plan, and that the noise associated with construction plant and activity varies significantly, the predicted noise levels are provided as an indicative range of levels which may occur in practice.

Table 5: Indicative range of construction noise predictions, $L_{Aeq, 15\text{minute}}$ dB

Construction phase	Nearest property	Predicted level range
Access road construction	R78	45-50
On-site substation	R05	35-40
Site Compound	R05	35-40
Turbine foundations	R78	45-50
Cable trench digging	R78	45-50
Turbine assembly	R78	45-50

The results presented in Table 5 demonstrate that the construction noise levels are predicted to achieve the lower limit values provided by Code. The predicted noise levels have been determined for the nearest receiver location to each activity. Accordingly, predicted noise levels at other receiver locations will be lower than presented in Table 5, and will therefore also achieve the lower limit of the Code.

CONSTRUCTION TRAFFIC NOISE

Criteria

To provide an assessment of noise associated with construction traffic, reference is again made to the Queensland Department of Transport and Main Roads publication *Transport Noise Management Code of Practice Volume 2 – Construction Noise and Vibration* dated September 2014 (the Code).

The code notes that haulage/transportation associated with construction activities on public roads within the project area or beyond has the potential to create traffic noise issues for existing sensitive receptors. Accordingly, the Code proposes that construction traffic should not increase the pre-construction traffic noise level $L_{A10,1\text{hour}}$ by more than 3dB.

Assessment

An assessment of noise associated with construction traffic has been prepared on the basis of the existing and forecast traffic information presented in the SKM (now Jacobs) reports:

- *Mount Emerald Wind Farm Traffic Impact Assessment Report* dated 8 August 2011.
- *Mount Emerald Wind Farm Traffic Impact Assessment Report – Technical Note – Traffic Impact Assessment Engineering Response* dated December 2012.

The forecast traffic information has been used in conjunction with the prediction methodology detailed in the UK publication *Calculation of Road Traffic Noise* to determine the expected increase in noise levels for comparison with the guideline criterion provided by the Code.

The predictions have been prepared for two proposed traffic routes; Kennedy Highway and Hansen Road. For both route options, noise calculations have been based on the Average Annual Day Traffic (AADT) increasing by seventy-nine (79) vehicles. These vehicles will comprise a mix of heavy goods and passenger vehicles. A conservative assessment has been made by assuming that all 79 additional construction vehicles are heavy goods vehicles.

Based on the above, Table 6 and Table 7 provide details of the reference traffic information and predicted noise level changes for the two construction traffic routes.

Table 6: Construction traffic on Kennedy Highway – noise levels $L_{A10, 1\text{hour}}$ for receivers at Walkamin

Period	AADT	%HGV	Speed (km/hr)	Distance (m)	Estimated $L_{A10,1\text{ hour}}$
Existing (estimated 2012)	5670	5.9	100	35	66
Existing plus construction	5749	7	100	35	66

Table 7: Construction traffic on Hansen Road – noise levels $L_{A10, 1\text{hour}}$ for receiver R111

Period	AADT	%HGV	Speed (km/hr)	Distance (m)	Estimated $L_{A10,1\text{ hour}}$
Existing (estimated 2012)	1440	0	90	45	57
Existing plus construction	1519	5	90	45	58

The results presented in Table 5 and Table 6 demonstrate that traffic noise levels are predicted to increase by less than 1dB and approximately 1dB for the Kennedy and Hansen Road route options respectively. These predicted increases are provided for the nearest representative receiver locations along the proposed construction traffic routes, however the predicted changes are applicable for all other receiver locations along the routes. The predictions therefore demonstrate that the change in traffic noise as a result of construction meets the Code guideline criterion for all receiver locations.

ANCILLARY INFRASTRUCTURE NOISE

Criteria

The Queensland *Environmental Protection (Noise) Policy 2008* (the EPP) provides legislation relevant to the control of noise from noise sources of a commercial or industrial nature.

The purpose of the EPP is to achieve the objectives of the Environment Protection Act 1994, and the purpose of the policy is stated to be achieved by:

- a) *Identifying environmental values to be enhanced or protected; and*
- b) *Stating acoustic quality objectives for enhancing or protecting the environmental values; and*
- c) *Providing a framework for making consistent, equitable and informed decisions about the acoustic environment.*

Schedule 1 sets out acoustic quality objectives relevant to residential dwellings and these are reproduced below in Table 8.

Table 8: EPP Schedule 1 acoustic quality objectives for dwellings

Sensitive receptor	Time of day	Acoustic quality objectives dB (measured at the receptor)			Environmental value
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$	
dwelling (for outdoors)	daytime & evening	50	55	65	health and wellbeing
dwelling (for indoors)	daytime & evening	35	40	45	health and wellbeing
	night-time	30	35	40	health and wellbeing, in relation to the ability to sleep

Assessment

Ancillary infrastructure associated with the development of a wind farm includes power transmission networks and electrical substations and.

The wind farm is proposed to be connected to existing power transmission infrastructure that passes through the wind farm site layout. The new connection to the network will also occur within the wind farm site. Accordingly, the proposed wind farm will not introduce any new power transmission lines in the vicinity of noise sensitive receptor locations. Further consideration of noise associated with power transmission infrastructure is therefore not required.

An electrical substation is proposed to be developed as part of the project, located within the proposed wind turbine layout of the site. We understand that the specific installation location and arrangements are yet to be finalised. However, the planned location for the substation is illustrated on the following figure which is an extract of the map PR100246-170 provided from RATCH by email on 2 September 2014.

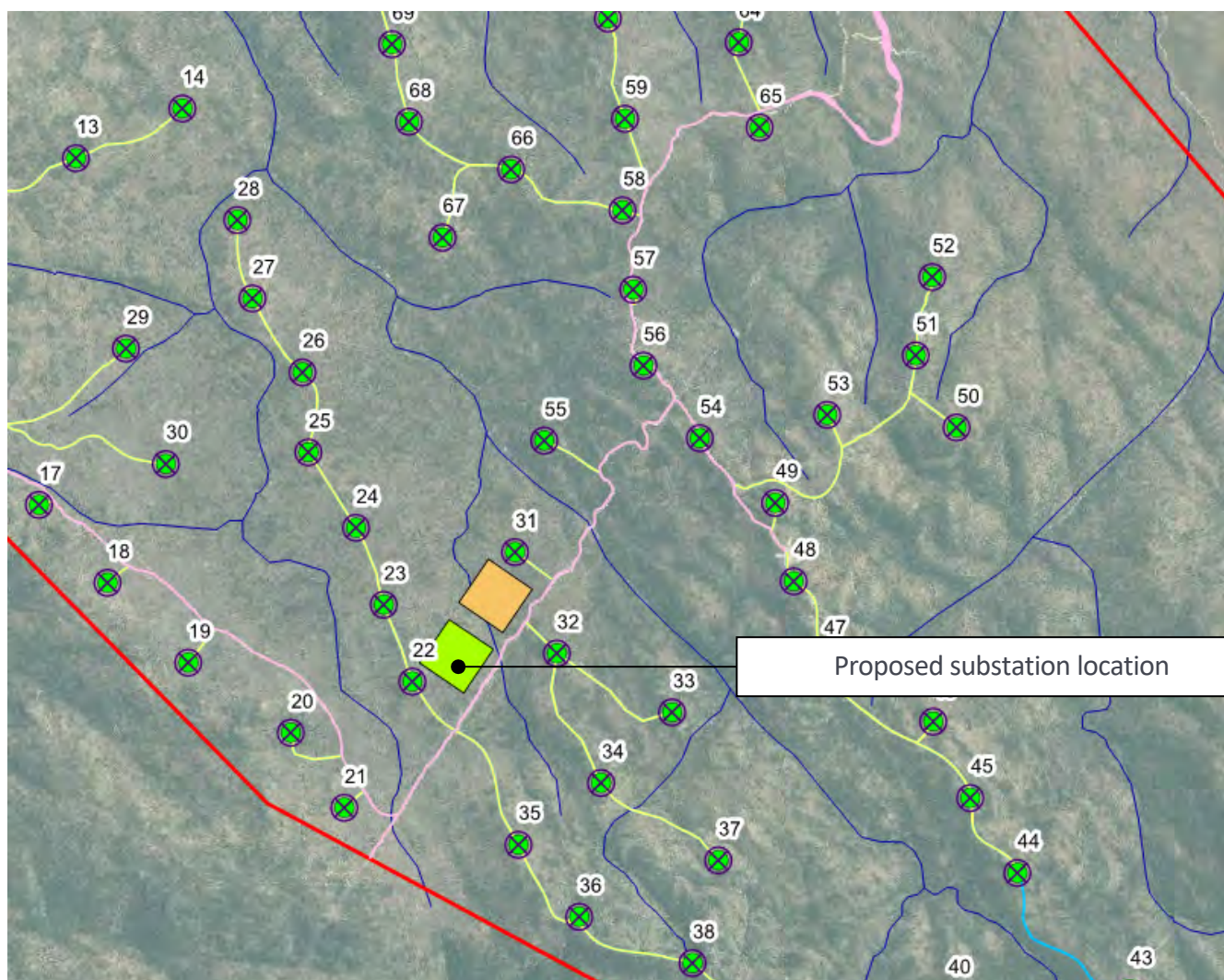


Figure 1: Planning location for wind farm substation

Based on this plan, approximate GPS coordinates as detailed Table 9 have informed the current assessment of transformer noise.

Table 9: Approximate substation location

	GPS Coordinates (GDA94 Zone 55)	
	Easting	Northing
Substation	327812	8099863

The nearest receiver location to the substation is receiver R05 at a distance of approximately 2.7km.

Specific details of transformer selections are yet to be made, however noise emissions associated with this type of electrical plant are commonly in the range of 95-100dB L_{Aw} . While the specific transformers selections would not be finalised until the detailed design phase of the project, the typical emission ranges and separating distances are sufficient to determine that operational noise levels associated with transformers would be below 30dB externally at surrounding residential receiver locations.

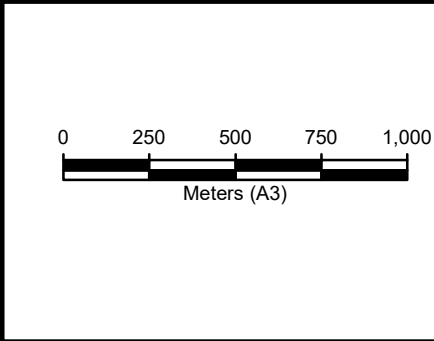
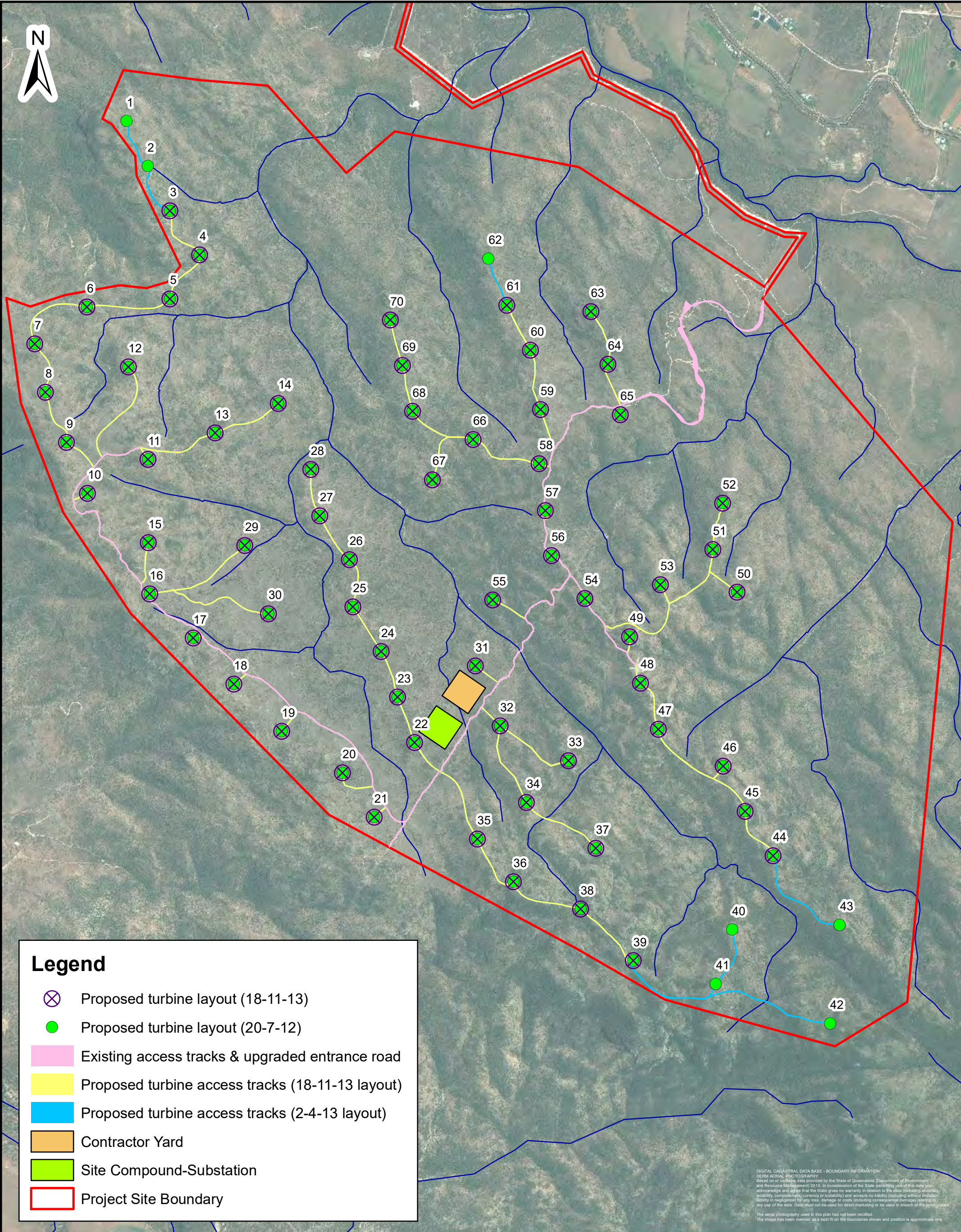
The noise of the transformers is therefore expected to be well within the acoustic quality objectives noted by the EPP for the day and evening and external, even accounting for any adjustments (if applicable at the receptor) for the potential tonal characteristics associated with transformers . Further, accounting for the typical outdoor to indoor reduction of 10-15dB for a partially open window, the internal acoustic quality objectives of the EPP are expected to be met for night-time operation also.

We trust this above information is satisfactory for your immediate purposes. Please do not hesitate to contact us if you have any questions.

Regards,




Associate



Project Manager M. Jess
Compiled by J. Middleton
Map Projection MGAz55
Map Datum GDA94
File Reference PR100246-170a.mxd
Sheet Number 1 of 1

Client RACL
Title Mount Emerald Wind Farm Turbine locations and development footprint

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SCALE (A3) 1:22 000	DATE 18-11-2013	DRAWING NO. PR100246-170
		ISSUE A

26 APR 2015

DILGP - BRIEF FOR DECISION

Date: 20 April 2015

ESU

SUBJECT: Decision of ministerial call in for the proposed Mount Emerald Wind Farm, Arriga

RECOMMENDATIONS:

That you:

- ☒ **note** the recommendations in the attached assessment report (**Attachment 1**) by Cardno
- ☒ **approve**, subject to the conditions in the draft decision notice (**Attachment 2**), the development application made by Mount Emerald Wind Farm Pty Ltd for a development permit for a Material Change of Use (Wind Farm (maximum of 63 turbines))
- ☒ **approve, sign and date** the attached decision notice (**Attachment 2**)
- ☒ **sign** the attached letters to affected parties (**Attachment 3 - using your electronic signature**) advising of your decision to approve the development application subject to conditions and enclosing a copy of the decision notice
- ☒ **sign** the attached letters to members of the community (**Attachment 4 - using your electronic signature**) advising of your decision to approve the development application subject to conditions
- ☒ **note** that the last day for you to decide the development application is **Friday 24 April 2015**
- ☒ **note** that you must cause to be tabled in the Legislative Assembly a report about your decision within 14 sitting days after making your decision. This is subject to a separate briefing note MBN15/136.

NOTED or APPROVED / NOT APPROVED

Hon Jackie Trad MP
Deputy Premier
Minister for Transport, Minister for
Infrastructure, Local Government and
Planning and Minister for Trade

Date: 24/04/15.

BACKGROUND:

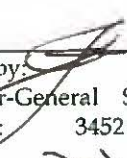
On 11 June 2014, the then Deputy Premier, Minister for State Development, Infrastructure and Planning (Planning Minister) decided to call in the development application for the proposed Mount Emerald Wind Farm in Arriga and issued a notice of call in to the affected parties. The former Planning Minister decided to assess and decide the development application against the normal assessment and decision provisions under the *Sustainable Planning Act 2009* (SPA) (merit assessment).

The former Planning Minister decided to call in the development application at the point of giving an information request to the applicant. On 10 September 2014, the applicant provided a response to the information request in full.

The applicant has agreed to extend the decision making period until 24 April 2015.

KEY ISSUES:*Economic and job creation benefits of the proposed development*

Mount Emerald Wind Farm will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.

Author details Name: Jane McInnes Position: Senior Planner Telephone: 3452 7690	Endorsed by: Greg Chemello, Deputy Director-General Business Group: Planning and Property Telephone: 3452 7686 Approved: 17 April 2015	Endorsed by:  A/Director-General Stephen Johnston Telephone: 3452 6767 20/4/15
--	--	--

Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.

The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.

The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.

Local Government Interests

Attachment 5 outlines both Mareeba Shire Council and Tablelands Regional Council's interests in the development application and the department's response to those interests. Key interests for both councils relate to traffic impacts, which have been addressed through conditions in the draft decision notice.

Deciding development application

Your decision on the development application must be based on assessments made under SPA.

The department engaged the following consultants to undertake an assessment of the development application in accordance with SPA to inform your assessment and decision:

- Cardno to undertake technical assessments including landscape and visual amenity, ecological, agricultural land, environment, noise, traffic, aeronautical and engineering
- Foresight Partners Pty Ltd (Foresight Partners) to provide advice on economic matters.

Copies of the Cardno and Foresight Partners reports are attached (**Attachment 1**).

Based on these assessments and advice from referral agencies and third parties the department recommends that you approve the development application, subject to the conditions in the draft decision notice (**Attachment 2**) and on the grounds set out in Cardno's assessment report (**Attachment 1**). The department undertook a review of the conditions recommended by Cardno and made a number of changes to ensure the conditions are reasonable and relevant. The changes made were to:

- remove conditions that are covered by other Acts
- amend conditions that are not enforceable under SPA
- amend conditions to provide certainty upfront
- amend wording.

The former Planning Minister received deputations from a number of concerned local residents regarding perceived impacts from the proposed development; including noise, traffic and environmental matters. It is considered that these potential impacts have been addressed through conditions that set appropriate noise emission limits (including a reduced level of night time and day time noise allowed), and the requirements for approved traffic management and environmental management plans to be in place prior to construction commencing.

The issue of the potential health effects of wind farm noise and "infra-sound" (pressure waves of a frequency that cannot be measured, but is supposedly felt as a 'sensation' by some individuals) is contentious. The vast majority of reputable studies indicate there is no evidence of any physical linkage, but concede that anxiety amongst some people could well lead to health complaints experienced. As a result, it is likely that some members of the local community who have raised health concerns are likely to be unhappy about a decision to approve the development.

Notice of decision

Under section 334 of SPA, you are required to give written notice of your decision to the applicant, each referral agency and the local government. You are also required to give a copy of the decision notice to each principal submitter (note there are no principal submitters for this development application). It is recommended that you approve, sign and date the decision notice (**Attachment 2**) and letters to affected parties (**Attachment 3**) advising of your decision to approve the development application subject to conditions.

Report about decision

Under section 432 of SPA, you are required to prepare a report about your decision in relation to a called in development application and have a copy of the report tabled in the Legislative Assembly within 14 sitting days of your decision. This is subject to a separate briefing note **MBN15/136**.

RESULTS OF CONSULTATION:

The department's Legal Services Unit has been consulted during the assessment of the development application and its comments incorporated as appropriate.

Media Services has also been made aware of the matter.

The applicant's response to your information request has been made available on the department's website.

Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

November 2014

Document Information

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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LIST OF ATTACHMENTS

Attachment A – Recommended Conditions

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Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Represent.	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological – impacts of wind farm on protected flora and fauna
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray and environmental / contaminated land matters
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical Engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the wind farm was undertaken by Foresight Partners in parallel with this assessment.

Overall, the development application complies with the relevant planning instruments set out within the assessment report, with two occasions where a potential conflict may arise with the applicable codes. There are sufficient grounds to justify the decision notwithstanding those potential conflicts.

On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- technical assessments to inform recommendations;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of, assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommending approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises an assessment of the proposed development against the applicable planning framework. It includes an assessment in terms of planning and technical matters, and incorporates the outcomes of an economic assessment undertaken in parallel by Foresight Partners. It has not addressed any submissions received in respect of the Ministerial Call In.

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme (version 1/2007, in effect at the time of lodgement) and the Temporary Local Planning Instrument 01/001 (Wind Farms). The Planning Scheme and TLPI prescribe Code Assessment for the proposed development. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Technical Assessment provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment of Development Application provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes onto state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)*

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referrable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 Department of Health

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

“There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life.”

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 Mareeba Shire Council

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 Tablelands Regional Council

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA, the Mareeba Shire Planning Scheme and other relevant planning instruments as discussed in this Chapter. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- “(2) *The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) the State planning regulatory provisions;*
 - (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) any applicable codes in the following instruments-*

- (i) a temporary local planning instrument;
 - (ii) a preliminary approval to which section 242 applies
 - (iii) a planning scheme;
- (f) if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.
- (3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—
 - (a) the common material;
 - (b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
 - (c) any referral agency's response for the application;
 - (d) the purposes of any instrument containing an applicable code;
- (4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).
- (5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.
- (6) Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) In assessing the application, the assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-
 - (a) before the day decision stage for the application started; or
 - (b) if the decision stage is stopped-before the day the decision stage is restarted.
- (2) However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any infrastructure provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—
 - (a) the conflict is necessary to ensure the decision complies with a State

- planning regulatory provision; or*
- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
- (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
- (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This is SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17), and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. Section 4.76 of the Rural Zone Code states that development that is consistent with the specific outcomes in s4.78 to s4.80 complies with the Rural Zone Code. Section 4.77 states that the overall outcomes are the purpose of the Code.

The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;

- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;
- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Chapter 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI 01/11, a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga locality is included on page 12 of the TLPI 01/11 (Wind Farms) – the site is a part of the Arriga locality .

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. The intent states that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

Section 6.2 of the Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the following outcomes (the overall outcomes):

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact

- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage
- Decommissioning and Rehabilitation

An assessment against the Wind Farm Code of the TLPI 01/11 is provided in **Chapter 6**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and the State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect. Appropriate weight should be given to the SPP under section 317 of the SPA.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Chapter 6**.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is Impact Assessable development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. The intent states that wind farm development will not have unacceptably adverse impacts on the environment and on amenity (at both a local and wider area scale), and will have social, environmental and economic benefits to the community at both local and regional level.

Section 6.2 of the Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the following outcomes (the overall outcomes):

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1 of the Wind Farm Code. An assessment against the relevant provisions is made in **Chapter 6**.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to instruments, codes, laws and policies that came into effect after the application was, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. No weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, the draft Wind Farm State Code has not been given any weight and therefore there has been no assessment of the development application against the draft Wind Farm State Code.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made and has also been assessed.

The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the TLPI, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the Wind Farm Code of the TLPI 01/12 – Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11).

Section 317 of the SPA states that the assessment manager may give weight it is satisfied is appropriate to a later planning instrument, code, law or policy. As such, this report undertakes an assessment against the planning framework in place at the time of lodgement of the development application (as per s313 of the SPA) and has given weight to later planning instruments, codes, laws or policies, most significantly, the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). Weight has been given to the Wind Farm Code of the amended Mareeba Planning Scheme, as it represents more recent planning thought for wind farm development in Mareeba Shire.

In summary, in accordance with Section 313 of the SPA the proposed wind farm development application has been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies;
- the Mareeba Shire Planning Scheme (incorporating Amendment No 1 of 2007); and
- Temporary Local Planning Instrument 01/11 (Wind Farms).

In accordance with Section 317 of the SPA the assessment of the proposed wind farm development application has also given weight to:

- the State Planning Policy; and
- the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray, and environmental / contaminated land matters;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the Mount Emerald Wind Farm was undertaken by Foresight Partners in parallel with this assessment.

This chapter summarises the outcomes of the technical assessment for each technical service, including the economic review undertaken in parallel by Foresight Partners.

5.2 Landscape Visual Amenity

A landscape visual amenity assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the landscape visual amenity assessment is to determine the visual impact of the proposed wind farm on the local context and views, particularly with regards to areas of regional landscape significance, significant landscape features, and landscape and scenic values as described by the applicable planning framework. The assessment also assesses shadow flicker.

In this regard, of particular relevance to the landscape visual amenity assessment is the material prepared by the applicant that describes and presents the visual impacts of the proposed development. The following material prepared by the applicant adequately describes the proposed development in landscape visual amenity terms.

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length (in kilometres) of the visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons; and
- Shadow flicker assessment.

The material prepared by the applicant adequately allows for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. However, it is noted that none of the planning or visual impact technical material substantially address the

question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. This is addressed in this assessment.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of 'regional landscape significance'. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure.

It is also relevant that the Mt Emerald – Walsh Bluff mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Planning Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11 (Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, and the intent of the Wind Farm Code of TLPI 01/11 sought that they have "*minimal impact on the environment and on amenity (both at a local and wider area scale)*". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code of the Planning Scheme. The intent of the Wind Farm Code in the amended planning scheme altered the above TLPI wording to seek that development "*will not have unacceptably adverse impacts in the environment and on existing amenity (at both a local and wider area scale)...*". However, it is the overall outcomes and specific outcomes which determine compliance with the Code (and it follows, with the intent of the Code).

The Rural Zone Code includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code in the TLPI 01/11 includes overall outcome (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

The purpose of the Wind Farm Code in the Planning Scheme (incorporating Amendment 01/11 – Wind Farms) includes overall outcome (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and demonstrable impacts associated with wind farms*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*" For the purpose of landscape visual amenity assessment, the relevant overall outcomes are essentially consistent between the two Codes.

At the time the application was made, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it is a requirement under the TLPI 01/11 and Planning Scheme amendment 01/11 Wind Farms (September 2013) where the Wind Farm Codes require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant views' (Specific Outcome S3a).

It is apparent from the material prepared by the applicant, and from field inspection, that the Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

The term 'minimal impact' is replaced in the Wind Farm Code of the amended Mareeba Shire Planning Scheme (September 2013) with 'unacceptably adverse impacts', and the amendment is given weight in the planning assessment. Further, it is compliance with the overall outcomes and specific outcomes which demonstrate compliance with the Code (and it follows, with the intent of the Code).

The Mareeba Shire Planning Scheme does not specifically protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework for the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites.

It is concluded that the extent and nature of the impacts have been generally well analysed and technically assessed, although the local importance of the mountain range as a significant landscape feature was not addressed. However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment. In this regard, the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the planning expectations for wind farms and their siting requirements, and as such the proposed wind farm will not result in unacceptable visual impacts on view scapes. Therefore, whilst not 'natural' and representing a change to the landscape, the visual impact is nonetheless acceptable.

It is therefore determined that the likely impacts of the proposed wind farm on visual amenity are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to the inclusion of appropriate conditions. In terms of those conditions, the visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Recommended visual amenity conditions include (refer to Appendix A for full conditions):

- non-reflective colours and materials are used for turbines and especially blades (as per Specific Outcome S3b of the Wind Farm Code); and
- electrical connections are provided underground in all instances, where practicable (as per Specific Outcome S3c of the Wind Farm Code).

An assessment of shadow flicker has identified that the distance between residences and the proposed wind turbines provides sufficient buffer to reduce potential shadow flicker impacts and the proportion of rural views affected to acceptably low levels. The proposed development may be approved subject to the inclusion of a condition that ensures compliance with shadow flicker requirements is maintained. The recommended shadow flicker condition is:

- the measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling (as per Specific Outcome PS6(b) of the Wind Farm Code).

5.3 Ecological

An ecological assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the ecological assessment is to determine the impact of the proposed wind farm on State and local ecological features, including Matters of State Environmental Significance, and if so, whether appropriate impact mitigation and management measures and offset commitments can reduce the magnitude of ecological impacts.

Cardno note that the applicable planning framework refers to the terms 'areas of significant ecological value' (overall outcome e) of the Wind Farm Code in TLPI 01/11) or 'areas of state environmental significance' (probable solution S4 of the Wind Farm Code in Mareeba Planning Scheme incorporating Amendment 1/11 – Wind Farms). These terms are not defined by any applicable planning instrument and, as such, the proposed wind farm is not located within such areas. In any case, 'Matters of State Environmental Significance' and 'Areas of Ecological Significance' (as per the FNQRP) are assessed.

Matters of State Environmental Significance (MSES) that are potentially applicable to the site include the following natural values and areas:

- protected areas (including all classes of protected area except coordinated conservation areas) under the Nature Conservation Act 1992 - not applicable, the site does not contain or adjoin any protected areas;
- marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 - not applicable, the site does not contain or adjoin any marine protected areas);
- areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008 - not applicable, the site does not encompass or adjoin and declared fish habitat areas;
- threatened wildlife under the Nature Conservation Act 1992 and special least concern animal under the Nature Conservation (Wildlife) Regulation 2006 - **applicable**, site surveys confirmed the presence of several threatened wildlife species including *Homoranthus porter*, *Grevillea glossadenia* and *Hipposideros diadema* and several other threatened wildlife species that were not detected during field surveys are considered likely to inhabit the site;
- regulated vegetation under the Vegetation Management Act 1999 – **applicable**, the site contains areas of regulated vegetation with one or more of the following attributes:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems
 - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems
 - Category R areas on the regulated vegetation management map

- areas of essential habitat on the essential habitat map for wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the Nature Conservation Act 1992
- regional ecosystems that intersect with watercourses identified on the vegetation management watercourse map
- regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map
- high preservation areas of wild river areas under the Wild Rivers Act 2005 - not applicable, the site is not in a declared area;
- wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environmental Protection Regulation 2008 - not applicable, the site does not encompass or adjoin any such wetlands;
- wetlands and watercourses in high ecological value waters as defined in the Environmental Protection (Water) Policy 2009, schedule 2 - not applicable; and
- legally secured offset areas - not applicable, the site does not encompass or adjoin any legally secured offset areas.

Areas of Ecological Significance identified by the FNQRP that are potentially applicable to the site include:

- Protected areas – not applicable, the site is not in a protected area;
- World heritage areas – not applicable the site is not in a world heritage area;
- Wetlands – not applicable, the development activity will not occur in a protected wetland;
- Terrestrial area –
 - habitat of rare or endangered species including essential habitat of the Southern cassowary and mahogany glider – **applicable**, the site contains habitat for threatened wildlife species including some mapped areas of essential habitat for the Southern Cassowary;
 - habitat of rare or endangered species including regional ecosystems with a Vegetation Management Status of 'endangered' or 'of concern' and 'non woody' regional ecosystems – **applicable**, the site contains regional ecosystems identified as being 'of concern';
 - Significant coastal dune systems – not applicable, the site is not in a significant coastal dune system;
 - Einasleigh Uplands bioregion – **applicable**, the site is located on the eastern edge of the Einasleigh Uplands bioregion.

Of particular relevance to the ecological assessment is the draft Environmental Impact Statement and the Statement of Commitments, as prepared by the applicant. The material prepared by the applicant includes relevant ecological surveys and assessments that provide an adequate basis for assessment of the application.

The ecological assessment has identified that the proposal will have adverse ecological impacts, including adverse impacts to those MSES, as defined by the State Planning Policy, and Areas of Ecological Significance, as defined in the FNQRP. This is recognised by the applicant in the application material, including in the Environmental Impact Statement. The adverse ecological impacts primarily relate to:

- direct loss and degradation of vegetation and fauna habitat resource associated with the construction of the proposed wind farm; and

- fauna mortality, morbidity and habitat degradation/alienation associated with operation of the proposed wind farm.

In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur.

The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. The impact mitigation and management measures are identified in a 'Statement of Commitments' prepared by the applicant, which include a range of 'environmental management plans'. The environmental management plans include:

- a construction and work site operational management plan;
- a sediment, erosion and storm water management plan;
- a hydrocarbon and hazardous substances plan;
- a bushfire risk management plan and emergency evacuation plan;
- a threatened species management plan;
- a weed and pest management plan;
- a rehabilitation plan;
- a habitat clearing and management plan;
- an ecological fire management plan;
- a cultural heritage management plan;
- an environmental management plan training program; and
- an environmental management plan reporting program.

With regards to that documentation:

- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on native fauna such as birds, flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed, mitigated or offset pursuant to the range of 'environmental management plans' being appropriately implemented. The proposal may be approved subject to the inclusion of appropriate conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Recommended conditions include (refer to Appendix A for full conditions):

- approval and implementation of the 'environmental management plans' identified in the material prepared by the applicant and referenced above;
- where the development involves the clearance of native vegetation and wildlife habitat, detailed Significant Species Management Plans must be prepared; and

- where the development involves the clearance of native vegetation and wildlife habitat, an appropriate Environmental Offset must be secured.

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES), such as the Northern Quoll and Spectacled Flying-Fox. Nevertheless, conditions are identified (refer **Chapter 7**) relating to the management of these species.

5.4 Agricultural Land and Environment

An agricultural land and environmental assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

Agricultural Land

The purpose of the agricultural land assessment is to determine whether the proposed development has the potential to adversely or positively impact the agricultural land use values of the local area (including as identified in the Economic Growth Module of the State Planning Policy).

Of particular relevance to the agricultural land assessment are the provisions of the Mareeba Shire Planning Scheme and the State Planning Policy. The application material appears to adequately address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;
- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development; and
- a response to the matter of impact to aerial spraying.

It is noted that the applicant suggests that the land is not considered Good Quality Agricultural Land under the Planning Scheme, which is confirmed to be consistent with the Council's planning scheme maps. Further, the State government mapping does not identify the site as Agricultural Land Class A or B, or Strategic Cropping Land. The site is not currently used for cultivation, and only stock grazing is possible.

Matters of spray drift associated with aerial spraying have been assessed and have been determined to be acceptable.

It is concluded that the proposed wind farm is compatible with the rural nature of the site, as identified by the FNQ Regional Plan. Further, having regard to the wind farm footprint and to the broader socioeconomic benefits of the project, this assessment identifies that the proposal is acceptable in terms of the agricultural land values of the site and the local area. The proposal may be approved; no conditions are required to be imposed.

Environmental / Contamination

The purpose of the environmental assessment is to determine whether there is potential for residual unexploded ordnance (UXO) contamination to be uncovered or disturbed by the development, with consequential risk to human health and safety (as per the Contamination Module of the State Planning Policy).

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist a UXO assessment is required to be completed in order to facilitate the development.

The application material states the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of the application material by DEHP indicated a substantial risk existed, and UXO commentary identified the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment by DEHP was issued to a 'slight' possibility of occurrence of UXO. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO matters. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the Environmental Impact Statement appears to concur with DEHP's recommendation regarding the assessment of UXO related matters.

It is therefore concluded that the UXO issues present on site have been assessed to be able to be managed. The proposal may be approved subject to the inclusion of appropriate 'general advice' attached to the approval that identifies the relevant procedure for the possibility of UXO disturbance.

5.5 Noise

An acoustic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the acoustic assessment is to determine the impact of the proposed wind farm on the local acoustic environment, in particular, on any nearby sensitive receivers.

In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain any statutory text to the probable solution but does include a note that makes reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

It is concluded that that the proposed wind farm will be able to be appropriate in acoustic terms, where particular noise criteria are enforced and complied with. The proposal may be approved subject to the inclusion of appropriate conditions that enforce particular noise criteria. Recommended conditions include (refer to Appendix A for full conditions):

- ensure the development meets appropriate noise criteria of 35dB(A) in particular circumstances (as discussed above), and 40 dB(A) otherwise; and
- demonstrate compliance and complaints management with regards to the noise criteria specified above.

5.6 Traffic Impact

A traffic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the traffic assessment is to determine whether the traffic likely to be generated by the proposed development during construction and operation is appropriate having regard to the immediate and broader road network.

Of particular relevance to the traffic assessment is the Traffic Report prepared by Jacobs in response to the Information Request, titled "Technical Note 2 – Traffic Impact Assessment Engineering Response" and dated 29 August 2014. That traffic report addressed various traffic matters as follows.

- A clear description of the whole of the potential access routes to the site for oversized vehicles, including a high level identification of constraints along the network.
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Likely staff travel movements to the site, and how these can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Where sufficient measures to restrict staff traffic to 30 vehicles per day are not able to be provided, assessment identifying the worst case traffic impact on the road network.

An assessment of the application material has been undertaken and it is confirmed that the application material has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council; and

- Requirements for permits and escorts to traverse the detailed routes.

These matters are not able to be fully assessed at the moment as the details of construction schedule and other variables are likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any traffic issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles, when these details are known, will be required to ensure the routes are acceptable, and as such the assessment of the suitability of Hansen Road and Springmount Road for oversized vehicle movements should be included as a condition.

In respect of managing staff vehicles, the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders.”

It is determined that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery, which can be managed). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known.

It is concluded that that the proposed wind farm is able to be appropriately managed in terms of traffic matters, including during construction. The proposal may be approved subject to the inclusion of appropriate conditions relating to traffic management. Recommended conditions include (refer to Appendix A for full conditions):

- preparation and approval of a construction traffic management plan, prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind energy facility, that includes:
 - existing conditions survey of Hansen Road and Springmount Road;
 - designation of all vehicle access points to the site from surrounding roads;
 - designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways;
 - recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements;
 - measures to be taken to manage traffic impacts associated with the ongoing operation of the wind energy facility;
 - a program to rehabilitate existing public roads of Hansen Road and Springmount Road, to its existing condition where required.

5.7 Aeronautical

An aeronautical assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the aeronautical assessment is to determine whether appropriate aeronautical matters have been addressed in the proposed wind farm development.

The application material includes evidence of consultation with the Civil Aviation Safety Authority (CASA). The consultation with CASA recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, and will not affect any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Subsequent to that consultation, turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

It is concluded that the application is appropriate in aeronautical terms, subject to conditions relating to turbine height and further approval from relevant authorities should the wind farm layout be altered. The proposal may be approved subject to the inclusion of those conditions. Recommended conditions include (refer to Appendix A for full conditions):

- limitations on the overall maximum height not exceeding 1179.5m AHD; and
- details of any micro-siting of turbines must be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts.

5.8 Civil and Electrical Engineering

5.8.1 Civil

A civil engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the civil engineering assessment is to determine whether appropriate civil engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is appropriate, in civil engineering terms, and is able to be appropriately developed. Matters considered in the assessment that were determined to be appropriate, in principle, include road alignment of main access road, road grading along the proposed alignment, the ability to manage stormwater runoff, maintenance access to the proposed sites, and Impact footprint in construction areas.

However, the nature of civil engineering matters is that they are largely and often fully assessed at detailed design stage, following the initial land use assessment contemplated by this development application.

Pursuant to the above, the following identifies matters that will need to be further addressed during the detailed design process in response to the relevant development conditions and associated Operational Works applications.

- Vertical grading to site access road. Road grading in specific areas shall be subject to detailed design at Operational Works stage to ensure the heavy low loader vehicles can navigate the roadway without undue constraints. The traffic assessment has identified that the road access is appropriate, in principle.

- Road cross sections. Depending on the side slope of the local topography, further detail is required at Operational Works stage to ensure that the batters developed from the associated road grading do not cause stability and rehabilitation issues on the constructed batters adjacent to the roadway.
- Construction management plan. A construction management plan should be prepared and approved prior to commencement of construction.
- Sediment and erosion control. Sediment and erosion control management plans should be prepared and approved prior to commencement of construction, to ensure undesirable sediment and erosion issues do not impact on the development site and surrounding areas. This is particularly relevant in the areas where steep road grades and associated cut and fill batters are developed.
- Water quality management. Water quality management details should be prepared and approved prior to commencement of construction, to ensure the quality of stormwater runoff from the site is maintained within acceptable limits.
- Stormwater management. Stormwater management plans should be prepared and approved prior to commencement of construction, to ensure stormwater runoff from the site is controlled and managed with minimal impact on the development site and adjacent properties.
- Decommissioning and rehabilitation of the site. Further details regarding decommissioning and rehabilitation should be conditioned.

It is concluded that the application is appropriate, in principle, in civil engineering terms, subject to further details being provided at Operational Work stage of the civil engineering design. The proposal may be approved subject to the inclusion of conditions relating to the matters identified above (refer to Appendix A for full conditions).

5.8.2 **Electrical**

An electrical engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the electrical engineering assessment is to determine whether appropriate electrical engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is sound, in electrical engineering terms, and can be appropriately developed. However, the nature of some electrical engineering matters is that they are largely developed at detailed design stage, following the initial land use assessment contemplated by this development application.

In this regard, the electrical engineering assessment identified that the material provided in response to the information request did not include all of the information requested, it is considered that these matters can be addressed at detailed design stage pursuant to the relevant Building Works and Operational Works applications, or via conditions.

The electrical assessment identified that Specific Outcome S2(b) of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires the wind farm to be readily connected to existing, nearby high voltage electricity transmission lines without significant environmental, social or amenity impact. The application material does not include or sufficiently present the impacts of the proposed high voltage interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. Powerlink, in their advice agency response, identified that whilst there is no connection agreement in place, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the applicant complying with its obligations under relevant electricity laws. A condition is recommended in terms of connection to the Powerlink network. As such, the viability of

interconnection design and grid connection to the Powerlink network can be established through the ongoing engagement with Powerlink pursuant to that condition.

Minimum clearances of turbine structures to Powerlink's assets need to be complied with and should form a condition of approval for the wind farm development. The required clearance of structures to Powerlink's assets was advised in Powerlink's advice agency response. A condition is recommended in terms of clearance between structures and Powerlink assets.

The electrical assessment also considered the proposed wind farm against the National Electricity Rules and Codes, as it applies to wind farms. The connection to Powerlink's network will need to comply with the National Electricity Rules and Codes, as is standard practice for such connections.

The electrical assessment identified that Specific Outcome S5 of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. The application material adequately addresses this matter and the proposed considered appropriate in this regard.

It is noted in application material that the high voltage reticulation within the development may use overhead lines, and not exclusively underground cables. This is not recommended in the heavily vegetated areas, and presents risk of bush fires from electrical faults, despite management plans being proposed. Instead, exclusive use of underground cables is recommended (except where physically constrained) and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the turbine structures and risk of bush fires has not been assessed in detail, although preliminary commitments to management plans has been identified in the application material. It is recommended that a lightning and earthing system to mitigate against the risk of bushfires caused by direct lightning strikes on turbines be conditioned. In respect of bushfire, a Bushfire Risk Management Plan is also recommended to be conditioned.

It is concluded that the application is appropriate, in principle, in electrical engineering terms, subject to further details being provided as detailed design progresses, at Operational Work and Building Work stage and in response to conditions. The proposal may be approved subject to the inclusion of conditions identified below (refer to Appendix A for full conditions).

- engagement with Powerlink must occur with regards to a connection to Powerlink's transmission line network;
- further technical assessments regarding safe clearance between turbines and Powerlink infrastructure must be prepared and approved;
- electrical high voltage reticulation within the development must be underground (except where physically constrained);
- a suitable lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines must be designed and installed; and
- a Bushfire Risk Management Plan shall be prepared and approved.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the application material, particular that which was prepared in respect of economic matters in response to the Minister's request for additional information. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

“Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant’s discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....”.

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and **section 6.3** below provides a summary of those matters or things comprising the assessment criteria, to the extent relevant to the development application.

This chapter provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code Assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are Code Assessable, section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development.

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p><i>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</i></p> <p><i>(ii) the planning scheme as being appropriately reflected in the planning scheme;</i></p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified and assessed in Section 6.5 below.</p>
<p><i>Any applicable codes in the following instruments-</i></p> <p><i>(i) A structure plan</i></p> <p><i>(ii) A master plan</i></p> <p><i>(iii) a temporary local planning instrument;</i></p> <p><i>(iv) a preliminary approval to which section 242 applies</i></p> <p><i>(v) a planning scheme;</i></p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and so was also in effect at the time the application was properly made. TLPI 01/12 replaced TLPI 01/11 (when TLPI 01/11 ceased to have effect on 07 October 2012) and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the TLPI as the Wind Farm Code (TLPI), Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Each of the codes applicable at the time the development application was properly made (including the TLPI 01/11 Code and the Planning Scheme Codes) have been assessed in this Chapter.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager may also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ('the Planning Scheme') is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>There are some changes between the wording in the Wind Farm Code in the TLPI 01/11 (in effect at the time of lodgement) and the Wind Farm Code contained in the Planning Scheme Amendment 1/11 – Wind Farms (in effect at the commencement of the decision stage). To the extent there are differences, it is considered appropriate to place weight on the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms as it is more recent and current than the TLPI (which has expired).</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>An assessment against the applicable codes of TLPI 01/11 is contained at section 6.6 of this report.</p> <p>An assessment against the applicable codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms is contained at Section 6.7.</p>
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	There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>

Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site.</p> <p>Policies relating to biodiversity conservation and areas of ecological significance (including land use policy 1.1.1) seek that urban development be located outside of areas of high ecological significance.</p> <p>Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development'. The term 'urban development' neither explicitly excludes infrastructure items, nor includes renewable power generation in the range of uses stated in the definition. The expectation is that wind farms will be located in rural areas and would not be considered 'urban development'.</p> <p>Further, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June</p>

	<p>2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>The proposed wind farm is not considered urban development and in any case the development can be constructed with adverse impacts being avoided or mitigated (subject to conditions in Appendix A).</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<p><i>Policy 1.3 Air and Acoustic Environment Protection</i></p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the</p>

	<p>applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<i>Policy 2.1 Regional Landscape Values</i>	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p>

	<p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given <i>'appropriate recognition in land use planning and development assessment'</i>.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. A particular landscape feature that is valued in the region is its hill slopes.</p> <p>Section 2.3 recognises that public utilities and infrastructure may located on hill slopes but should be designed and located to minimize the impacts on scenic amenity. Land use policy 2.3.1 states that the visual amenity of the region's landscapes and seascapes is protected and enhanced by assessing proposed developments on landscapes that are vulnerable to visual impact due to their prominence, topography or degree of naturalness. Regard must also be given to land use policy 2.1.1, which recognises the value of landscapes for renewable energy resource areas.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity.</p>

	<p>An assessment of the of the landscape visual amenity matters relating to the proposal has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is apparent from the material prepared by the applicant, and from field inspection, that the Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed. • There is not any specific protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. • It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast, and the acceptability of visual impacts are largely subjective. • The proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites. • Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to the FNQRP related to scenic amenity. Therefore, whilst not 'natural' and representing a change to the landscape, the visual impact is nonetheless acceptable.
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<i>Policy 5.4 Primary Industries</i>	Land Use Policy 5.4.2 states that threats to primary production from incompatible development are identified and managed through land use planning and where appropriate, by developer- established buffers. The assessment in section 5.4 of this report identifies that the proposed wind farm is compatible with the rural nature of the site, and that the proposal is acceptable in terms of the agricultural land values of the site and the local area.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are ' <i>recognised as a acceptable land uses and supported for their contribution to reducing greenhouse emissions</i> '. The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.

It is considered that the proposed wind farm development demonstrates compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policies

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** of this report lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme or are otherwise not relevant to the assessment of this development. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	Development: (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on	In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist.

	<p>matters of state environmental significance, and</p> <p>(3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts.</p>	<p>Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>As per the conclusions in section 5.3, the proposed development satisfies the relevant assessment requirements as:</p> <ul style="list-style-type: none"> • potential adverse environmental impacts on matters of state environmental significance are identified; and • measures are identified by the applicant and will be conditioned that manage the potential adverse environmental impacts on matters of state environmental significance through protection or mitigation; and • via the provision of a program of environmental offsets, the impacted matters of state environmental significance will be enhanced.
Natural Hazards, Risk and Resilience	<p>For all natural hazards: Development:</p> <p>(1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and</p> <p>(2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and</p> <p>(3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and</p> <p>(4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of</p>	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently, other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and</p>

	<p>a natural hazard, and</p> <p>(5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard, and</p>	<p>regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation. These are recommended as conditions in Appendix A.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument 01/11 (Wind Farms) was in effect when the application was lodged and taken to be properly made. As such, an assessment is made against the relevant provisions of the TLPI 01/11 below.

TLPI 01/12 replaced TLPI 01/11 when it expired on 7 October 2012. TLPI 01/12 contained provisions consistent with TLPI 01/11 and so the assessment below also represents an assessment against TLPI 01/12.

As discussed in **section 6.3** of this report, an assessment must be made against TLPI 01/11 as it was in effect at the time the application was properly made. However, since that time and prior to the commencement of the decision stage, TLPI 01/11 and subsequently TLPI 01/12 expired, and Planning Scheme Amendment 1/11 took effect. The Planning Scheme Amendment, which includes a Wind Farm Code with some changes to the TLPI Wind Farm Code reflecting more recent planning thought, has been given weight in this assessment.

Section 6.2 of the Wind Farm Code of TLPI 01/11 states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code (and it follows, with the intent of the Code).

Overall Outcomes

The purpose of the Wind Farm Code is to achieve the following outcomes.

Overall Outcome	Response
a) Wind farms are located, design and operated to address and minimise potential impacts on environmental, economic and social values.	<p>The proposed development is located, designed and operated to address and minimise potential impacts on environmental, economic and social values.</p> <p>Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.</p> <p>To the extent that overall outcome a) changes between the TLPI and the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment, which also seeks that wind farms are located to take advantage of viable wind resources.</p>
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.	<p>The proposed wind farm and associated infrastructure takes account of and is appropriately sensitive to existing development, environmental matters, and landscape and scenic values. These matters are addressed in detail in Chapter 5.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p> <p>The changes to overall outcome b) between the TLPI and the Planning Scheme Amendment are minor.</p>
c) Wind farm assessment utilises and takes comprehensive account of recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.	<p>The proposed wind farm has referred to scientific knowledge and standards. The potential impacts of the wind farm have been considered in this assessment.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p> <p>To the extent that overall outcome c) changes between the TLPI and the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment, which seeks that assessment considers both positive and negative impacts.</p>
d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.	<p>The proposed wind farm and associated infrastructure is compatible with the vacant rural nature of the site. Future preferred settlement patterns anticipate limited change to the surrounding rural landscape. The assessment identifies that the wind farm can be managed to ensure compatibility with surrounding uses and dwellings.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind</p>

	<p>Farm Code below.</p> <p>The changes to overall outcome d) between the TLPI and the Planning Scheme Amendment are minor.</p>
<p>e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.</p>	<p>The proposed wind farm is not located within areas of significant ecological value, as this is not a term defined by any applicable statutory planning instrument. An assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) are addressed in section 6.4.</p> <p>The applicant acknowledges and this assessment identifies that proposed development may have adverse ecological impacts, including on fauna populations. In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur. The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed or mitigated pursuant to the range of 'environmental management plans' being appropriately implements (as per conditions recommended to be imposed in Appendix A).</p> <p>However, the overall outcome refers to "do not adversely impact on ecological processes", and some impact is expected (even though the impacts will be appropriately managed or mitigated).</p> <p>The overall outcome must be considered in the context of the broader Wind Farm Code – it is expected that any wind farm will have some impact on ecological processes or fauna populations, due to its very nature and change to the area, and that this should be minimised in terms of the wind farm use. In this context, the proposed development may not have an adverse impact having regard to the expected operation of wind farms and that the TLPI 01/11 which identified the Arriga locality as a location with a planning expectation for wind farms (by virtue of a reduced level of assessment and associated mapping).</p> <p>Further, S4 of the Wind Farm Code provides more precise detail as to the assessment of ecological matters, and the proposed development complies with the applicable Probable Solution. As such, it follows that</p>

	<p>compliance with the corresponding Overall Outcome can be satisfied.</p> <p>Overall outcome e) changes between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it seeks that “where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations”. The proposal complies with the amended overall outcome.</p> <p>As such, to the extent that there may be a conflict, the development is supported by sufficient grounds, that include:</p> <ul style="list-style-type: none"> the TLPI is out of date due to its age and the changing circumstances reflected by the more up to date provisions of the Planning Scheme Amendment and the new terminology and assessment provisions of the SPP and Matters of State Environmental Significance (which enable impacts to be managed or mitigated); there is an expectation for wind farms in landscape / rural areas by the FNQRP and in the Arriga locality by the TLPI; and other sufficient grounds as presented in chapter 7 of this report. <p>Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.</p>
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	<p>The proposed wind farm will manage amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions within acceptable limits, or can manage these matters subject to implementation of relevant conditions (refer to Appendix A).</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	<p>The road network intended to be used for transportation of infrastructure and equipment are of a suitable standard, and will be conditioned to be suitably maintained.</p> <p>Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.</p>
h) The operation of the wind farm is controlled by site-specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the	<p>The operation of the wind farm will be controlled by site-specific management plans, as per recommended condition (Appendix A).</p> <p>Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.</p>

operational life of the wind farm.	
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	The wind farm is able to be connected to the existing high-voltage electricity transmission line. Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Wind farms are located within an economically viable wind resource.	The applicant has provided information that advises that the proposed wind farm is located within an economically viable wind resource. To the extent that overall outcome e) changes between the TLPI and the Planning Scheme Amendment, in that it is removed from the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment.
k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	It is a recommended condition of approval that site rehabilitation be carried out at the end of the operational life of the proposed wind farm. Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

Specific Outcomes and Probable Solutions

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1, as reproduced and assessed below.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed. The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from

<p>direct, non-direct and cumulative impacts in relation to environment, economic and social impacts.</p> <p>b) Wind farms are readily connected to existing, nearby high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with an economically viable wind resource.</p>		<p>wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is concluded that sufficient account of impacts have been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed within access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farm's impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Refer to Chapter 5 for an assessment summary. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended</p>
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		<p>conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict. Shadow flicker and other amenity matters have been assessed and are considered not to cause unacceptable conflict with nearby residents.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B,</p>
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		<p>WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro-siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity.</p> <p>An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>The conclusions in that summary include the following.</p> <ul style="list-style-type: none"> • The Mt Emerald – Walsh

		<p>Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.</p> <ul style="list-style-type: none">• The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. Therefore, whilst not 'natural' and representing a change to the
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		<p>landscape, the impact is nonetheless acceptable.</p> <ul style="list-style-type: none">• It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. There is an expectation for wind farms in landscape / rural areas by the FNQRP and particularly in the Arriga locality by the TLPI – and it is expected that the wind farms would be in elevated locations. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.• It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites.• In this regard the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting
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		<p>the expected siting requirements for wind farms, and the proposed wind farm will not result in unacceptable visual impacts on view scapes.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal. These matters are recommended to be imposed by conditions.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts.</p>
<p>S4 Ecological Impact</p> <p>Wind farms avoid unacceptable impacts on the ecology and sustainability of flora or fauna populations.</p>	<p>PS4</p> <p>a) Wind farms avoid areas of High Ecological Significance as identified in the Far North Queensland Regional Plan 2009-2031 and determined by Department of Environment and Resource Management.</p> <p>b) Where avoidance is not possible, impacts are minimised.</p>	<p>The probable solution seeks that wind farms avoid Areas of High Ecological Significance as identified in the FNQRP, or where avoidance is not possible, impacts are minimised. The Areas of High Ecological Significance are:</p> <ul style="list-style-type: none"> • Protected areas – the site is not in a protected area; • World heritage areas – the site is not in a world heritage area; • Wetlands – the development activity is not in a protected wetland; • Protected areas – not applicable, the site is not in a protected area; • World heritage areas – not applicable, the site is not

		<p>in a world heritage area;</p> <ul style="list-style-type: none"> • Wetlands – not applicable, the development activity will not occur in a protected wetland; • Terrestrial area – <ul style="list-style-type: none"> ○ habitat of rare or endangered species including essential habitat of the Southern cassowary and mahogany glider – the site contains habitat for threatened wildlife species including some mapped areas of essential habitat for the Southern Cassowary; ○ habitat of rare or endangered species including regional ecosystems with a Vegetation Management Status of 'endangered' or 'of concern' and 'non woody' regional ecosystems – the site contains regional ecosystems identified as being 'of concern'; ○ Significant coastal dune systems – the site is not in a significant coastal dune system; and ○ Einasleigh Uplands bioregion – the site is located on the eastern edge of the Einasleigh Uplands bioregion. <p>Compliance with the probable solution satisfies the specific</p>
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		<p>outcome as impacts are minimised through various measures to be implemented, in those occasions where avoidance is not possible. Notwithstanding, compliance with the specific outcome is also achieved as the development avoids unacceptable impacts on the ecology and sustainability of flora or fauna populations, as any potential impacts will be managed and monitored (including through imposition of conditions in Appendix A).</p> <p>The assessment of the ecological material is further set out in Section 5.3 of this report.</p> <p>The specific outcome and probable solutions change between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it refers to areas of state environmental significance, rather than more ambiguous terms, and reinforces that the TLPI is out of date.</p>
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with Queensland Government recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p>	<p>PS5 No probable solution provided.</p>	<p>The specific outcome and probable solutions change between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it refers more broadly to recognised standards (rather than just Queensland Government standards, of which there are limited), and provides an editor's note that refers to the Environmental Protection (Noise) Policy 2008 and the New Zealand standard NZA6808:2010.</p> <p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An</p>

<p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>		<p>Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). An Information Request response was submitted by the applicant on 10 September 2014.</p> <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of</p>
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		<p>Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p> <p>The proposal satisfies the Specific Outcome as it is (or can be via conditions) located, designed, constructed and operated in accordance with Queensland Government recognised standards with respect to noise emissions (of which there are limited), and noise emissions resulting from the wind farm are not expected to (including through management via conditions) result in unacceptable levels of nuisance, risk to human health or wellbeing, or ability to sleep or relax.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located in accordance with</p>	<p>PS6</p> <p>a) Modelled blade shadow flicker impacts do not exceed 30 hours</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118</p>

<p>national and/or State government recognised standards with respect to shadow flicker.</p> <p>b) Shadow flicker from wind turbines that potentially impact on an urban and rural development does not result in an unacceptable level of annoyance.</p>	<p>per annum and 30 min/day at existing urban or rural developments.</p> <p>b) Measured blade shadow flicker does not exceed 10 hours per annum at existing urban and rural developments.</p>	<p>receptors modelled, only 4 where predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre-existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>The applicant submitted an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff dated 28 July 2011. This report undertook initial investigation that concluded the electromagnetic interference is within reasonable levels,</p>

		<p>however it identifies that further assessment will be required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known. This is recommended to be managed by way of conditions.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely to be subject to change prior to construction occurs.</p>

<p>drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post-construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management

	<p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4m.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than 1 month.</p>	<ul style="list-style-type: none"> • Erosion and Sediment Control Plan • Stormwater management Plan <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled and maintained.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p>

		Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; (iii) the sustainable ecological functioning of the site is maintained or improved; (iv) any agricultural function is restored; (v) wind farm infrastructure is removed from the site. 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and replacing soil over foundations; • removing all material from site for recycling; • where tracks are of no use to the land owner, the land reinstated; • underground and above ground cabling removed; • the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>

The proposed wind farm development demonstrates compliance with the overall outcomes and specific outcomes of the Wind Farm Code of the TLIP 01/11, and therefore complies with the Wind Farm Code.

To the extent that conflict may be considered to exist (overall outcome e), the development is supported by sufficient grounds as presented in **Chapter 7** of this report.

6.7 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 05 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed

within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay codes identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment is provided below against the relevant codes of the Mareeba Shire Planning Scheme, including those in effect when the application was properly made (and which continued to have effect throughout the application process) and those which subsequently came into effect. .

6.7.1

Rural Zone Code

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type</p>

	25 metres from any Railway corridor land.	<p>proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non-compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the instrument (definitions, levels of assessment and the Wind Farm Code). The Wind Farm Code anticipates that wind farms will locate in rural areas, and it is implicit that wind farms will have height to enable access to viable wind resources (i.e. taller than houses and rural structures).</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. The potential conflict arises because the Rural Zone Code was drafted prior to the Wind Farm Code(s), and does not anticipate the height of wind farm turbines expected by the Wind Farm Code(s).</p> <p>The potential conflict is appropriate because:</p> <ul style="list-style-type: none"> • pursuant to s326(c)(ii) of the SPA, the potential conflict arises because of a conflict between two or more aspects of the Planning Scheme, being the Rural Zone Code and the Wind Farm Code (which has been given weight and reflects the earlier TLPI), in that the Wind Farm Code anticipates wind farms in
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		<p>rural areas with considerable turbine height; and</p> <ul style="list-style-type: none"> • pursuant to section 326(b), there are sufficient grounds to justify the decision, including that land use policy 6.3.1 of the FNQRP (which is not reflected in the planning scheme and is a higher order planning instrument) encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i>. Additional grounds are included in Chapter 7. <p>The Rural Zone Code of the Planning scheme is out of date, as the TLPI (and the subsequent inclusion of the Wind Farm Code in the planning scheme) and FNQRP promote wind farms in appropriate locations and recognise wind farms as a legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme when read as a whole and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing</p>

	<p>agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is considered that the proposed wind farm is not incompatible with surrounding agricultural uses and is not expected to impact ongoing agricultural activities.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code and found to be acceptable.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to

	<p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For all Lots</p> <p>PS4.3 Vegetation is retained on land with a slope of 15% or greater.</p>	<p>avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code and found to be acceptable.</p>
For Code Assessable Development		
<p>S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.</p>	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Environmental Management Plan (imposed as a condition in Appendix A).</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long 	<p>PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.</p>	<p>Not Applicable – the site is not in the Southedge Potential Tourist Area.</p>

<p>term; and</p> <p>(iii) Do not pose a risk to human health or the amenity of the locality; and</p> <p>(iv) Provided equitably.</p>		
<p><i>For Mona Reserve as identified on Map Z10 as Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <p>(i) Cost effective over their life cycle; and</p> <p>(ii) Minimise potential adverse environmental impacts in the short and long term; and</p> <p>(iii) Do not pose a risk to human health or the amenity of the locality; and</p> <p>(iv) Provided equitably.</p>	<p>PS7 Development is carried out in accordance with a Plan of Development and Land Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	<p>Not Applicable – the site is not in the Mona Reserve.</p>
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <p>(i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and</p> <p>(ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the</p>	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S9 is not applicable.</p>

<p>site; and</p> <p>(iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and</p> <p>(iv) Without impact upon the visual and landscape setting of the Shire.</p>		
<p>S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.</p>	<p>PS10 No probable solution prescribed.</p>	<p>The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.</p>
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
<p>S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.</p>	<p>PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and</p> <p>PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.</p>	<p>Not Applicable.</p>
For Code Assessable Development		
<p>S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.</p>	<p>PS2 No probable solution prescribed.</p>	<p>Not Applicable.</p>
4.80 RECONFIGURING A LOT		
<p>Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.</p>		

The proposed wind farm development demonstrates compliance with the majority of the specific outcomes of the Rural Zone Code.

To the extent that conflict may be considered to exist (specific outcome S1), the conflict arises because of a conflict between two or more aspects of any one relevant instrument (s326(c)(ii) of the SPA), and the development is supported by sufficient grounds (s326(b)) as presented in **Chapter 7** of this report.

6.7.2 **Division 5 - Car Parking Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use.	AS1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	Not Applicable.
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a	Not Applicable.

	forward direction.	
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable condition for parking; and AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and AS7.3 Disabled car parking spaces are signed posted.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or AS8.2 Shade structures are provided over 40% of the car parking spaces.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Car Parking Numbers</i>		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request. Assumptions in respect of traffic generation and the

		<p>maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.</p>
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Bicycle Parking</i>		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
<i>Movement and Access</i>		
S13 Access is safe,	AS13.1 Lots with two or more	A Traffic Impact Assessment

<p>functional, convenient and located in accordance with the Road Hierarchy Map R3.</p>	<p>street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire</p>
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		<p>Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.7.3 **Division 17 - Filling and Excavation Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	AS1 Filling and excavation is no greater than two (2) metres in height or depth.	<p>It is considered unlikely that significant filling and excavation will occur, however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared</p>

		plants.
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either: (i) A retaining wall entirely within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or (ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.	The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared. The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project, covering discrete construction areas and which will account for the changing surface configuration at various stages of construction. Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained. The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan. Conditions that will mitigate the impacts of the proposed development have been included in Attachment A . Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.
S4 Flooding and Drainage Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or	AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and AS4.2 Filling and excavation	Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific

surrounding land or road reserves.	<p>does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>
<p>S5 Environment</p> <p>Filling or excavation does not result in a reduction of the water quality of receiving waters.</p>	AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.	Refer to S4 above.
<p>S6 Environment</p> <p>Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.</p>	AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.7.4 Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Cultural Heritage Places</p> <p>(a) significant elements of the mining history of Mareeba Shire are conserved; and</p> <p>(b) buildings, structures and</p>	PS1 No probable solution provided.	There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.

<p>operational works which demonstrate significant historical periods in the development of the Shire are conserved; and</p> <p>(c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.</p>		<p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area,</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora</p>

<p>including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>		<p>species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p> <p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <p>(i) habitat; or</p> <p>(ii) water quality; or</p> <p>(iii) landscape quality.</p> <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <p>(i) water quality, and</p> <p>(ii) fauna habitat corridor, and</p> <p>(iii) the retention of undisturbed vegetation , or</p> <p>(iv) revegetation of appropriate areas with local endemic species.</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p>	<p>PS4 No probable solution provided.</p>	<p>Not Applicable as there are no buildings and places of Local Heritage Significance on the site.</p>

(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.		
S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	PS6 No probable solution provided.	Not Applicable as there are no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.7.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.

<p>or bats; or</p> <p>(iii) Air turbulence; or</p> <p>(iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and</p> <p>(b) Development is located and designed to protect the function of aviation facilities from:</p> <p>(i) Physical obstructions; or</p> <p>(ii) Electrical or electromagnetic interference with aircraft navigation systems.</p>	<p>keeping, handling or</p> <p>acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground,</p> <p>drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as</p> <p>delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and</p> <p>collected so that they are not accessible to wildlife.</p> <p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome</p>	<p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>as delineated on Planning Scheme</p> <p>Map A1. PS1.7 (i) Works or uses are not located within the</p> <p>500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>PS1.7</p> <p>(i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Biboohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Biboohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Biboohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in</p>	
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	<p>height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar facility that involve any building, structures or work above 950 AHD.</p>	
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6.7.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m2:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation¹⁸ of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that 	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the</p>

<p>purposes.</p>	<p>elements of the development least susceptible to fire are sited closest to the bushfire hazard.</p> <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • Personnel on site who understand how to respond quickly to fire and use equipment available on site. • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than</p>	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p>

	<p>50m2, each lot has:</p> <ul style="list-style-type: none"> a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, swimming pool). <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> a minimum cleared width of 20 metres; and a constructed road width and weather standard complying 	<ul style="list-style-type: none"> Bushfire Risk Management Plan Ecological Fire Management Plan Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>
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	<p>with local government standards.</p> <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; <p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow</p>	
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	<p>burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de-sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads. <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will</p>

		ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.
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6.7.7 **Division 23 Wind Farm Code**

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There are some changes between the wording of the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code in the TLPI 01/11 (in effect at the time of lodgement) and the Wind Farm Code contained in the Planning Scheme Amendment 1/11 – Wind Farms (in effect at the commencement of the decision stage). To the extent there are differences, it is considered appropriate to place weight on the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms as it represents more recent and current thinking than the TLPI (which has expired).

Section 6.2 of the Wind Farm Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code (and it follows, with the intent of the Code).

Overall Outcomes

The purpose of the Wind Farm Code is to achieve the following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	<p>Wind farms are to be located in areas with a viable wind resource, usually in an elevated located, and the position, design and operation is consequent to that location.</p> <p>Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource.</p> <p>The proposed development is positioned, designed and operated to address and mitigate potential significant adverse impacts on environmental, economic and social values.</p> <p>Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.</p>
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts	<p>The proposed wind farm and associated infrastructure takes account of and is appropriately sensitive to existing development, preferred settlement patterns (expected to be rural for the foreseeable future), environmental matters, and landscape and scenic values. These matters are addressed in detail in Chapter 5.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>

associated with wind farms.	
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	<p>The proposed wind farm has referred applicable standards in guiding design and operation, and such standards are contemplated by this assessment. The potential positive and negative impacts of the wind farm have been considered and balanced in this assessment.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p>
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	<p>The proposed wind farm and associated infrastructure is can managed to mitigate adverse impacts on existing and future surrounding uses and development.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p>
e) Where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	<p>The proposed wind farm is not located within areas of state environmental significance, as this is not a term defined by any applicable statutory planning instrument. An assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) are addressed in section 6.4.</p> <p>Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.</p>
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	<p>The proposed wind farm will manage amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions within acceptable limits, or can manage these matters subject to implementation of relevant conditions (refer to Appendix A).</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	<p>The road network intended to be used for transportation of infrastructure and equipment are of a suitable standard, and will be conditioned to be suitably maintained.</p> <p>Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.</p>
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	<p>The operation of the wind farm will be controlled by site-specific management plans, as per recommended conditions (Appendix A).</p> <p>Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.</p>
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	<p>The wind farm is able to be connected to the existing high-voltage electricity transmission line.</p>

	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	It is a recommended condition of approval that site rehabilitation be carried out at the end of the operational life of the proposed wind farm (refer Appendix A). Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

Specific Outcomes and Probable Solutions

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment, economic and social impacts. b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts. c) The siting of wind farms and associated infrastructure takes	PS2 No probable solution provided.	<p>a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) potential impacts can be</p>

<p>account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Refer to Chapter 5 for an assessment summary. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers</p>
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		<p>Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict with nearby residents.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and</p>
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		<p>10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity.</p> <p>An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>The conclusions in that summary include the following.</p> <ul style="list-style-type: none"> The Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern

		<p>8km (approximately) of the Great Dividing Range, as locally expressed.</p> <ul style="list-style-type: none"> The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. There
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		<p>is an expectation for wind farms in landscape / rural areas by the FNQRP and particularly in the Arriga locality by the TLPI – and it is expected that the wind farms would be in elevated locations. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> • The proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites. • In this regard the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the expected siting requirements for wind farms, and the proposed wind farm will not result in unacceptable visual impacts on view scapes. Therefore, whilst not 'natural' and representing a change to the landscape, the visual impact is nonetheless acceptable. <p>A condition requiring the submission and agreement in</p>
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		<p>respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal. These matters are recommended to be imposed by conditions.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>c) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>d) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>Probable solution S4 seeks that wind farms should not be located in areas of state environmental significance. Specific outcome S4 also refers to area of state environmental significance in terms of seeking that that wind farms do not have significant adverse impacts.</p> <p>The proposed wind farm is not located within areas of state environmental significance, as this is not a term defined by any applicable statutory planning instrument. As such, compliance with P4 and S4 is achieved.</p> <p>In any case, an assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) is addressed in section 6.4.</p> <p>In terms of Matters of State Environmental Significance, an ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10</p>

		<p>endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified as Matters of Environmental Significance in the RPS report. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth is applicable.</p> <p>The assessment of the ecological material is set out in Section 5.3 of this report and it is concluded that the development is not expected to have significant adverse impacts on ecological values and processes or the sustainability of fauna populations, as a result of management and mitigation measures proposed to be implemented (and as imposed via recommended conditions)..</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values and processes.</p>
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p>	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted</p>

<p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>		<p>by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind</p>
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		<p>farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard.</p> <p>Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p> <p>The proposal satisfies the Specific Outcome as it is (or can be via conditions) located, designed, constructed and</p>
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		operated in accordance with recognised standards with respect to noise emissions, and noise emissions resulting from the wind farm are not expected to (including through management via conditions) result in unacceptable levels of nuisance, risk to human health or wellbeing, or ability to sleep or relax.
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is</p>

		considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	PS7 No probable solution provided.	<p>The applicant submitted an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff dated 28 July 2011. This report undertook initial investigation that concluded the electromagnetic interference is within reasonable levels, however it identifies that further assessment will be required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known. This is recommended to be managed by way of conditions.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the</p>

<p>construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all</p>

<p>out at acceptable times.</p>	<p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include</p>

Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.	monitoring programs; (iii) a Maintenance Management Plan	management techniques and ongoing monitoring programs that will be used. A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable. Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.
S11 Signage Signage and advertising devices are limited in scale and confined to site and development interpretation.	PS11 No probable solution provided.	The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan. Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.
S12 Decommissioning & Rehabilitation Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.	PS12 The site is rehabilitated such that: (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; (iii) the sustainable ecological functioning of the site is maintained or improved; (iv) any agricultural function is restored; (v) wind farm infrastructure is removed from the site.	The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site. Decommissioning the site would involve: <ul style="list-style-type: none">• dismantling the turbines;• removing towers and replacing soil over foundations;• removing all material from site for recycling;• where tracks are of no use to the land owner, the land reinstated;• underground and above ground cabling removed;• the substation and associated buildings

		would be removed. It is considered reasonable to include a condition requiring a site restoration plan. Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.
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The proposed wind farm development demonstrates compliance with the overall outcomes and specific outcomes of the Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms), and therefore complies with the Wind Farm Code.

The Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms) represents a shift in planning thought from the Wind Farm Code in TLPI 01/11, and is therefore given weight in this assessment, to the extent of any differences to the Wind Farm Code of the TLPI 01/11. It is therefore particularly relevant that the proposed wind farm development complies with the Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms).

7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

Section 324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326(1)(b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to Code Assessment.

An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI identifies that the relevant assessment criteria for development is the Wind Farm Code included in the TLPI, the Rural Zone Code, Filling and Excavation Code, and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport and Aviation Facilities Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions of the Wind Farm Code contained within the TLPI 01/12 – Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11).

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, this report undertakes an assessment against the planning framework in place at the time the application was properly made (as per s313 of the SPA) and has given weight to later planning instruments, codes, laws or policies, including the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

In accordance with section 313 of the SPA, an assessment has been undertaken against the following matters or things in effect at the time the development application was properly made on 30 March 2012, including:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies;
- the Mareeba Shire Planning Scheme (incorporating Amendment No 1 of 2007); and
- Temporary Local Planning Instrument 01/2011 (Wind Farms).

In accordance with Section 317 of the SPA the assessment of the proposed wind farm development application has also given weight to the following planning instruments, codes, laws or policies that came into effect after the application was made:

- the State Planning Policy; and
- the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

The assessment against the above planning instruments, codes, laws and policies, to the extent relevant for the application requiring Code Assessment (refer **Chapter 6**), identifies that the proposed wind farm is considered, subject to appropriate conditions, to:

- comply with the applicable State regulatory provisions;
- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP, which took effect subsequent to the application being properly made;
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Wind Farm Code of the TLPI 01/11, noting potential conflicts below;
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Rural Zone Code, Filling and Excavation Code, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport and Aviation Facilities Overlay Code of the Mareeba Shire Planning as in effect at the time the application was properly made (Planning Scheme incorporating Amendment No 1 of 2007) and in effect at the time the decision stage commenced (Planning Scheme Incorporating Amendment 1/11 – Wind Farms), noting potential conflicts below; and
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Wind Farm Code of the Mareeba Planning Scheme (Incorporating Amendment 1/11 – Wind Farms), which took effect subsequent to the application being properly made.

There are two occasions where a potential conflict may arise with the applicable codes. These are Overall Outcome e) of the Wind Farm Code in TLPI 01/11 and Specific Outcome S1 of the Rural Zone Code. To the extent that there is a conflict with these provisions, the development is supported by sufficient grounds stated below. No other potential conflicts have been identified, but to the extent that any may exist, the following sufficient grounds apply equally.

In terms of the non-compliance with Specific Outcome S1 of the Rural Zone Code, pursuant to s326(c)(ii) of the SPA, the potential conflict arises because of a conflict between two or more aspects of the Planning Scheme, being the Rural Zone Code and the Wind Farm Code (which has been given weight and reflects the earlier TLPI), in that the Wind Farm Code anticipates wind farms in rural areas with considerable turbine height notwithstanding the height provisions stated in Specific Outcome S1 of the Rural Zone Code. In respect of this conflict, the Wind Farm Code would best achieve the purpose of the Planning Scheme when read as a whole, pursuant to section 326(1)(c)(ii).

Sufficient grounds for the proposed development are as follows.

- The TLPI 01/11 is out of date due to the shift in planning thought evidenced by an amendment to the planning scheme (Amendment 01/11 – Wind Farms), which recognises the importance of wind farms and supports their development. The changes to terminology in the Wind Farm Codes between the TLPI 01/11 and Planning Scheme Amendment 01/11 – Wind Farms enable a more appropriate assessment of wind farms.
- The TLPI 01/11 is out of date due to its changing circumstances, in terms of ecological matters and terminology, in particular that 'Matters of State Environmental Significance' pursuant to the State Planning Policy represent the basis for current environmental assessment, with potential for management and mitigation of potential impacts.
- The Far North Queensland Regional Plan recognises wind farms as a legitimate land use, including in rural areas, and emphasis is placed on promoting renewable energy. The Far North Queensland Regional Plan is not appropriately reflected in the Mareeba Planning Scheme and is a higher-order planning instrument.
- The proposed wind farm development involves significant and robust economic state interests, as identified by Foresight Partners.
- The proposed wind farm development is expected to contribute to renewable power generation, with resultant economic, ecological and social benefits.

7.2 Ecological Issues

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC Act assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES).

It is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. <p>(c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine</p> <p>(d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities</p> <p>(e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines</p> <p>(f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority,</p>	<p>Prior to the commencement of site / operational / building work</p>

<p>(g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and</p> <p>(h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including:</p> <p>(i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria</p> <p>(j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites).</p> <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>
<p>Northern Quoll Management</p>	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <p>(a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.</p> <p>(b) A monitoring program of additional utilisation studies prior to construction;</p> <p>(c) requires surveys to be undertaken during breeding seasons to ascertain:</p> <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are 	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

<p>warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council.</p> <p>(d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);</p> <p>(e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):</p> <p>(ii) Construction Phase Management Procedures:</p> <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	
<p>4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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Plan/Document number	Plan/Document name	Date																														
PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013																														
PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013																														
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Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012																														
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Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014																														
Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <p>(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
Access Tracks and Roads	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> (a) the Civil Aviation Safety Authority; (b) the Department of Defence (RAAF Aeronautical Information Service); (c) Airservices Australia; (d) any aerodrome operator within 15 km of the outside property boundaries of the site; (e) the Aerial Agriculture Association of Australia; (f) any organisation responsible for providing air ambulance services in the area. 	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <ul style="list-style-type: none"> (a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads; (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and 	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans	
<p>19. Submit for approval by the Council an environmental management plan.</p> <p>The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):</p> <ul style="list-style-type: none"> • a construction and work site operational management plan • a sediment, erosion and storm water management plan • a hydrocarbon and hazardous substances plan • a bushfire risk management plan and emergency evacuation plan • a threatened species management plan • a weed and pest management plan • a rehabilitation plan • a habitat clearing and management plan • an ecological fire management plan • a cultural heritage management plan • an environmental management plan training program • an environmental management plan reporting program <p>The environmental management plan must also address implementation and periodic review</p> <p>The environmental management plan:</p> <p>(a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;</p> <p>(b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;</p> <p>(c) may be prepared in sections or stages;</p>	<p>Prior to the commencement of site / operational / building work</p>

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
Landscaping	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
Site Security	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

14012
29 September 2014

Ms Jane McInnes
Senior Planner
Department of State Development,
Infrastructure and Planning
PO Box 15009
CITY EAST QLD 4002

Dear Ms McInnes

RE: ECONOMIC REVIEW OF MOUNT EMERALD WIND FARM

As requested we have completed our review of the additional information provided by the applicant, Ratch Australia Corporation (RAC) and Port Bajool, in response to the Minister's request for additional information in relation to the proposed Mt Emerald wind farm.

The purpose of the present report is to:

- review the application material and information response relevant to economic matters; and
- provide a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters. Any conditions which should be included on the decision notice should be provided.

As part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis*—Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request*—Ratch Australia & Port Bajool, September 2014.

The latter document addresses mainly environment and technical aspects of the request for information, but also has a section on economic issues relevant to this economic review.

In May 2014, Foresight Partners reviewed application material which included the *Mount Emerald Wind Farm Economic Impact* report prepared by Cummings Economics (April 2013) with respect to economic state interests. Our review concluded that the proposed wind farm development involved significant and robust economic state interests, but that the applicant should be requested to update the economic analysis to:

1. "Provide a brief overview and context for this development within the broader FNQ and local (Mareeba Shire or Tablelands) economy, identifying key industries and employment, unemployment rates, basic socio-economic characteristics of its people

or households and population growth projections. This information is readily available from Council's published information and ABS data.

2. Provide an overview analysis of Queensland's renewable energy markets and mix, with particular emphasis on the current and future role of wind in meeting renewable energy targets, and the proposed development's potential contribution in meeting state and national renewable energy targets.
3. Provide a discussion of the state of play in the regulatory environment for renewable energy and outline the implications for the project's development prospects (best case – worst case) in light of the current high level of uncertainty. (*Proposed Mt Emerald Wind Farm, Arriga, Mareeba Shire, Economic State Interests*, page 16)"

The first two points are addressed by the Jacobs report, with the third point addressed as part of the RAC report.

Jacobs Report

The original economic impact report prepared by Cummings Economics (April 2013) for the proposed wind farm, at 11 pages, was narrowly focussed and did not provide an adequate local context for the project, or a bigger picture context with respect to the renewable energy market in Queensland. The Jacobs report addresses these information gaps.

The original Development Application is for a maximum of 75 wind turbines. The Cummings Economics report indicated the project was to have 70 turbines. The Jacobs report indicates the number of turbines is now 63. The change in the number of turbines has no material effect or implications for the application with respect to economic considerations.

Section 2 of the Jacobs report provides a short overview of broader economic policies and strategies touching upon renewable energy and economic development as relevant to the proposed wind farm. It concludes with statements that the project supports or aligns with the vision and objectives of these plans and, in particular, the *Far North Queensland Regional Plan 2009-2031*, as it promotes a new, sustainable industry in Far North Queensland, generates employment opportunities and addresses an increase in energy demand.

Section 3 describes the existing socio-economic environment of the study area, which comprises the Mareeba and Atherton Statistical Area 2s (SA2). Comparative or benchmark 2011 Census and other data for the Tablelands Local Government Area, Far North Queensland and Queensland are also presented. Figure 1-1 in the Jacobs report shows these various areas, but the map scale is too small to show the Mareeba and Atherton SA2 areas. To assist we attach a larger scale map zooming in on these area for greater clarity.

This section provides a discussion of key demographic characteristics of the study area, including:

- current population numbers and projections of future populations – the study area had a population of 20,965 at June 2011, and this is projected to grow by 6,865 residents to 27,821 by 2036;
- family composition and housing details (tenure status and housing costs);
- a brief discussion of the 2011 Socio-economic Indices for Areas (SEIFA) decile score for the Tablelands area. Tablelands scored 3 (out of ten), with lower scores generally representing areas of disadvantage (relative to other areas of Queensland/Australia). Although not reported, the Mareeba SA2 scored even lower (2);
- personal and household incomes (low relative to Queensland and Far North Queensland);

- labour force and employment (unemployment is high, particularly in Mareeba, but declining relative to Queensland);
- industries of employment (dominated by primary industries, retail trade and health care and social assistance); and
- local business composition (Tablelands and Cairns areas).

The report provides a table (Table 10) showing the changes in gross regional product since 2002, with the Mareeba area exhibiting more volatility over time (mainly since 2007) relative to Queensland. It notes that the project's construction phase (two years) provides an opportunity to lift the region's gross regional product.

Section 4 of the report addresses item 2, and provides an overview of Queensland's renewable energy market, particularly regarding the current and future role of wind in meeting energy targets. It briefly discusses the Federal Government's renewable energy targets (large scale renewable energy targets or LRET, and the small scale renewable energy scheme or SRES).

The report refers to the *Queensland Renewable Energy Plan 2012* (QREP) as the State Government's renewable energy policy and that, among its goals for 2020, wind is expected to generate 600 MW of renewable energy. It is our understanding that the QREP document and its goals are not currently Queensland Government policy.

The report provides a discussion of the current mix of Queensland's renewable energy generation and the relative (in)significance wind generation plays in its overall large-scale renewable capacity (12MW out of 1,127MW). Bagasse and hydro are the State's key renewable energy generation sources. It notes that Queensland's renewable energy resources are higher in cost to develop relative to other states (especially Victoria and South Australia) and acknowledges that Queensland does not have the same quality of wind resources of southern states, which have substantially higher capacity factors (resulting in lower cost per unit of generation).

Nevertheless, the report highlights that wind capacity in Queensland will play a vital role in meeting QREP 2012 objectives (assuming this is Queensland Government policy) as bagasse and wind turbines are the two large scale generation technologies that can deliver large volumes of renewable energy generation. It states that Queensland's wind resources can play an important part in meeting the Federal Government's LRET target.

The Jacobs report provides satisfactory responses to items 1 and 2 of the information request. Its discussion of socio-economic characteristics of the local and regional areas provide the local context for the proposed wind farm development, and the market overview provides a better picture of how it fits in with, and outlines its potential contribution to, Queensland's future renewable energy generation capacity.

Development Application Response Report

This report's discussion under its heading "B" Economic uses a summary of the Jacobs report's response to items 1 and 2. It then addresses item 3 concerning the current state of play in the regulatory environment for renewable energy and potential implications for the proposed wind farm development.

It acknowledges the current uncertainty impacting the market for future renewable energy projects (not just wind) and discusses the importance of government incentives needed to support a more rapid transition to less harmful and less well developed technologies as wind and solar generation. It provides a short discussion essentially calling for a "level playing

field” and points out that Australian State and Federal Governments provide subsidies to the coal industry in the form of coal terminal lease fees and the provision of enabling infrastructure (road and rail) to transport coal to power stations and ports (for export), as well as tax credits for diesel used in trucks and machinery.

The report is realistic and upfront about the impacts of potential major changes in the regulatory environment upon the proposed Mt Emerald wind farm, noting that:

“The removal of the RET scheme would see the project become uneconomic in the short-term (10 years), as a suitable power price for the energy generated by the wind farm would not be available to support a viable financial case” (page 4).

It also notes that, if fuel sources such as coal and gas continue to increase in cost resulting in increases in the base price for electricity generation, then it is possible the project will become viable at some point in the future.

Our Conclusions and Recommendations

Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant’s discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for the project. Regulatory uncertainty remains a key variable in the project’s economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for the renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.

The uncertainty over the Renewable Energy Targets at the federal level for new electricity generation projects may not be settled for some time, or may even be discontinued for new projects. If the latter proves to be the case, it may be ten years (according to the applicant) before the project could compete with coal and gas. Although more properly a planning matter, a condition extending the currency period of the approval of the wind farm project should be considered, if possible and practical, given the present circumstances.

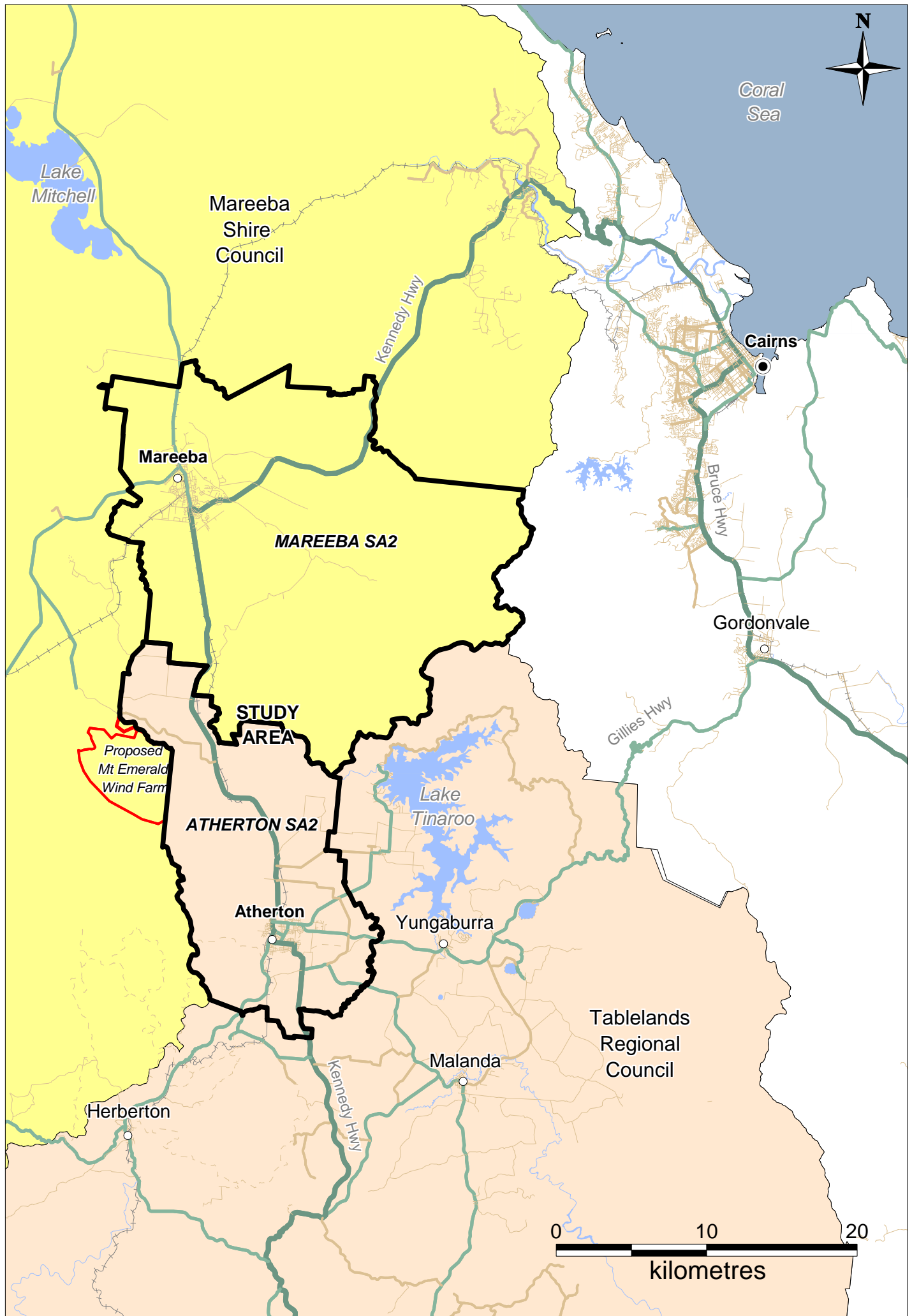
We trust the above review and recommendations are sufficient for the Minister’s, and the Department’s, decision-making process regarding the proposed Mt Emerald wind farm development. Please do contact the undersigned should your require any further input on this matter.

Yours faithfully

Refused under section 47(3)(b) of the RTI A



Figure: Proposed Mt Emerald Wind Farm Site and Mareeba and Atherton SA2s (Study Area)





Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Councillor Tom Gilmore
Mayor
Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880

Dear Councillor Gilmore

Ministerial Call In of a Development Application Mount Emerald Wind Farm, Arriga

Applicant: Mount Emerald Wind Farm Pty Ltd
Subject Site: Springmount Road and Kippin Drive, Arriga
Location: Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
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If you require any further assistance, please email: ministerial_call_in@dspdip.qld.gov.au.

Yours sincerely

JACKIE TRAD MP
DEPUTY PREMIER
Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Mr Peter Franks
Chief Executive Officer
Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880

Dear Mr Franks

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Mr Brian Millard
Senior Planner
Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880

Dear Mr Millard

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Refused under section 4

Mount Emerald Wind Farm Pty Ltd

Email: Refused under section 4@ratchaaustralia.com

Dear [Refused under section 4](#)

Ministerial Call In of a Development Application Mount Emerald Wind Farm, Arriga

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

The Honourable Steven Miles MP
Minister for Environment and Heritage Protection
and Minister for National Parks and the Great Barrier Reef
GPO Box 2454
BRISBANE QLD 4001

Dear Minister Miles

Ministerial Call In of a Development Application Mount Emerald Wind Farm, Arriga

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Yours sincerely

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

The Honourable Anthony Lynham MP
Minister for State Development and
Minister for Natural Resources and Mines
PO Box 15216
CITY EAST QLD 4002

Dear Minister Lynham

Ministerial Call In of a Development Application Mount Emerald Wind Farm, Arriga

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Ms Merryn York
Chief Executive
Powerlink Queensland
PO Box 1193
VIRGINIA QLD 4014

Dear Ms York

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Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Mr Shane Knuth MP
Member for Dalrymple
PO Box 1667
ATHERTON QLD 4883

Dear Mr Knuth

Ministerial Call In of a Development Application Mount Emerald Wind Farm, Arriga

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Subject Site: Springmount Road and Kippin Drive, Arriga
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Deputy Premier

Minister for Transport, Minister for Infrastructure,
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24 April 2015

Refused under section 47(3)(b) of the RTI Act.

Dear Refused unde

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Deputy Premier

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Our ref: MBN14/753

24 April 2015

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Yours sincerely

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100 George Street Brisbane
PO Box 15009 City East
Queensland 4002 Australia
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Our ref: MBN14/753

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Councillor Rosa Lee Long
Mayor
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PO Box 573
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Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

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Our ref: MBN14/753

24 April 2015

Refused under section 47(3)(b) of the R

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Mr Ian Church
Chief Executive Officer
Tablelands Regional Council
PO Box 573
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Dear Mr Church

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Dear Refused under

Ministerial Call In of a Development Application Mount Emerald Wind Farm, Arriga

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Subject Site: Springmount Road and Kippin Drive, Arriga
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Yours sincerely

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Our ref: MBN14/753

24 April 2015

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The Honourable Warren Entsch MP
Federal Member for Leichhardt
Email: warren.entsch.mp@aph.gov.au

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**JACKIE TRAD MP
DEPUTY PREMIER
Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade**

Level 12 Executive Building
100 George Street Brisbane
PO Box 15009 City East
Queensland 4002 Australia
Telephone +61 7 3719 7100
Email deputy_premier@ministerial.qld.gov.au



Hon Jackie Trad MP

Deputy Premier

Minister for Transport, Minister for Infrastructure,
Local Government and Planning and Minister for Trade

Our ref: MBN14/753

24 April 2015

Refused under section 47(3)(b) of the RTI Act

Dear Refused under section 47(3)(b) of the RTI Act

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President
Mareeba Chamber of Commerce
PO Box 1653
MAREEBA QLD 4880

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DSDIP - BRIEF FOR NOTING	Date: 24 April 2015
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SUBJECT: Supplementary briefing note on the perceived health impacts associated with wind farms - Proposed Mount Emerald Wind Farm, Arriga

RECOMMENDATION:

That you:

- note that the Victorian government amended the *Policy and Planning Guidelines for Development of Wind Energy Facilities* and reduced the setback distance for proposed wind turbines and existing dwellings without requiring the consent of the owner of the dwelling (**Attachment 1**)
- note that the National Health and Medical Research Council's (NHMRC) Statement: Evidence on Wind farms and Human Health, concluded that "there is currently no consistent evidence that wind farms cause adverse health effects in humans" (**Attachment 2**)
- note that Herberton Shire Council issued a development permit on 20 September 1999, for the Windy Hill wind farm, which contained a condition regulating external noise at the noise sensitive use (**Attachment 4**)
- note that on 23 April 2015, Queensland Health wrote to the department supporting the NHMRC's position statement that "*physical and mental health effects are unlikely to occur at distances greater than 1,500 metres*" (**Attachment 7**)
- note that internal departmental advice confirming that your assessment of the Mount Emerald Wind Farm call in may consider any relevant document (**Attachment 8**).

BACKGROUND:

You are currently considering a briefing note relating to a ministerial decision on a called in development application for the proposed Mount Emerald Wind Farm at Arriga (MBN14/753).

The department received a request from your office seeking the following:

- confirmation of the current setback requirements for proposed wind turbines and existing dwellings under the *Policy and Planning Guidelines for Development of Wind Energy Facilities*, published by the Victorian government
- confirmation of the National Health and Medical Research Council's (NHMRC) Statement: Evidence on Wind farms and Human Health
- confirmation of the development permit noise conditions for the Windy Hill wind farm
- Queensland Health's current position in relation the proposed Mount Emerald Wind Farm
- confirmation that the assessment of the Mount Emerald Wind Farm was not limited to the *Environmental Protection (Noise) Policy 2008, Guideline - Planning for Noise Control* and the *Draft Guideline - Assessment of Low Frequency Noise*.

NOTED or APPROVED/MOT
APPROVED

[Signature]

Hon. Jackie Trad MP
Deputy Premier, Minister for Transport,
Minister for Infrastructure, Local
Government and Planning and Minister
for Trade

Date:

Received

13 MAY 2015

ESU

Author details Name: Adam Yem Position: Acting Director Telephone: 3452 7679	Endorsed by: Greg Chemello Position: Deputy Director-General Business Group: Planning Group Telephone: 3452 7686 Approved: 24 April 2015
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KEY ISSUES:***Policy and Planning Guidelines for Development of Wind Energy Facilities***

With respect to the *Policy and Planning Guidelines for Development of Wind Energy Facilities*, the Victorian government recently adopted an amendment, reducing the setback for proposed wind turbines to an existing dwelling to 1 kilometre without requiring the consent of the owner of the dwelling (**Attachment 1**).

National Health and Medical Research Council

The National Health and Medical Research Council (NHMRC) released its statement on Evidence on Wind Farms and Human Health in February 2015 (**Attachment 2**). The Statement is supported by an information paper also released by NHMRC (**Attachment 3**).

In summary, the statement concludes "*After careful consideration and deliberation of the body of evidence, NHMRC concludes that there is currently no consistent evidence that wind farms cause adverse health effects in humans.*"

Windy Hill wind farm noise condition

A development permit for the Windy Hill wind farm was issued by Herberton Shire Council on 20 September 1999 (**Attachment 4**).

The relevant acoustic noise condition, numbered 36, limits noise to residential sites to background noise plus 5dB(A) or 40dB(A), whichever is the greater. It is noted that the condition relates to the measurement of external noise at the noise sensitive use.

Queensland Health

On 27 April 2012, Queensland Health wrote to Tablelands Regional Council recommending that the setback requirements, contained within the *Policy and Planning Guidelines for Development of Wind Energy Facilities* and prepared by the Victorian government, be observed (**Attachment 5**).

On 9 July 2014, Queensland Health wrote to the former Deputy Premier, referring to the draft information paper released by the NHMRC, which had acknowledged there was "*consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life.*" (**Attachment 6**)

Following consultation with the department, Queensland Health wrote to the department supporting the NHMRC's position statement that "*physical and mental health effects are unlikely to occur at distances greater than 1,500 metres*" (**Attachment 7**).

Assessment of the Mount Emerald Wind Farm

With respect to the enquiry regarding the Department's assessment of the proposed Mount Emerald Wind Farm against the *Environmental Protection (Noise) Policy 2008, Guideline – Planning for Noise Control* and the *Draft Guideline – Assessment of Low Frequency Noise*, it is noted that as the Planning Minister, you may have regard to any material considered relevant and not just these documents. In this instance, the assessment has considered an array of statutory documents in other state based and international based jurisdictions, as allowed for under the *Sustainable Planning Act 2009*.

The Department also notes that the former Department of Environment and Resource Management's letter, dated 27 September 2011, acknowledges that "There are no statutory guidelines in Queensland specifically relating to wind farms".

Further details in relation to this matter are contained in internal Departmental correspondence (**Attachment 8**).

RESULTS OF CONSULTATION:

Consultation was undertaken with officers within Queensland Health in the preparation of this briefing note.



IN REPLY PLEASE QUOTE

3/051/99/005 &
3/056/99/004 GKM:wr

HERBERTON SHIRE COUNCIL

40 GRACE STREET, HERBERTON

TELEPHONE: (07) 4096 2244

FACSIMILE: (07) 4096 2689



ADDRESS ALL COMMUNICATIONS TO
CHIEF EXECUTIVE OFFICER
P.O. BOX 41,
HERBERTON, Q. 4872

20 September, 1999

Stanwell Corporation Limited
C/- C & B Consulting Group
PO Box 1949
CAIRNS QLD 4870

Attention: Mr O Dalton

Dear Mr Dalton

HERBERTON SHIRE COUNCIL
CHIEF EXECUTIVE OFFICER



FINAL NEGOTIATED DECISION NOTICE

I refer to your IDAS development application lodged on the 21 April 1999 in accordance with the Integrated Planning Act 1997, for a Material Change of Use for a Wind Farm and preliminary approval for the Reconfiguration of a Lot for part of the land described in the application.

As you were advised by letter dated 25th August 1999, Council considered the applications and granted approval for such uses. Following representations in relation to the conditions of the approval, Council at its meeting on the 17th September 1999 considered the matter and granted approval for the uses detailed in the negotiated Decision Notice attached subject to conditions of that Notice.

There were three submissions lodged in relation to the application and one letter of support. Copies the documents are enclosed with this letter which indicates the names and addresses for your information.

You are further advised that the draft Environmental Management Plan is required to be amended in accordance with the comments outlined in the report to Council, which state:

Construction Phase

- Section 6.1.2 Complaints – shall identify the name and title of the 'responsible person' and this information shall be provided to Council. Should the 'responsible person' change, Council is to be notified immediately and provided with new names. The terms Site Foreman/ Site Manager should be contained to one reference, either the Site Foreman or the Site Manager.
- the names of the Site Foreman/Site Manager and Superintendent during the construction phase shall be provided to Council. Should the Site Foreman or Superintendent change, Council is to be notified immediately and provided with new names.

Section 6.1.4.2 Noise -- states '...all noise complaints that are not frivolous nor vexatious shall be investigated...'

Classification is required as to who determines if complaints are frivolous and vexatious. If this issue cannot be successfully classified then all noise complaints should be investigated.

..2/..



IN REPLY PLEASE QUOTE

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HERBERTON, Q. 4872

Page 2

Operational Phase

- *Section 6.1.5.2 Noise – Should include reference to complying with New Zealand Standard NZS6808:1998 Noise Levels associated with Wind Turbine Generators, as agreed by Stanwell Corporation Limited.*
- *Incorporate Annexure 1 – Noise Impact Assessment, Section 7.0 and Section 9.3 into DEMP*
- *Issue of site safety is not addressed and reference to local SES/Fire Brigade training should be included.*

Maintenance Phase

The DEMP does not include details regarding the maintenance phase. Information is required to be included on this phase of the project.

These amendments are required in association with the requirements specified in Condition (33) of the Development Permit Approval.

35

Yours faithfully

Gordon K. Malcolm
CHIEF EXECUTIVE OFFICER

HERBERTON SHIRE COUNCIL

Development Applications – Final Negotiated Decision Notice

Integrated Planning Act 1997 S 3.5.15

Dear Applicant

Re: Application for a Material Change of Use Development Permit - Wind Farm comprising a maximum of 42 Wind Turbine Generators and Ancillary Infrastructure (provision of internal electricity reticulation network and connection to the external electricity reticulation network) and an Application for Reconfiguration of a Lot Preliminary Approval.

The Development Applications for a Wind Farm and associated easements on land described as:

Lot 2 RP716061; and
Lot 93 CWL3089; and
Lot 115 CWL167; and
Lot 228 CWL259 (part); and
Lot 227 CWL2960 (part),
Parish of Ravenshoe, County of Cardwell

was assessed and approved with Conditions.

The Development Application for a Material Change of Use was approved in two parts being:

- A Development Permit for a Material Change of Use for a Wind Farm comprising a maximum of 20 Wind Turbine Generators in 3 stages and Ancillary Infrastructure (provision of internal electricity reticulation network and connection to the external electricity reticulation network) and
- A Preliminary Approval for a Material Change of Use for a Wind Farm for up to a maximum of twenty-two (22) Wind Turbine Generators.

A Preliminary Approval for Reconfiguration of a Lot was approved to provide easements to contain the Wind Farm development on various lots

The decision was made by Herberton Shire Council on 25/08/99 and the final negotiated decision was made by Herberton Shire Council on 17/09/99.

Local Government area Herberton Shire.

The following schedule provides all the relevant details

1. Referral Agencies *if applicable*

Concurrence Agencies

name and address _____ Not Applicable _____

Advice Agencies

name and address _____ Not Applicable _____

2. **Conditions if applicable**

Assessment Manager's

conditions _____ As Per Attachment _____

Concurrence Agency

conditions _____ Not Applicable _____

3. **Reasons for refusal if applicable**

Explanation of refusal

see Section 3.5.15 (2) (e) of IPA _____ Not Applicable _____

4. **Approval type**

✓ Preliminary Approval

✓ Development Permit

5. **Further Development Permits required if applicable**

Reconfiguration of a Lot Development Permit &
Operational Works
Material Change of Use (Code Assessment)

6. **Compliance with codes for self assessable development if applicable**

The applicant may need to comply with the following codes for self assessable development related to the development approved. _____ Not Applicable _____

7. **Properly made submissions (for applications subject to Impact Assessment only)**

Were any properly made submissions made about the application Yes ✓ No ☐

8. **Rights of Appeal**


In accordance with the Integrated Planning Act 1997, you may appeal to the Planning and Environment Court within twenty (20) business days from the date of receipt of Council's Decision Notice in relation to this approval. A copy of the relevant section of the Act is enclosed for your information as well as the form "Notice of Appeal".

9. **Assessment Manager**

Name: Chief Executive Officer

Herberton Shire Council

Accreditation No.(if applicable): N/A

Signature:  Date: 20th September 1999

Version 2 (Updated 9 October 1998)

CONDITIONS OF APPROVAL

(A) Conditions attached to Council's Approval – Material Change of Use (Development Permit)

DEVELOPMENT PERMIT

GENERAL

1. (a) The Development Permit is limited in extent to the following staged development of the
Wind Farm:
Stage 1 : a maximum of 2 Wind Turbine Generators;
Stage 2 : a maximum of 9 Wind Turbine Generators;
Stage 3 : a maximum of 9 Wind Turbine Generators;
- (b) The Wind Turbine Generators shall have the following maximum capacity and dimensions;

Capacity	650 kW
Rotor Diameter	approx 40-50 metres
Tower Diameter At Base	approx 2.5 metres
Hub Height	approx 40-50 metres
Overall Height	approx 70 metres
2. (a) The configuration and layout of Stages 1, 2 and 3 of the Wind Farm shall generally comply with the Concept Plan for Scenario 1 – Wind Farm Layout – Rotor Diameter 50 metres, as amended by conditions attaching to this approval.
- (b) The applicant shall undertake a Site Survey to identify the final location for all the Wind Turbine Generators to be located on the site and any ancillary facilities. The Site Survey shall also identify existing stands of remnant vegetation and windbreaks. Should the applicant not proceed with the application for Reconfiguration of a Lot a copy of the Site Survey shall be lodged with Council for the approval of the Manager Engineering Services prior to an Application for a Development Permit for Building Works associated with Stage 1 of the Wind Farm development being lodged with Council.
3. Any draft easement agreements necessary to provide for the establishment of the Wind Farm on the site shall be provided for the approval of Council prior to the creation of the easements. Any costs associated with Council reviewing the easement documentation shall be borne by the applicant.
4. Construction of any Stage of the development shall not commence until:
 - all necessary arrangements for the easements are in place;
 - written confirmation is provided to Council in relation to the easements; and
 - a Development Permit for Building Works has been issued by Council.

5. Approval of satisfactory building plans and specifications in accordance with the Integrated Planning Act, Building Act, Council's Local Laws and the Planning Scheme for Herberton Shire where applicable, shall be required at the development of each Stage, prior to commencement of the use.
6. The provisions of the Integrated Planning Act, the Building Act, the Fire Safety Act, and all other relevant Acts and Regulations and the Local Laws of the Council from time to time shall at all times be observed and performed in relation to the land, the building and the use and occupation thereof.
7. The construction and development of the Wind Farm on the site shall not commence until:
 - (a) a Development Permit is issued by Council for a Reconfiguration of a Lot; and all the easements the subject of Stages 1, 2 and 3 of the application are registered by the Department of Natural Resources, or a Dealing Number has been issued by the Department of Natural Resources and provided to Council; or Conditions 3 and 4 of this approval have been satisfied; and
 - (b) a Development Permit is issued for the Building Work associated with Stage 1 and/or other Stages of the development.
8. The applicant shall at all times during the staged development of the subject land carry out the development and construction of any building or structures thereon and conduct the approved use(s) in accordance with the plans, specifications, facts, and circumstances as set out in the application submitted to Council, except as modified by these conditions.
9. The approval shall lapse four (4) years from the date of issue of the Development Permit or such extended period as Council may allow unless the use is substantially commenced and all conditions complied with.

CAR PARKING AND ACCESS REQUIREMENTS

10. Site access associated with the Wind Farm shall be limited to three access points accessing the site from Glendinning Road and generally as indicated on the Concept Plan – Figure 3 indicative Wind Farm layout (Review of Environmental Factors).
11. Any site access to and from the site from Glendinning Road shall be a minimum of 40 metres from the intersection of the Kennedy Highway and Glendinning Road, as required by the Department of Main Roads.
12.
 - (a) All three access points shall be constructed to a standard satisfactory to Council's Manager Engineering Services.
 - (b) In particular, the site access points shall meet the following specifications:
 - all weather bitumen surface,

- adequate turn out to accommodate large commercial vehicles associated with the construction and maintenance phases of the project and tourist buses and cars towing caravans associated with the operational phase of the project;
 - incorporation of adequate drainage measures/features
- (c) design of each site access point shall be submitted to Council for the approval of the Manager Engineering Services.
- (d) the construction of each access point may be staged in accordance with any staging of the development.
13. No access to the site shall be permitted from Kennedy Highway in association with the Wind Farm development, as required by the Department of Main Roads and no access to the site shall be permitted from the Old Palmerston Highway.
14. (a) Any damage to the intersection to the Kennedy Highway and Glendinning Road and Glendinning Road to the eastern corner of Lot 115 CWL167 associated with the construction and/or operation of the Wind Farm shall be made good by the developer/operator and at no cost to Council.
- (b) A security bond in the form of a bank guarantee to the satisfaction of Council shall be lodged for an amount of \$50,000 to ensure compliance with Condition 12(a) above.
- The bond is required to be lodged with Council prior to the issue of development approval for building and/or operational works associated with Stage 1 of the development. Council is prepared to release the bond after each stage of the development is completed and any necessary roadworks undertaken by the applicant provided the applicant lodges a further bond for the same amount for each subsequent stage at the time of development approval for building and/or operational works for that stage.
15. Internal roads on site remain the responsibility of the developer/operator, but shall be constructed to a standard to allow access to the Wind Turbine Generators to be maintained at all times and to minimise and mitigate any on site erosion and drainage problems.
16. Any construction work, including roadworks, shall be carried out in accordance with the Department of Main Roads Erosion and Sediment Control Manual issued in April 1998 and its amendments and shall comply with all other relevant Acts and Regulations. Erosion Control Measures shall be implemented in the event of any on site erosion/damage impacts on site or on adjoining properties, associated with the construction and the ongoing operation of the development on the site. The Erosion Control Measures/Drainage Measures shall be approved by the Manager Engineering Services, prior to implementation.
17. All existing creek systems and drainage areas are to be left in their natural/current state, including no channel alterations, unless approval is granted by the Manager Engineering Services.
18. (a) A public parking and viewing area shall be provided in association with Stage 1 of the development, at a location approved by Council.

- (b) The Stage 1 public parking and viewing area shall be accessed from Glendinning Road and shall incorporate the following:
- The parking area and the viewing area may, if necessary, be separated by a distance not to exceed 150 metres. If the two areas are separated, they shall be connected by a sealed pathway which can accommodate wheelchair access.
 - A walking track may also be provided from the parking and/or viewing area to one of the Wind Turbine Generators in close proximity to the area.
 - The parking area and access to the parking area shall be bitumen sealed and drained to the satisfaction of the Manager Engineering Services. The parking area shall be line marked to accommodate 2 large tourist coaches and 12 cars. The access to the parking/viewing area shall provide a bitumen turn out to accommodate large tourist coaches and cars towing caravans.
 - Signage advising and directing motorists to the public parking and viewing area shall be erected on the Kennedy Highway, Glendinning Road and the Old Palmerston Highway
 - The vehicle parking area shall be contained with a suitable barrier treatment between parking and landscape or other areas.
 - A covered viewing platform shall be provided within the public viewing area and shall be accessible by wheelchairs.
 - Signage at the public viewing area shall be limited to a Stanwell Corporation Limited Information sign and a Herberton Shire Council Information sign.
 - The public parking and viewing area/s shall be landscaped with advanced indigenous tree and shrub species in accordance with a landscape plan approved by Council.
 - A works plan shall be prepared for the public parking/viewing areas providing details of the design of the areas and the drainage and sealing to a standard acceptable to Councils Manager Engineering Services.
- (c) The landscape plan and works plan shall be approved by the Manager Engineering Services prior to the issue of Development Approval for Building Work associated with the development.
- (d) Areas to be landscaped shall be established and maintained at all times to the satisfaction of the Manager-Engineering Services.
19. (a) If the public parking/viewing area becomes popular and there is a need identified by Council to increase and improve facilities then the developer/operator shall provide additional parking/viewing facilities as agreed with Council and at no cost to Council, within 3 months of being requested by Council to provide the facilities.
- (b) Details of an alternate site for a Stage 2 parking/viewing area or a Stage 2 extension of the Stage 1 parking/viewing area shall be provided to Council at the time the works plan or the Stage 1 parking/viewing area is lodged with Council. The location and extent of the Stage 2 parking/viewing area shall be approved by Council in association with the Stage 1 parking/viewing area.

- (c) The construction of a Stage 2 parking/viewing area shall only be required if a demonstrated need exists for the facility.
20. The Stage 1 and Stage 2 public parking and viewing areas shall be constructed by the applicant at no cost to Council. Maintenance of the public parking and viewing areas shall be the responsibility of the applicant unless they are located within the road reserve in which case maintenance shall be undertaken by Council.
21. In association with the Stage 1 parking/viewing area the applicant shall widening Glendinning Road from the intersection with the Kennedy Highway with the entrance to the Stage 1 parking/viewing areas. The bitumen seal of this sections of Glendinning Road shall be widened to accommodate two way traffic, to the satisfaction of the manager engineering services.
22. Footpaths and road verges where possible are to be left in a mowable condition. Mature trees shall not be removed unless the trees create a danger to the public, nor is it expected that any major earthworks be carried out in association with the provision of access and parking/viewing area/s.

CONSTRUCTION ISSUES

23. Any spillage of concrete or any other material on any road associated with the construction phase of the development shall be removed immediately at no cost to Council.
24. No access by heavy construction vehicles (ie: semi-trailers, concrete trucks, cranes etc) from the eastern approach to the site along Glendinning Road shall be allowed. All construction traffic shall access the site from the Kennedy Highway and Glendinning Road intersection.
25. The applicant shall provide the following detailed information to Council prior to construction of each Stage and at the time of Building Works approval:
- turbine manufacturer and specifications of the Wind Turbine Generators, towers, transformers, nacelles and other components for each Stage of the development, in particular lightning mats and use of non-metal blades to reduce lightning strike;
 - type, size and number of vehicles involved in both the transportation of components to the site and construction of components on the site for each Stage of the development;
 - the size and extent of the foundations required for each Wind Turbine Generator associated with each Stage of the development
 - an assessment of the supply of basic materials such as concrete and how these materials are to be transported and where applicable stored on site, for each Stage of the development.
 - general information regarding associated works such as placing of transformers, substations/switchyards, in association with each Stage of the development.
 - Precautions which are proposed to prevent any contamination of soil, air and other impacts, if any, associated with the construction phase of each Stage of the development.
26. The applicant shall comply with all the requirements of the Department of Main Roads in relation to the transport of long/wide loads on State controlled roads and local roads accessing the site, for each Stage of the development, as required.

27. Any access tracks required at construction phase but not required following construction shall be rehabilitated back to their original condition or better, to allow the land to be used for rural purposes.
28. The applicant shall ensure that during construction and on completion of any on-site construction works the subject land will be maintained in a clean and tidy condition at all times to the satisfaction of the Manager Engineering Services.
29. At all times, during construction, the applicant is to ensure dust suppression measures are undertaken for the site to ensure that all materials are appropriately stores and any unsealed areas do not create a dust nuisance to surrounding areas to the satisfaction of the Manager Engineering Services.
30. Construction and maintenance associated with the Wind Farm and ancillary facilities shall be limited to the hours of 7:00 am to 6:00 pm Monday to Saturday. Any variations to these hours shall be agreed to in writing by the Chief Executive Officer prior to the requested extension of hours.

SIGNAGE

31. Details of any signage proposed in association with the development shall be submitted for approval of the Manager Engineering Services prior to the issue of a Development Approval for Building Work for the proposed development.
32. The applicant shall obtain written agreement from Department of Main Roads to ensure that the proposal satisfies the requirements of the Department in relation to ingress to and egress form the site, and does not compromise any future road proposals of the Department. The written agreement shall be provided to the Manager Engineering Services prior to the issue of a Development Approval for Building Work.
33.
 - (a) The applicant shall liaise with the Department of Main Roads to identify appropriate signage and the location of signage on the Kennedy Highway to notify motorists of the location of the Wind Farm, and to direct motorist to the public parking and viewing area on Glendinning Road.
 - (b) The signage shall satisfy the requirements of the Department of Main Roads and shall be located on the southern and northern approaches to the site in locations, specified by the Department of Main Roads.
 - (c) Details of the signage and the location of the signage and the agreement of the Department of Main Roads shall be provided to the Manager Engineering Services prior to commencement of the use.
34. No signage of any kind shall be permitted on any of the Wind Turbine Generators or other structures associated with any Stage of the Development

ENVIRONMENT AND AMENITY

35. The applicant shall lodge with Council an Environmental Management Plan for the approval of the Manager Engineering Services. The EMP shall address all phases and all stages of the project.

In particular, the EMP shall include:

- Management of bird strike
- Management of noise emissions
- Management of electromagnetic interference
- Management of lightening strike
- Management of cyclonic conditions
- Management of safety issues

Details of noise monitoring agreed between Council and the Proponent, as required in Condition 38, shall be incorporated into the EMP.

The EMP shall be approved by the Manager Engineering Services prior to the issue of Development Approval for Building Work associated with Stage 1 of the development.

36. The development shall satisfy the New Zealand Standard: 'Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators' (NZS6808:1998).

Acceptable limits outlined in the New Zealand Standards refer to:

The sound level from the Wind Turbine Generators (or Wind Farm) not exceeding, at any residential site, and at any nominated wind speeds, the background sound level by more than 5dB(A), or a level of 40 dB(A), whichever is the greater.

The development shall comply with NZS6808:1998 and the acceptable limit for residential sites specified above.

37. Construction and operation noise associated with each Stage of the Wind Farm shall be monitored periodically for each Stage of the development over representative periods during the day and night for a period of 3 months by the developer/operator to ensure that the existing noise amenity of adjacent houses is maintained.
38. Noise monitoring associated with the operational phase of each Stage of the development shall be monitored periodically at locations to be agreed with Council during the following wind conditions for a period of 3 months or longer, as required:
- marginally above "cut in" wind speed;
 - long term average wind speed; and

39. The findings of the noise monitoring programs for each Stage of the development, including an assessment of the findings against the New Zealand Standard for residential sites, in particular houses on the site and houses adjacent to the site and/or within 200 metres of the site, shall be provided to Council upon completion of the monitoring program.
40. Any noncompliance with NZS6808:1998 during Stage 1 or any other Stage of the development will require noise attenuation measures to be introduced, as agreed between the applicant and Council.
41. (a) To seek to protect the visual amenity of the Shire and the local area in particular the development shall satisfy the following setbacks:
 - all Wind Turbine Generator Towers shall be setback a minimum of 100 metres from Kennedy Highway,
 - all Wind Turbine Generator Towers shall be setback a minimum of 60 metres from Glendinning Road with special dispensation for one (1) Wind Turbine Generator Tower located on Lot 227 CWL2960 which may be set back a minimum of 30 metres from Glendinning Road provided it allows easy and convenient access to and from the public parking and viewing area,
 - all Wind Turbine Generator Towers shall be setback a minimum of 75 metres from site boundaries adjoining land not the subject of these applications,
 - all Wind Turbine Generator Towers shall be setback 350 metres from existing houses on the site and existing houses on land adjoining the site,
 - any other structures, for example the switchyard/substation, shall be setback 40 metres from the Kennedy Highway, 20 metres from Glendinning Road or any other road and/or 10 metres from site boundaries adjoining land not the subject of these applications.
- (b) Council may permit a lesser setback from existing houses located on the subject site, subject to receipt by Council of an indemnity from the relevant land owner, which is acceptable to Council. The indemnity shall indemnify Council against any potential claims arising from the operation of the Wind Farm on the site. The indemnity shall be structured so as to be binding on successors in title. All costs associated with the preparation of the indemnity, including Council costs, shall be borne by the applicant or the land owner.
42. (a) The Site Survey prepared to determine the location of each Wind Turbine Generator shall identify stands of remnant vegetation and windbreaks existing on the site.
- (b) Remnant stands of vegetation and windbreaks existing on the site shall not be removed from the site, unless approval is granted by the Manager Engineering Services.
- (c) Approval for the removal of remnant stands of vegetation and/or windbreaks shall not be granted to increase the number of Wind Turbine Generators which can be accommodated on the site, or to provide for access to any Wind Turbine Generators proposed on the site.

- (d) A copy of the Site Survey identifying the stands of remnant vegetation and existing windbreaks shall be provided to the Manager Engineering Services at the time Development Approval is sought for Building Works for Stage 1 of the development.

43. To reduce the visual impact of the Wind Turbine Generators and to provide uniformity to the development the following requirements shall be satisfied:

- All Wind Turbine Generators in each and every Stage of the development shall be the same model and type and the same height, tower design and rotor diameter.
- All Wind Turbine Generators in each and every Stage of the development shall have the same exterior colour finish which has the least impact on the surrounding environment.
- The exterior colour of all the Wind Turbine Generators shall be agreed between the applicant and Council.

The information shall be provided to Council for each Stage of the development, prior to the issue of Development Approval for Building Work.

44. To avoid the potential for electromagnetic interference associated with the Wind Farm, compliance is required with the following:

- For “fixed point to point” services such as microwave communication links Wind Turbine Generators shall not be located directly in the line of sight between any transmitter and any receiver antenna . To minimise the potential interference, a minimum of one Fresnel zone clearance shall be maintained.
- For both “fixed point to area” and “fixed point to point” services, the area immediately around any transmitter/receiver antenna shall be kept clear.
- A Survey of licensed telecommunication equipment providers in the area is required to be assessed. In addition a Survey shall be conducted of signal reception quality in the area before the installation of Wind Turbine Generators at each Stage, particularly for telecommunication systems where signal quality will be subjectively assessed, such as TV. This shall allow quantitative comparison after installation, with a comparison Survey. Remedial measures, if required, shall then be introduced such as improved antennae, relocation of the transmitter, installing a repeater, or cabling from a location clear of interference.
- The results of the Surveys shall be provided to Council in association with advice from the applicant in relation to compliance with “fixed point to point” services and “fixed point to area” service requirements.

Any remedial measures required and identified at any Stage of the development shall be agreed with Council and introduced at no cost to Council or any other party.

MISCELLANEOUS

45. At all times while the use continues there shall be a current licence for any storage of flammable and/or combustible liquids on the site which exceeds the minor storage quantities as defined in the Flammable and Combustible Liquids Regulations, if required.
46. The applicant shall liaise with the responsible agency for Aviation Maps to ensure that Aviation Maps are updated in association with each Stage of the development. Confirmation that this has occurred shall be provided to Council for each Stage of the development.
47. The applicant shall licence any activity on the site which requires licensing under the Environmental Protection Act, as required.

(B) Conditions attached to Council's Approval – Material Change of Use (Preliminary Approval)

PRELIMINARY APPROVAL

GENERAL

1. The Preliminary Approval is limited in extent to a maximum of 22 Wind Turbine Generators.
 - (a) Prior to Council considering an application for a Development Permit for a Material Change of Use – Code Assessment for any of the additional 22 Wind Turbine Generators associated with this Preliminary Approval, the applicant shall have constructed and operated Stages 1, 2 and 3 of the Wind Farm Development for a minimum period of three months and provided Council with information outlining compliance with the conditions of the Development Permit approving Stages 1,2 and 3.

Upon compliance being demonstrated to the satisfaction of Council, an application for a Development Permit for a Material Change of Use – Code Assessment may be lodged with Council for any of the additional 22 Wind Turbine Generators.
 - (b) The code with which the proposal will be assessed is the conditions attaching to the Development Permit component of this approval or any variation or addition to the conditions agreed to between the Council and the applicant to take account of contemporary standards associated with Wind Farm operations and planning practices current at that time.
2. In particular the configuration and layout of any Wind Turbine Generators, over and above the 20 approved under the Development Permit component of this approval shall be identified on a Concept Plan submitted to Council and shall comply with the following conditions:
 - Condition 37;
 - Condition 43;
 - Condition 44 of the Development Permit
3. Council shall not approve an increase in the number of Wind Turbine Generators above the maximum of 20 approved under the Development Permit component of this approval unless the proposed increase can satisfy all the conditions attaching to the Development Permit.
4. Any application seeking approval of additional Wind Turbine Generators, over and above the 20 approved under the Development Permit component of this approval, shall be required to be accompanied by an Application for Reconfiguration of a Lot for a Development Permit to facilitate the siting of additional Wind Turbine Generators on the site, if easements in gross have not been created over the subject site of the Wind Farm Development.
5. Any Application for Reconfiguration of a Lot or any siting of additional Wind Turbine Generators associated with this stage of the development will be required to comply with the siting guidelines outlined in the Development Permit component of this approval.

(C) Conditions attached to Council's Approval – Preliminary Approval for Reconfiguration of Land

That the Application for the Reconfiguration of a Lot to provide for easements to contain the Wind Farm development be granted preliminary approval on land described as :

Lot 2 RP 716061; and

Lot 93 CWL 3089; and

Lot 115 CWL 167; and

Lot 228 CWL 259 (part); and

Lot 227 CWL 2960 (part),

Parish of Ravenshoe, County of Cardwell, subject to the following conditions:

1. The applicant shall undertake a Site Survey to identify the final location for all the Wind Turbine Generators to be located on the site and any ancillary facilities. The Site Survey shall also identify existing stands of remnant vegetation and windbreaks. A copy of the Site Survey shall be lodged with Council in association with any Application for a Development Permit for the Reconfiguration of a Lot associated with the Wind Farm development.
2. The location of the Wind Turbine Generators and other ancillary facilities associated with the development, shall be controlled by the conditions attaching to the Development Permit for a Material Change of Use issued by Council for the development of a Wind Farm on the site
3. An easement shall be provided over the public parking and viewing area/s, if the public parking and viewing area/s is/are located on the site.
4. Draft easement agreements shall be provided for the approval of Council at or prior to the time the Plans of Survey creating the easements are lodged with Council for signing and sealing. Any costs associated with Council reviewing the easement documentation shall be borne by the applicant.
5. Construction of any Stage of the development shall not commence until all the easements are registered by the Department of Natural Resources, or a Dealing Number issued by the Department of Natural Resources is provided to Council, and a Development Permit for Building Works has been issued by Council.





**Queensland
Government**
Queensland Health

FAX MESSAGE

Tropical Regional Services
William McCormack Place II, Level 7 5B Sheridan
Street Cairns Qld 4870

TO: Fax: 07 4091 4300
Name: Peter Pattison
Organisation: Senior Planner, TRC
Date: 27/04/2012

FROM: Fax: 07 4031 1440
Phone: 07 4226 5555
Name: David Sellars
Position: Director, Tropical Regional Services

CONFIDENTIAL COMMUNICATION

SUBJECT: Mt Emerald Wind Farm:

Third party advice relating to potential human health impacts that may arise from wind farms response.

Pages 2 pgs (Inclusive)

Please find letter of response attached.

Be advised an original signed copy has been posted.



THE ORIGINAL OF THIS DOCUMENT
CAN BE FOUND ON PHYSICAL FILE
MCU/11/0024
LOCATION: Planning MDA

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**Queensland
Government**

Queensland Health

Enquiries to: Chris Blake
Telephone: 4226 5576
Facsimile: 4031 1440
Our Ref: 20120419MtEmerald_windfarm

Peter Pattison
Senior Planner
Tablelands Regional Council
PO Box 573
Atherton, QLD, 4883

Dear Mr Pattison

**Mt Emerald Wind Farm (Maximum of 75 nominal 2.3MW Capacity Turbines). Lot 7
SP235244, Part of Lot 905 on CP896501 & Easement A in Lot 1, Easement C in Lot 2 &
Easement E in Lot 3 on SP231871 Situated at Kippin Drive, Arriaga.**

I write in response to your request for information relating to the potential human health impacts from the operation of wind turbines at the above referenced location.

The Queensland Government's, *Environmental Protection (Noise) Policy 2008* outlines provisions for protecting the quality of acoustic environments that are conducive to human health and well being by establishing noise level goals for various operations such as wind farms.

According to the noise assessment report prepared by Noise Mapping Australia (Document 090815ND02.docx on 16 March 2012) the proposed wind farm meets all noise level goals and is acceptable from a noise perspective. This conclusion was based on the following:

- Audible noise goals (40dB(A) or 5dB(A) above background noise levels) were met for all locations;
- The noise data supplied by the wind turbine manufacturer indicates there are no tonal characteristics associated with the turbines.
- The model noise levels for infrasound and low-frequency noise show compliance with Department of Environment and Resource Management (DERM) draft low frequency noise guidelines for low frequency and infrasound noise.

Despite the aforementioned findings, Queensland Health recommend wind farm planning applications be carefully considered, given there is a growing body of evidence to suggest there may be adverse health affects associated with the noise generated by wind farms.

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Tropical Regional Services
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Phone
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(07) 4031 1440

Research into the potential health effects of wind turbines is ongoing and is being undertaken on an international scale. The National Health Medical Research Council (NHMRC) is currently reviewing its position on the possible health effects of wind turbines and aims to release a Public Statement by the end of 2012. Queensland Health would be likely to be guided by the NHMRC statement, resulting from this research.

Until such time, Tablelands Regional Council are encouraged to take a precautionary approach to development applications of this type. The Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria document (Published by the Victorian Government Department of Planning and Community Development Melbourne, August 2011) provides a framework for a consistent and balanced approach to the assessment of wind farm projects and maybe considered to be current best practice.

This guideline imposes a ban on turbines within two kilometres (2km) of an existing dwelling, unless written consent is obtained from the owner of the dwelling. With this in mind a total of nine (9) dwellings are within two kilometres (2km) of the proposed turbines. Given the meteorological characteristics of prevailing winds, which occur mostly from a east/south easterly direction; there are two (2) premises in the western sector that may be more heavily affected then those premises located within the two kilometre (2km) buffer in the eastern sector.

These comments are provided to Council for their information and appropriate action. Should you have any further queries, Chris Blake, Environmental Health Officer, Cairns Public Health Unit, Queensland Health, will be pleased to assist you and can be contacted on telephone (07) 4226 5555.

Yours sincerely



David Sellars

Director

Environmental Health

Tropical Regional Services

27/4/2012



RECEIVED

15 JUL 2014

Department of Health

Enquiries to: Ms Uma Rajappa
Director
Environmental Hazards
Telephone: 3328 9338
Facsimile: 33289354
File Ref: CH010127

The Honourable Jeff Seeney MP
Deputy Premier
Minister for State Development, Infrastructure and Planning
PO Box 150009
City East QLD 4002

Dear Mr Seeney

Thank you for your letter dated 11 June 2014, regarding the development application for the Mount Emerald Wind Farm at Arriga in Mareeba. You have sought advice from my Department regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures.

The National Health and Medical Research Council (NHMRC) noted in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that "There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

The NHMRC Draft Information Paper acknowledges that the impact of noise from wind farms has indirect health-related effects such as annoyance, sleep disturbance and quality of life. It would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

I am advised that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

Should officers of your Department require further information, please contact Ms Uma Rajappa, Director, Environmental Hazards, on telephone 33289338

Yours sincerely

Dr Jeannette Young
Chief Health Officer

9/7/14

Office
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GPO Box 48
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Department of Health

Enquiries to: Ms Uma Rajappa
Director
Environmental Hazards
Telephone: 3328 9338
Facsimile: 3328 9354
File Ref: CH010802

Mr James Coutts
Executive Director, Planning and Property
Department of State Development
PO Box 150009
City East QLD 4002

Dear Mr Coutts

Thank you for your email inquiry from Mr Adam Yem, Acting Director dated 23 April 2015, regarding the National Health and Medical Research Council (NHMRC) Statement: *Evidence on Wind Farms and Human Health* (Feb 2015) and the proposed Mount Emerald Wind Farm development at Arriga in Mareeba.

In light of the recent NHMRC Statement your department has sought the following advice:

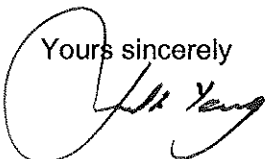
1. Given the NHMRC's statement issued in February 2015, Queensland Health also concludes "that there is currently no consistent evidence that wind farms cause adverse health effects in humans."
2. Given the change to the Victoria Planning Provisions, and provided there are no existing dwellings within 1 kilometre of any proposed wind turbine, Queensland Health does not have any concerns with the proposed Mount Emerald Wind Farm.

The NHMRC statement notes that based on direct evidence there is no consistent evidence that wind farms emissions directly affect health outcomes. However, the NHMRC also noted that taking into account evidence of health effects of similar emissions from other sources (parallel evidence), there are unlikely to be any significant effects on physical or mental health at distances greater than 1,500 m from wind farms. Given the limited reliable evidence, the NHMRC considers that further high quality research is warranted.

The Department of Health supports the NHMRC position statement and notes that physical and mental health effects are unlikely to occur at distances greater than 1,500m.

Should officers of your Department require further information, please contact Ms Uma Rajappa, Director, Environmental Hazards, on telephone 33289338.

Yours sincerely



Dr Jeannette Young
Chief Health Officer

23/4/15

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3235 9573

Chris Lee

From: Mark Saunders
Sent: Thursday, 23 April 2015 12:30 PM
To: Adam Yem
Subject: FW: URGENT - Mount Emerald Wind Farm noise conditions and consultant's conflict of interest
Attachments: DERM to TRC MEWF noise conditions.pdf; RE: URGENT Mt Emerald Wind Farm and the New Zealand Standard

Adam

In relation to the below email, we can point out that the attached letter from DERM starts off with: "There are no statutory guidelines in Queensland relating specifically to Wind Farms". It then goes on to list a grab-bag of noise related documents, mostly relating to Environmentally Relevant Activities (which Wind Farms are currently not). The three documents listed below (the Draft Guideline – Assessment of Low Frequency Noise now forms part of EHP's Noise Measurement Manual) all relate to ERA and/applications for an Environmental Authority).

In my discussions with Refused under section 4 when she wanted an assurance that the application would be assessed against the EPP (Noise) only (as she believed it was the 'relevant Queensland standard' to which the TLPI must have been referring to), I advised the assessment manager (i.e. the DP) could also use other material if it was considered appropriate (see attached email).

Regards
Mark

Mark Saunders
Director, Planning Services
Department of Infrastructure, Local Government and Planning
Level 6, 63 George St Brisbane QLD 4000
p. 07 3452 7871 | m. Refused under | e. Mark.Saunders@dsdip.qld.gov.au

Customers first | **Ideas into action** | **Unleash potential** | **Be courageous** | **Empower people**

From: Matt Collins [mailto:Matt.Collins@ministerial.qld.gov.au]
Sent: Thursday, 23 April 2015 9:41 AM
To: Mark Saunders; Greg Chemello; Adam Yem
Cc: Tess Pickering
Subject: FW: URGENT - Mount Emerald Wind Farm noise conditions and consultant's conflict of interest

From: Refused under section 47(3)(b) of the RTI Act.
Sent: Wednesday, 22 April 2015 10:59 PM
To: Deputy Premier
Cc: dalrymple@parliament.qld.gov.au; External - Cook Electorate Office; Treasurer; Police; thepremier@premiers.qld.gov.au; Health; Attorney; Matt Collins
Subject: URGENT - Mount Emerald Wind Farm noise conditions and consultant's conflict of interest

Dear Deputy Premier

I take this opportunity to thank you again for visiting us in Mareeba and experiencing first-hand our complex environment. I pen this letter to you, knowing full well that your decision on the Mount Emerald Wind Farm

(MEWF) is imminent, to draw your attention to a number of anomalies that should be taken into account before your due pronouncement.

Of major concern is that ***your departmental officers are recommending approval of the Mount Emerald Wind Farm project without reference to ANY of the following requirements identified by the government's own noise experts*** (see attached):

- Environmental Protection (Noise) Policy 2008 (EPP Noise)
- Guideline – Planning for Noise Control
- Draft Guideline – Assessment of Low Frequency Noise

This is the minimum which should apply to protect against environmental nuisance and environmental harm. However, your Departmental officers assert that the Noise Policy shouldn't apply simply because the noise from wind turbines is "variable" / "non-continuous". They state there will be no low frequency noise conditions as are required for other projects. Queensland's Planning for Noise Control guidelines won't apply because the proponent has stated the noise levels are "not practically achievable".

In relation to your Department's assertion that EPP Noise shouldn't apply:

1. Both variable and continuous noise are referred to in EPP Noise – it is for all sources of noise
2. Land Court of Queensland determined* in relation to a noise source which "will vary over time", that EPP Noise applies, stating "EPP (Noise) defines an acoustic quality objective as the maximum level of noise that should be experienced in the acoustic environment of an area or place. Those words are clear and effect should be given to them."
3. EHP (formerly DERM) recommended the consideration of EPP Noise to Tablelands Regional Council in its assessments of both High Road and Mount Emerald Wind Farms.
4. Acoustician Dr Bob Thorne, providing advice to Tablelands Regional Council on MEWF, acknowledged turbines "to be a noise source of variable nature" and recommended application of EPP Noise.
5. Statutory instrument *Far North Queensland Regional Plan 2009-2031* has the force of law (s.24, SPA). If there is an inconsistency between this regional plan and a planning scheme or planning instrument, or any plan, policy or code of a planning nature under any Act, the regional plan prevails (s.26(3), SPA). The *FNQ Regional Plan Land Use Policy 1.3.2* specifically states that the project **MUST** meet the [acoustic quality] objectives of EPP Noise.

What is the likelihood that the Court, the legislation and EHP are all incorrect? Given the weight of the above, it is far more likely that the solitary advice being relied on by your Department is incorrect. The inescapable conclusion is that EPP Noise must apply to all wind farm projects.

The community has a reasonable expectation it will be protected from intrusive, harmful and nuisance noise in the same way as other Queenslanders. When your own Department disregards every recommendation of the government's acoustic experts, a Queensland statutory instrument and Land Court precedent, the community has valid reason to ask whether the advice the Department is receiving is impartial and independent. This is particularly relevant when the advice is supplied by consultant [Refused under se] an acoustician who appears to have a serious conflict of interest. In providing advice that EPP Noise does not apply to wind farms, [Refused under s] is supporting the legal position of his wind farm client. This is a position he will be required to defend in his client's upcoming Queensland court appeal.

Neglecting the recommendations of your own government acoustic experts, adopting instead contradictory and unsupported advice, would result in:

- **a failure to adopt the precautionary principle recommended by the Sustainable Planning Act, 2009; and the caution urged by NHMRC and Queensland Health in relation to wind turbine noise**
- **denial of natural justice to residents**
- **interference with due process**
- **failure of your duty of care to residents**
- **permitting of foreseeable and legally sanctioned harm to residents**

Why is your Department so resistant to independent examination of its recommendations, stating to us on 17/04/2015 it has no intention of referring the noise conditions to EHP “at this late stage”? Despite wind farms not being an ERA, EHP has given previous advice on wind farms and can do so again.

Deputy Premier, should you decide to approve the wind turbine project, you bear the serious responsibility for ensuring it will comply with Queensland’s noise regulations and not cause harm to residents. The integrity of the noise conditions can be assured by insisting they be referred back to EHP’s noise experts for transparent, proper and unbiased assessment.

We look forward to your response.

Regards

Refused under section 47(3)(b) of the RTI Act.

*Xstrata Coal Queensland Pty Ltd & Ors v. Friends of the Earth - Brisbane Co-Op Ltd & Ors, and Department of Environment and Resource Management [2012] QLC 013

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Queensland
Government

File/Ref: NOR/045459(p11)

Department of
Environment and Resource
Management

27 September 2011

Peter Pattison
Senior Planner
Tableland Regional Council
PO Box 573
ATHERTON QLD 4833

DERM Response (Third Party Advice)
To Tablelands Regional Council re
DA 'Mount Emerald Wind Farm Pty Ltd
See Job IT0911CNS0005, File TNS/603276

Dear Mr Pattison

Thank you for your letter dated 24 August 2011 requesting third party advice in relation to potential noise impacts from the proposed wind farm at lot 7 on SP235244, Klippin Drive, Arlga.

There are no statutory guidelines in Queensland specifically relating to wind farms. When assessing the application however, Council as assessment manager should consider the following:

- Environmental Protection Act 1994;
- Environmental Protection (Noise) Policy 2008;
- DERM's Planning for Noise control guideline;
- DERM's Draft guideline, Assessment of Low Frequency Noise (enclosed); and
- State Planning Policy 5/10 Guideline: Air, Noise and Hazardous materials.

Part 3 of the Environmental Protection (Noise) Policy 2008, environmental values and acoustic quality objectives, provides a framework for the assessment of noise impacts and is further supported by Schedule 1 of the Policy which provides guidance by stating the acoustic quality objectives for sensitive receptors. The acoustic quality objectives are those that are conducive to protecting human health, wellbeing and the amenity of a community and should be met at any affected premises.

In considering the application, council should require the applicant to provide detailed technical information on the likely noise impacts, consistent with Australian Standard AS1055.1-1997 'Acoustics: description and measurement of environmental noise- general

68 Sheridan Street CAIRNS
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Queensland 4870 Australia

Telephone + 61 7 4222 6334
Facsimile + 61 7 4222 6070

Website www.derm.qld.gov.au

ARN 46 640 294 485

GBM
24/9/2011

procedures". This information will assist council in assessing the proposal and its compliance with the recommended criteria for noise as defined by the *Environmental Protection (Noise) Policy 2008*.

Given the technical expertise required to conduct a thorough assessment of the application, if the department had a statutory role in this proposal, it would make arrangements with the applicant to provide an independent third party review of the noise assessment and potential impacts. The department recommends council consider a similar course of action.

It is also of note that the South Australian Government's Environmental Protection Agency has produced a guideline *"Wind Farms – Environmental Noise Guidelines July 2009"* which provides detailed technical information regarding wind farm management. This guideline may be of assistance to council in considering the application.

Should you have any further enquiries, please do not hesitate to contact Chris Buckingham of the department on telephone 07 4722 5632.

Yours sincerely

sch4n3(3) Prejudice the
Scott Sullivan
Manager – Environment

Enc: DERM's Draft guideline, *Assessment of Low Frequency Noise*

Released by DERM under the RTI Act 2009
RTIPS 11-161

Chris Lee

From: Mark Saunders
Sent: Wednesday, 3 December 2014 2:11 PM
To: Greg Chemello
Cc: Teresa Luck
Subject: RE: URGENT Mt Emerald Wind Farm and the New Zealand Standard

Greg

Refused under section 47(3)(b) of the RTI Act. has either misunderstood or is deliberately misrepresenting what I said.

I was not justifying the use of any particular standard. Refused under section 47(3)(b) of the RTI Act. asked me if the Deputy Premier could use the noise metrics adopted in the planning scheme amendment that occurred after the application was made (e.g. the New Zealand Standard) rather than what was in effect at the time of application (none specified in the TLPI apart from "relevant Qld standards"). I advised that an assessment manager (in this case the Deputy Premier) could give whatever weight he considered appropriate to later policies, and this is well established in planning law.

In relation to the EPP (Noise) – yes I am aware that it covers both continuous and non-continuous noise, but I pointed out that it contains three separate objectives just for night time (indoors) (30, 35 and 40 dBA), and the EPP was not clear on which was appropriate for operations such as wind farms.

I do not intend to enter into a debate over the matters Refused under section 47(3)(b) of the RTI Act. has raised, so will not be responding to Refused under section 47(3)(b) of the RTI Act. email.

Regards

Mark Saunders
Director, Planning Services
Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government

tel +61 7 3452 7871

m Refused under section 47(3)(b) of the RTI Act.

post PO Box 15009 City East Qld 4002

visit Level 6, 63 George Street Brisbane

mark.saunders@dsdip.qld.gov.au

www.dsdip.qld.gov.au

www.dsdip.qld.gov.au/about-planning/#overview



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From: Refused under section 47(3)(b) of the RTI Act.
Sent: Wednesday, 3 December 2014 12:12 PM
To: Mark Saunders

Cc: Greg Chemello; Information (DLGP); mary.sharp@ministerial.qld.gov.au
Subject: URGENT Mt Emerald Wind Farm and the New Zealand Standard

TO: Mark Saunders
Director of Planning Services
DSDIP

Dear Mark

Thanks for taking the time to talk to me briefly yesterday particularly in relation to my questions on NZS 6808:2010 *Acoustics – Wind farm noise* and why it would apply to the Mount Emerald Wind Farm project when Queensland has its own Environmental Protection (Noise) Policy 2008 (EPP Noise) to deal with it.

By way of background, on 1/06/2011 the Tablelands Regional Council set approval conditions for the proposed High Road Wind Farm and, based on expert advice, set the noise level at 35dBA, specifically mentioning that noise at night time shall not exceed 30dBA and that “in addition, perceptible or audible noise from wind farm activity shall not affect human health or wellbeing, including sleep or relaxation”. This is obviously a direct reference to EPP Noise.

EHP advised the Tablelands Regional Council on 27/09/2011 that in relation to Mt Emerald Wind Farm “the assessment manager should consider the *Environmental Protection (Noise) Policy 2008*, *DERM’s Planning for Noise control guideline* and *DERM’s Draft guideline, Assessment of Low Frequency Noise...*”

The community has repeatedly been advised that EPP Noise would apply to the Mt Emerald Wind Farm project. In fact, the Deputy Premier stated at Community Cabinet over the weekend that the wind farm would have to comply with Queensland noise regulations.

In an effort to justify the use of NZS 6808:2010, you mentioned that EPP Noise was only for continuous noise. It would appear that you have been misinformed, as EPP Noise mentions both continuous and non-continuous noise (section 10) and is applied to all types of industrial noise.

It is noted that the New Zealand Standard NZS 6808:2010 *Acoustics – Wind farm noise* states:

To provide a satisfactory level of protection against sleep disturbance, this Standard recommends a limit of wind turbine sound levels outdoors at noise sensitive locations of 40 dB L_{A90(10 min)} (see 5.2).

C5.1.2 This is based on an internationally accepted indoor sound level of 30 dB L_{Aeq} to protect against sleep disturbance (refer to Berglund, Lindvall, and Schwela).

The document the New Zealand standard refers to is *Guidelines for community noise* published by the World Health Organisation (WHO), which has précised the work of leading world experts in order to produce recommendations for all countries to adopt to maintain and protect public health.

Do you agree the basis of the New Zealand standard is to achieve 30dBA indoors at night? This WHO recommendation of a maximum of 30dBA indoors at night has been directly adopted by Queensland in its EPP Noise. Queensland regulations provide this protection. Do you agree that EPP Noise does apply to the Mt Emerald Wind Farm project?

I look forward to hearing from you as a matter of urgency.

Kind regards

Refused under section 47(



Ref: MBM14/292

Date: 20 June 2014

Attn: Mr Mark Saunders
Director, Planning Services
Planning and Property Group
Department of State Development, Infrastructure and Planning
PO Box 15009
CITY EAST QLD 4002

Via: Mail / Email (Mark.Saunders@dsdip.qld.gov.au)

Dear Sir

RE: MOUNT EMERALD WIND FARM – MINISTERIAL CALL-IN

We write with reference to the above matter and to the Minister's recent decision to call in the development application.

In response, we would like to take the opportunity to express our support for the Minister's decision and confirm our eagerness to work with the Minister's advisory team towards achieving a mutually acceptable outcome to the assessment process.

We confirm our intent to provide the Minister with a comprehensive response that will address items contained within the Minister's Information Request. Our preferred timing for provision of this response is likely to be early-to-mid September 2014 following provision of the final Environmental Impact Statement to the Federal Department of the Environment for their consideration, under the Environmental Protection and Biodiversity Conservation (EPBC) Act, as final outcomes of this process will provide additional guidance/information likely to be of benefit to the Minister's assessment process.


In the interim, we suggest there would be mutual benefit in allowing us to meet with members of the Minister's assessment team. Such a meeting would provide us the opportunity to provide a comprehensive briefing on the project, including the extensive body of work undertaken to date, to identify potential impacts and mitigation strategies. At the same time, it would provide us with the opportunity to seek direction as to the extent of additional information likely to be required to provide an acceptable level of response to the Minister's Information Request.

Further, we suggest there would be benefit in conducting an on-site inspection of the development site at the same time.

Should you accept our request for a project meeting and site inspection, please advise a time suitable to your team members, and we will arrange an appropriate venue and attendance by all relevant members of our project team.

Yours sincerely

Refused under section 47(3)(b) of the RTI Act



Director - Mount Emerald Wind Farm Pty Ltd

Refused under section 47(3)(b) of the RTI Act.

**EXECUTIVE CORRESPONDENCE
DEPUTY PREMIER / ASSISTANT MINISTER
DEPARTMENT OF STATE DEVELOPMENT, INFRASTRUCTURE AND PLANNING**

Deputy Premier's Office

DPO Tracking Number

Date

57150714

15/07/2014

DPO Allocation

☐ Jeff Popp

☐ Mary Sharp

☒ Matt Adams

☐ Dimity Elson

☐ Corinne Amos

☐ Adam Yem

☐ Natalie Keys

☐ Carrie Hall

☒ Brooke Tranent

☐ Julie Pickerill

Response

☐ Priority - 5 days

☐ Routine - 15 days

☐ Other - days

☐ Briefing Note

☐ Decision ☐ Noting ☐ Meeting *

☐ DPO direct response
(copy attached)

☒ NRN / NFA

Signatory

☐ Deputy Premier

☐ Assistant Minister

☐ Chief of Staff

☐ Senior Policy Advisor

☐ Deputy Chief of Staff

Acknowledgement

☐ Standard

☐ Courtesy and Final

☐ Planning Scheme
Amendment

☐ Submission

Signatory

☐ Deputy Premier

☐ Assistant Minister

☐ Chief of Staff

☐ Senior Policy Advisor

☐ Deputy Chief of Staff

DSDIP

Source File Number

Source Tracking Number

Date due

F14/2281

MC14/2500

DSDIP Allocation

☐ Office of the Director-General

☐ Office of the Coordinator-General

☒ Planning and Property

☐ Regional Services

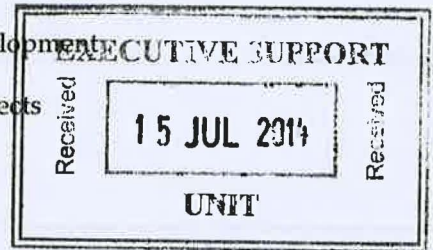
☐ State Development

☐ Major Projects

☐ EDQ

☐ OSR

☐ Copy to



Approval

Response approved Coordinator-General, DSDIP

..... / / 2014

Response approved Director-General, DSDIP

..... / / 2014

Drafting Instructions

(* provide purpose, date, time, venue, attendees, departmental officer to attend meeting)

please consider in call in process.

Thank you.

15/7/14

15 JUL 2014

Department of Health

Enquiries to: Ms Uma Rajappa
Director
Environmental Hazards
Telephone: 3328 9338
Facsimile: 33289354
File Ref: CH010127

The Honourable Jeff Seeney MP
Deputy Premier
Minister for State Development, Infrastructure and Planning
PO Box 150009
City East QLD 4002

Dear Mr Seeney

Thank you for your letter dated 11 June 2014, regarding the development application for the Mount Emerald Wind Farm at Arriga in Mareeba. You have sought advice from my Department regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures.

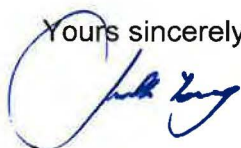
The National Health and Medical Research Council (NHMRC) noted in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that "There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

The NHMRC Draft Information Paper acknowledges that the impact of noise from wind farms has indirect health-related effects such as annoyance, sleep disturbance and quality of life. It would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

I am advised that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

Should officers of your Department require further information, please contact Ms Uma Rajappa, Director, Environmental Hazards, on telephone 33289338

Yours sincerely



Dr Jeannette Young
Chief Health Officer

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3235 9573

Chris Lee

From: Chris Lee
Sent: Tuesday, 22 July 2014 11:51 AM
To: Refused under section 41cardno.com.au'
Cc: Jane McInnes
Subject: Mt Emerald Wind Farm - RATCH comments on Information Request
Attachments: 20140722 Ministerial Call in Information Request - Commentary.docx

Hi Refused under section 41

Please find attached the written comments on the information request from RATCH.

Feel free to call me on the number below if you wish to discuss further

Thanks

Chris Lee
Senior Planner
Statutory Planning | Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government
tel +61 7 3452 7694 (ext 27694)

Great state. Great opportunity.

State Government Ministerial Call-in Information Request

Economic

1. Provide a brief overview and context for this development within the broader Far North Queensland region and local (Mareeba Shire/Tablelands) economy, identifying key industries and employment, unemployment rates, basic socio-economic characteristics of its people or households and population growth projections. This information is readily available from council's published information and ABS data.

To be provided/answered.

2. Provide an overview analysis of Queensland's renewable energy markets and mix, with particular emphasis on the current and future role of wind in meeting renewable energy targets, and the proposed development's potential contribution in meeting state and national renewable energy targets.

To be provided/answered.

3. Provide a discussion of the state of play in the regulatory environment for renewable energy and outline the implications for the project's development prospects (best case - worst case) in light of the current high level of uncertainty.

MEWF will provide a brief response to this question.

MEWF question the relevance of this? This is a question for the owner when determining project viability?

Noise

4. Provide an A3 plan showing numbered receptors, the most current aerial/ satellite imagery for the area, the current cadastral boundaries, and the six noise contour modelling scenarios, plus further wind speed increments to 12 m/s. Only three proposed scenarios have been provided instead of the six requested and the requested overlays on aerial photos have not been provided. All six noise modelling scenarios identified should be provided. This should include labelling or evidence that the noise contour maps have been calculated for the additional 12 m/s wind speed increments.

To be provided/answered

5. The Noise Assessment report has nominated an indoors/ outdoors noise reduction level of 10dB, and a 20dB reduction for air conditioned dwellings. A reasonable outside to inside limit is critical to the assessment of this development and therefore, field assessments should be carried out at a sample of affected or similar receivers to confirm the outside to inside linear (dB(Z)) and dB(A)) noise reduction as originally requested.

To be provided/answered

Please refer to Council Information Request Response Question 10, page 10 – 12.

Further clarification required from DSDIP in regard to further field assessment/s, quantity and location.

6. Background Noise Level v Wind Speed graphs for R06 and R16 have been provided but no regressions lines are included on R16. This information should be up-dated and provided.

Please refer to Council Information Request Response Figure 5.

7. Provide correlation between wind speed at the residence and wind speed at the towers. This needs to be provided in tabular form or similar.

To be provided/answered

MEWF question the relevance of this? Background v wind speed graphs use site wind speeds, not wind speeds at the residence. Estimated wind farm noise also uses site wind speeds, not residence wind speeds. As an example at a particular point in time, the site wind speed is 15m/s, the corresponding background level at the receptor is known (regardless of what the wind speed is at the receptor) and the estimated wind farm noise can be made.

8. The current draft Queensland planning guideline for wind farms recommends a limit of 35 dB(A) rather than 40 dB(A) for audible noise. In addition NZS 6808:20109 (referenced in the Mareeba Shire Planning Scheme) prescribes that if there is a difference of 8 dB or more between evening and night-time then the higher amenity criteria of 35 dB(A) should be applied. This does not appear to have been investigated in the report. To assess this averaged background noise levels for evening and night time at the receiver, monitoring locations should be provided and an assessment undertaken against the identified standard.

To be provided/answered

As agreed with DSDIP (17 July 2014) MEWF to provide further information on the higher amenity criteria within the NZS 6808:20109 (Mareeba Shire Planning Scheme).

MEWF noted that little weight will be provided to the draft QLD Planning Guideline for wind farms, given its current status.

9. Provide information regarding the proportion of nearby receivers that are currently air-conditioned.

To be provided/answered

MEWF question the relevance of this? Particularly given the outcomes of request #5.

10. Presentation of the weather data to clearly show variation between seasons at the noise monitoring locations as relevant to the noise assessment.

To be provided/answered

MEWF question the relevance of this? Refer to questions on request #7

11. 12 months of continuous, time indexed, wind direction and speed data for the two Mt Emerald monitoring masts, and equivalent Figure 18 - Analysis of Wind Data plots has been provided. A comparison of mast wind speed data to measured receiver wind speed data is required for the noise monitoring period. This information was not evident from the additional information supplied and should be supplied.

To be provided/answered

MEWF question the relevance of this? Refer to questions on request #7

12. Further justification of accuracy of modelling based on environmental conditions is required, rather than the assumption that all variability will be based on turbine sound power level fluctuations. For example, wind turbine noise can typically vary by up to 5 dB(A) from that predicted using ISO9613.2:1996.

To be provided/answered

13. Provide averaged measured noise levels for day, evening and night-time periods for each monitoring location.

Please refer to Council Information Request Response 17; provides for day and night-time values.

14. Demonstrate how the development will achieve the requirements of Part 2 and 3 of the *Environmental Protection (Noise) Policy 2008*. The report should also consider the Department of Environment and Resource Management guidelines - Planning for Noise Control.

Please refer to Council Information Request Response 25.

15. Manufacturer's testing conditions and methodology to determine wake effects are required.

To be provided/answered

Not really sure what is being asked for here?

16. Provide an extract of the Danish EPA detailing the LFN methodology adopted for the assessment used to generate the levels in table 12.

To be provided/answered

17. Noise Impact from roads, construction and associated wind farm turbine associated infrastructure, such as power transformers, has not been discussed in the noise report. This should be addressed along with recommendations for information to be included in the project EMP. Where Queensland guidelines do not exist for construction noise impact the levels in NZS 6808:2010 may be taken as a guide, or other suitable criteria developed based on suitable Queensland EPP criteria for intermittent noise sources.

To be provided/answered

18. Provide a revised tonal audibility assessment and data in 1/3 Octave bands rather than Octave bands for the Repower 3XM104 turbine.

To be provided/answered

Information from suppliers

19. Provide 1/3 Octave Band Tonal audibility assessment and 1/3 octave band data for Siemens for the SWT-3.0-101 and SWT-3.0-108 turbines.

To be provided/answered

Information from suppliers

Landscape Visual Amenity

20. Provide the following information as notations to existing visual assessments:

- a) typical turbine height compared to the height of existing power line pylons

Please refer to Council Information Request Response 35

- b) identification of site ridgelines and their elevations as seen from various viewpoints

Please refer to Council Information Request Response 32 and 36

- c) numbering visible turbines in each view and their ground level elevations

Please refer to Council Information Request Response 31

- d) calculation of length (km) of visible array of skyline turbines relative to the total length of visible skyline ridge.

Please refer to Council Information Request Response 37

- 21. Advise of HV Transmission line connections to the grid e.g. the likely number, location and size of any extra pylons.

To be provided/answered

- 22. The periods during which any houses may experience shadow flicker (and view distances), notwithstanding that such periods may be less than 30 hours per year

To be provided/answered

Traffic Impact

- 23. Provide a clear description of all possible access routes (in their entirety) to the site for oversized vehicles. This should include at least a high level identification of constraints along the network and identification of measures that would be put in place to allow state government and council to assess these impacts.

To be provided/answered

- 24. An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.

To be provided/answered

- 25. Provide further information on how staff travel to site can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day (as indicated in the Traffic Impact Assessment.

To be provided/answered

- 26. Should sufficient measures to restrict staff traffic to 30 vehicles per day not be provided a new assessment identifying the worst case traffic impact on the road network should be provided.

To be provided/answered

Ecology

27. The response to the Information Request dated April 2014 does not directly respond to the flora or fauna issues raised but refers to a "comprehensive Environmental Impact Statement (EIS) prepared as part of the requirements for project approval under the *Environment Protection and Biodiversity Conservation Act* (EPBC)." The EIS has not been supplied and, therefore, provide the following additional information:
- a) EPBC Protected Vegetation Communities - discussion on the occurrence (or otherwise) of EPBC protected vegetation communities identified by the Protected Matter Report.
 - b) Regional Ecosystem Mapping - the Appendix D2 amended mapping is difficult to interpret. Provide appropriate shading.
 - c) Queensland Herbarium (HERBECS) database -define the search area. The search area should be extended to a 25 km radius, or the centre point of the search area should be located to best capture relevant habitats.
 - d) Field survey - clarify the location of the high intensity and low intensity sites and show these on Appendix A2.
 - e) Queensland Museum and Birds Australia Atlas databases - if these were searched, then that data should be provided. If they were not searched, then searches should be provided.
 - f) Wildnet (Wildlife Online) database - the data base search area should be increased to 25 km, or the centre point of the search area should be located to best capture relevant habitats.
 - g) Known & Expected species assemblage - the species listing in Appendix I2 is incomplete. Not all species listed in the site profiles are reported in Appendix I2 and vice versa.
 - h) Conservation Significant species - there are inconsistencies in the discussed flora species. Not all species are conservation significant in the context of the report (e.g. *Eucalyptus lockyeri*). Conservation significance should be clearly defined.
 - i) The likelihood of occurrence is only addressed for the EPBC search tool results, and not for the WildNet and HERBRECS search results. Species that are listed to occur in the WildNet and HERBRECS search results are noted in the literature review but no reason is given for their exclusion from consideration. Further discussion is required about the likelihood of occurrence.
 - j) Weed species - comprehensive discussion of legislative requirements should be provided. There are inconsistent levels of discussion (e.g. grader grass v lantana). The possible beneficial project consequences should be discussed in relation to weed and feral species.
 - k) The data sources for all fauna species listed in Appendix B1 should be provided.
 - l) The correct species status under the EPBC Act and the Nature Conservation Act should be provided for all species.
 - m) Biodiversity status should be provided for Regional Ecosystems. Provide sufficient/ additional/ further detail and discussion about the following:
 - the likelihood of occurrence of the EPBC Act protected vegetation communities
 - the likelihood of occurrence of all relevant conservation significant species.
 - species profiles (life history information) for conservation significant species and identification and assessment of potential impacts, including known threatening processes
 - existing habitat values of the site in the context of both conservation significant and other flora and fauna species.
 - n) Wildlife/ connectivity corridors should be discussed at internal site, local and landscape levels, including any possible consequences that may arise from the project. Discussion should include all fauna and plants.

- o) Ridgelines (particularly when associated with rock pavements) have been identified as being ecologically significant. The construction and operational impacts on these areas need to be clearly identified, what proportion will be impacted, and what the possible impacts on *Homoranthus porteri*, *Plectranthus amoenus* and *Grevillea glossadenia* will be.
- p) Back on Track species and/or regionally significant species.

Refer to EIS

- 28. If the Civil Aviation Safety Authority has any lighting requirements in relation to the proposal, then fauna assessments must consider the effects of this requirement.

Refer to EIS

- 29. Demonstrate how the development will achieve the requirements of Part 3(7) - Environmental Values and Acoustic Quality Objectives of the *Environmental Protection (Noise) Policy 2008*: The environmental values to be enhanced or protected under this policy are - (a) the qualities of the environment that are conducive to protecting the health and biodiversity of ecosystems, in the context of any impacts on fauna.

Refer to EIS

- 30. The application's flora and fauna assessment identifies a need for further surveys, investigations and studies and these should be provided. The proposed development is a controlled action under the federal government EPBC Act and is required to be assessed by environmental impact statement. A copy of that EIS should be provided. This information is considered to be integral to assessment of the project.

Refer to EIS

Aeronautical

- 31. The final wind farm layout has to be provided showing all confirmed total heights (including tip of rotor) of the proposed turbines and proving that they do not exceed the height restriction of 1179.Sm suggested by Air Services Australia.

To be provided/answered

As discussed, MEWF recommend this be a condition of approval?

- 32. Written confirmation from the Civil Aviation Safety Authority is to be provided, based on the final layout of the wind farm.

To be provided/answered

As discussed, MEWF recommend this be a condition of approval?

- 33. Written confirmation from the Department of Defence is to be provided (based on the final layout).

To be provided/answered

As discussed, MEWF recommend this be a condition of approval?

Wind

34. The number of monitoring sites in relation to the size of the proposed wind farm and the complex terrain is unusually low. This adds to the uncertainty of the wind resource and calculated energy yield. A final wind turbine layout should be supplied with the turbine locations, information on size and capacity to provide certainty in relation to the energy yield assessments in the complex terrain around Emerald Hill.

To be provided/answered

MEWF question the relevance of this? Would have thought this is a decision for project financiers rather than planning?

Planning

35. Provide justification, including reference to appropriate standards where applicable in respect of the 100m micro-siting tolerance included within the application material. This is considered a large variable distance for 'micro-siting'.

To be provided/answered

Chris Lee

From: Chris Lee
Sent: Thursday, 24 July 2014 10:35 AM
To: Jane McInnes
Cc: Beatriz Gomez; Morag Gilbert
Subject: Mt Emerald Wind Farm - Info Request update

Hi Jane

I received a call from [Refused under sec] today regarding the Ratch comments on the information request. Following his initial review he advised the following:

- Ratch comments are consistent with the meeting on 17/07/14
- [Refuse] has circulated the comments to internal technical people and has asked for feedback by Tuesday next week
- Noise – this is still the main issue and [Refus] indicated that further assessment of limited samples at the receivers will be required. He suggests holding a meeting in the next couple of weeks between Ratch and the Cardno noise specialist to discuss items 4-19 of the IR. He will propose a date early next week
- Ecology – Cardno have now reviewed the draft EIS and are satisfied that it includes sufficient information (no response to ecology questions in the IR necessary)
- Aeronautical – [Refus] agrees these can be conditioned (no response to the aeronautical questions in the IR necessary)

A more formal and considered response will be received mid-next week.

Thanks

Chris Lee
Senior Planner
Statutory Planning | Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government
tel +61 7 3452 7694 (ext 27694)

Great state. Great opportunity.

Chris Lee

From: Jane McInnes <Jane.McInnes@dsdip.qld.gov.au>
Sent: Wednesday, 30 July 2014 1:30 PM
To: Refused under section 47(3)(b) of the
Cc: Chris Lee
Subject: RE: Mareeba Wind Farm

Hi Refused

Thanks for your email. I had a fantastic week off.

I have had a quick review of the acoustic consultants comments and believe that a meeting is the best option. The acoustic consultant has highlighted that there is still a lot of outstanding information to be provided which the applicant thought they had provided.

Please send through a variation.

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au
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From: Refused under section 47(3)(b) of the RTI Act. @cardno.com.au]
Sent: Wednesday, 30 July 2014 10:17 AM
To: Jane McInnes
Cc: Chris Lee
Subject: Mareeba Wind Farm

Hi Jane

I hope that you had a good week off.

In your absence last week the applicant submitted a draft of how they are intending to respond to IR request. Chris kindly forwarded this in your absence.

As previously indicated to Chris I circulated this to our internal consultant team. I am awaiting one response, however I hope to be in a position to respond shortly.

At this point our acoustic consultant is indicating that it will be necessary for additional information and therefore as discussed I would recommend that the most efficient and beneficial way to deal with this would be to arrange a meeting with the applicant's technical advisor in respect of acoustic matters. A copy of our acoustic engineers response is attached for your review.

In respect of any meeting may I take this opportunity to draw your attention to section 4.2 of our fee proposal and fee exclusions. I believe that any such meeting would fall outside of our agreed scope of work and preparation for and attendance at such a meeting would require agreement as a fee variation. In this instance I believe that the meeting is necessary and would be the most efficient way to deal with this outstanding matter. I would be happy to provide

you with a formal written variation request (based on hourly rates included within our fee proposal) should you think that this is an appropriate course of action.

I await your response in respect of this matter.

Refused under section 47(3)(

SENIOR PLANNER
CARDNO HRP



Phone Refused under section 47(3)(b) of the RTI Act.

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email Refused under section 47(3)(b) of the R Web www.cardno.com/cardnohrp

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Chris Lee

From: [Refused under section 47(3)(b) of the RTI Act.] cardno.com.au >
Sent: Tuesday, 12 August 2014 12:10 PM
To: Jane McInnes
Subject: Mt. Emerald Wind Farm

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jane

Further to our meeting last week with the applicant, an action from the meeting was that [Refused under section 47(3)(b) of the RTI Act.] from Cardno (Acoustics) was to review the information previously submitted and contained within Appendix E of the Marshall Day report dated 16 April 2014, in relation to the Information Request Item 12.

[Refused under section 47(3)(b) of the RTI Act.] has reviewed this material in relation to item 12 of the Information Request and confirmed that the applicant does not need to provide further information to respond to this item. Reference to the information contained within Appendix E of the Marshall Day report will be sufficient.

I trust that this can be conveyed to the applicant.

Kind regards

[Refused under section 47(3)(b) of the RTI Act.]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

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Chris Lee

From: Jane McInnes <Jane.McInnes@dsdip.qld.gov.au>
Sent: Thursday, 14 August 2014 1:46 PM
To: [Refused under section 47(3)(b) of the RTI Act]
Subject: RE: Mt. Emerald Wind Farm

Thanks [Refused under section 47(3)(b) of the RTI Act]

I will pass this information on to [Refused under section 47(3)(b) of the RTI Act]

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au
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From: [Refused under section 47(3)(b) of the RTI Act.] [cardno.com.au]
Sent: Tuesday, 12 August 2014 12:10 PM
To: Jane McInnes
Subject: Mt. Emerald Wind Farm

Hi Jane

Further to our meeting last week with the applicant, an action from the meeting was that [Refused under section 47(3)(b) of the RTI Act.] from Cardno (Acoustics) was to review the information previously submitted and contained within Appendix E of the Marshall Day report dated 16 April 2014, in relation to the Information Request Item 12.

[Refused under section 47(3)(b) of the RTI Act.] has reviewed this material in relation to item 12 of the Information Request and confirmed that the applicant does not need to provide further information to respond to this item. Reference to the information contained within Appendix E of the Marshall Day report will be sufficient.

I trust that this can be conveyed to the applicant.

Kind regards

[Refused under section 47(3)(b) of the RTI Act.]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

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Chris Lee

From: Jane McInnes <Jane.McInnes@dsdip.qld.gov.au>
Sent: Tuesday, 16 September 2014 4:32 PM
To: Refused under section 47(3)(b) of the RTI Act.
Cc:
Subject: RE: Mt. Emerald Wind Farm

Hi Refused

Thank you for your email.

Refused is available all day Thursday to discuss the acoustic impacts.

Please confirm if you are available at 10am for a meeting? Alternatively, I am happy for you to suggest a time.

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au
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From: Refused under section 47(3)(b) of the RTI Act. cardno.com.au]
Sent: Tuesday, 16 September 2014 10:39 AM
To: Jane McInnes
Cc: Refused under section 47(3)(b) of the RTI Act.
Subject: Mt. Emerald Wind Farm

Hi Jane

I am still awaiting all comments to be returned from our consultant team but we have received a response from our acoustic advisor (Refused under section 47(3)(b) of the RTI Act.) which may require some further discussion in respect of the acoustic impact. As discussed I thought I would bring this to your attention in the first instance, however should further issues be raised I will raise these with you in accordance with the agreed timeframe.

Further to your request the following is a summary of what was discussed:

- S5 in the Wind Farm Code of the Mareeba Shire Planning Scheme is relevant
- S5 refers to 'recognised standards'
- It is noted that this changed from the 2012 TLPI which referenced Queensland Standards
- It is noted that the probable solutions identifies no probable solution (PS5) but includes an 'Editors Note' to the effect that consideration should be given to the NZS6808:2010
- The NZS6808:2010 includes a 35db noise level in 'high amenity areas' where a plan promotes a higher level of amenity protection
- We note that the Mareeba Shire Planning Scheme does not identify a higher level of amenity protection.
- This is part of the response provided by the applicant in response to the high amenity criteria.
- There are however other noise standards (recognised standards) such as the SA Standard which identifies 35 db in rural areas.
- The Information Request response in assessment of the high amenity criteria identifies 2 receptors through comparison of background sound levels and predicted win farm sound levels - Noise Perception Index (NPI). R06 is close to the 8db difference and R05 is in excess of this. There are therefore potential two noise sensitive locations that have been identified which do not meet the 35 db standard (as contained with the NZS and other recognised standards such as the SA Standard).

- There also seems to be some discrepancy between the graphs shown and the data in Table 4 of the Marshall Day memo which requires clarification.
- The second part of S5 requires audible and inaudible noise emissions do not result in unacceptable levels of nuisance, risk to human health or well being or the ability to relax or sleep.
- Following initial review of the information request and given the above it is considered that further information/clarification is required in respect of addressing S5 of the Wind Farm Code.
- The draft QLD Windfarm code is not effective and as has previously been confirmed has been given no weight.

I have spoken with [Refused under section 47(3)] (Acoustic consultant) and at this time she is available on Thursday this week. If you wish to meet with the applicant I would be grateful if you could discuss and confirm possible meeting times.

Regards

[Refused under section 47(3)]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email [Refused under section 47(3)(b) of the RTI Act.] Web www.cardno.com/cardnohrp

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Chris Lee

From: [Refused under section 47(3)(b) of the RTI Act.]@cardno.com.au>
Sent: Thursday, 25 September 2014 3:51 PM
To: Jane McInnes
Cc: [Refused under s]
Subject: Mount Emerald Wind Farm
Attachments: HRP14122R002 004- DSDIP Draft.docx; Draft Conditions 003.docx

Jane

Please find attached our draft assessment report and recommended conditions in respect of the above.

Please accept my apologies for the delay in getting this draft report to you.

In part this delay was caused by the additional thought and changes required in respect of the assessment of ecological impact. When considering the relevant planning framework for assessing a code assessable development application, perhaps somewhat surprisingly, it appears that only matters of state significance are referenced. However, within the applicants supporting material, discussion and significant mitigation is put forward in respect of the Flying Fox and Northern Quoll, both species protected under the EPBC.

This has been set out in the report and is potentially an issue that your legal colleagues may wish to give some further thought to in review. For this reason we have not included conditions in respect of these two issues in the conditions package. We have however drafted conditions in respect of these issues and included them within the final chapter of our report, should you consider it appropriate to include them as conditions.

You will also note that an area of conflict with the Mareeba Shire Planning Scheme is identified through non compliance with (S1) of the Rural Zone Code, insofar as the development is not consistent in scale with existing buildings and structures. Despite this conflict we consider that there are grounds to support this conflict, pursuant to section 326 of the SPA given that the wind farm code specifically promotes wind farms (the rural zone being the appropriate location for such developments) and compliance has been demonstrated with this code (section 326 (1) (c) (ii)). In any event there are considered to be sufficient grounds to justify the decision given the promotion of renewable energy in the FNQRP (Section 326 (1) (b)).

I look forward to receiving your comments on the draft material following your review and should you have any questions please do not hesitate to contact me.

Regards

[Refused under section 47(3)(b)]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email [Refused under section]ardno.com.au Web www.cardno.com/cardnohrp

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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

September 2014

Document Information

Prepared for Department of State Development, Infrastructure and Planning (DSDIP)
Project Name Mt. Emerald Wind Farm, Kippin Drive, Arriga
File Reference HRP14122R001.001 Part A Report
Job Reference HRP14122
Date September 2014

Document Control

Version	Date	Author	Author Initials	Reviewer	Reviewer Initials
001	23/09/2014				

Prepared for:
Department of State Development, Infrastructure and Planning (DSDIP)
100 George Street
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PO Box 15009
City East
Brisbane QLD 4002

Prepared by: Cardno HRP

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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LIST OF ATTACHMENTS

Attachment A – Recommended Conditions

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Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Representative	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological/Environment – impacts of wind farm on protected flora and fauna
- Agricultural Land - Agricultural Land and impact on ability to crop spray
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- preparation and compilation of technical assessment summaries to inform recommendations, including an objective description of the likely impacts, benefits and other considerations at the site, regional and state scale;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommended approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises a technical assessment of the proposed development against the applicable planning framework. It has not addressed any submissions received in respect of the Ministerial Call In. Further, it has not considered any economic matters, which we understand are being assessed separately by DSDIP.

Section 3 – Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Summary of Technical Consultants Responses provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on or about 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes on to state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been observed following lodgement.

- Tablelands Regional Council advised the Applicant on or about 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on or about 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended.
- Referral Responses received (refer to section 3.4 below).
- A response to the Information Request (dated April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 242 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

The reasons for the call in are as follows:

"State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft

Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Resource Management – Contaminated Land Matters (Concurrence)*

The Department of Environment and Resource Management (DERM) recommend that a number of concurrence agency conditions are attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters. On 9 April 2014 the Department of Environment and Resource Management (DERM) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 *Department of Environment and Resource Management – Wetland Management (Advice)*

Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland.

The assessment manager is to consider the requirement for a buffer area between any proposed works and the wetland. Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

It is also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 *Powerlink Queensland – Electricity Easement (Advice)*

The advice agency advice is that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 **Summary of Advice Agency Responses (following Ministerial Call In)**

Pursuant to section 427(4), until the minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (EHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 ***Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)***

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) confirmed that it has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm.

The DNRM advice agency response advised that their original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the IDAS. An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

3.6.2.2 ***Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)***

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the *Sustainable Planning Regulation 2009*.
- Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.
- Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.
- Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.

- EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that Defence recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- Do not touch or disturb the object.
- Take action, where appropriate, to prevent it being disturbed by another person.
- Note its approximate dimensions and general appearance.
- Note the route to its location.
- Advise the Police as soon as possible.

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

In relation to wetland management, the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue.

3.6.2.3 **Powerlink Queensland – Electricity Easement (Advice)**

Powerlink Queensland advised that it does consider the proposed development involves the "Energy and Water Supply" State Interest under the State Planning Policy.

The single State Planning Policy recognises that providing safe, reliable and affordable energy and water supply is vital to meeting the basic needs of communities and for Queensland's economic prosperity.

The planning system plays an important role in supporting the timely, safe, cost-efficient and reliable provision and operation of energy and water supply infrastructure, which in Powerlink's view includes electricity generating developments, such as wind farms.

The following representations are made:

1. **Electricity Supply** – an important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.
2. **Protecting of Powerlink's infrastructure** – the single State Planning Policy recognises that existing and approved future major electricity infrastructure (including easements) need to be protected from development that would compromise the corridor integrity, and the efficient delivery and functioning of the infrastructure. The land the subject of the development application, being Lot 7 on SP23544, is encumbered by the following Powerlink easements:
 - Easement B on RP906464, Dealing 701758410; and
 - Easement D on SP231871, Dealing 713030213.

These registered interests protect Powerlink's corridor for the existing Springmount Tee to Woree 275kV transmission line over Lot 7.

Powerlink maintains the position set out in the referral agency response dated 25 May 2012, and requests that Powerlink's requirements be included in any development approval for the proposed development.

The advice agency advice is that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.3 Third party Advice

3.6.3.1 *Department of Health*

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identify that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

"There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 *Mareeba Shire Council*

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 *Tablelands Regional Council*

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this

development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

DRAFT

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

“(2) The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—

- (a) the State planning regulatory provisions;*
- (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
- (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
- (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
- (e) any applicable codes in the following instruments-*
 - (i) a temporary local planning instrument;*

- (ii) a preliminary approval to which section 242 applies
 - (iii) a planning scheme;
- (d) if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.
- (3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—
 - (a) the common material;
 - (b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
 - (c) any referral agency's response for the application;
 - (d) the purposes of any instrument containing an applicable code;
- (4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).
- (5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.
- (6) Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-
 - (a) Before the day decision stage for the application started; or
 - (b) If the decision stage is stopped-before the day the decision stage is restarted.
- (2) However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—
 - (a) the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or

- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, the following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	Queensland Government policy, which sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	Queensland Government policy, which sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. This is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/07: Housing and Residential Development	This State Planning Policy seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application

	does not propose housing and therefore it is not relevant.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This is not applicable.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This is not applicable.
SPP 4/10: State Planning Policy for Healthy Waters	The SPP will ensure that development for urban purposes under the Sustainable Planning Act 2009, including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the environmental values prescribed in the Environmental Protection (Water) Policy 2009. This is not applicable as it is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This is not applicable as an industrial land use is not proposed.

Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. Not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of wetlands and their environmental values, or enhances these values. This is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. No SCL is identified and therefore this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy

source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;
- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;

- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.

- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage
- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in

force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.

- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;

- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2012 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5 and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made
- the SPP.

5 Summary of Technical Responses

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land - Agricultural Land and impact on ability to crop spray;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

This chapter provides a summary of the technical assessment for each technical service.

5.2 Landscape Visual Amenity

An assessment of the visual impact of the proposal has been undertaken and it is confirmed that the documents adequately describe the proposed development and provide sufficient technical assessment to assess visual impacts, including response to the Minister's information request regarding:

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length(km) of visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons;
- Shadow flicker assessment.

It is noted that none of the planning or visual impact technical reports substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. The Mareeba Shire Planning Scheme defines any landform >600 m AHD as a 'significant landscape feature'. At the time of application, it is not clear that the Planning Scheme or any other Code required assessment of visual impacts on significant landscape features, although it is now referred to in P06 of the Draft State Wind Farm Code (and the consultation draft of the Planning Guideline April 2014) and in S3 of the Mareeba Shire Planning Scheme amendment 01/11 Wind Farms (Sept 2013). Nevertheless, the landscape significance of this mountain range to character and scenic amenity should have been addressed.

It is stated that notwithstanding the approach taken in visual impact assessments, it is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed.

It is stated that the development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array

arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

The technical assessment goes on to state that the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast ('beauty lies in the eye of the beholder').

It is concluded that the extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.

5.3 Ecological

Ecological impacts have been assessed in terms of State and Local Government regulatory requirements and based on the documentation that has been submitted in support of the proposal it is concluded that:

- the proposal is supported by relevant ecological surveys and assessments that provide an adequate basis for assessment of the application;
- the proposal will have adverse ecological impacts;
- the proposal has specific locational requirements which the proposed site satisfies;
- the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur;
- the proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts;
- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is considered that sufficient documentation has been provided to enable an assessment of the ecological impacts of the proposal to be made and to determine whether:

- the proposal warrants refusal based on the likelihood of significant residual ecological impacts that have no reasonable prospects of being adequately mitigated or offset; or
- the proposal warrants approval subject to an appropriate set of Conditions being imposed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.

There are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues.

Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.

It is important to note that important ecological matters for the development relate to the protection of quoll and flying fox populations, but that these species are not protected by State or local legislation or policies. Nevertheless, the impacts have been assessed and conditions for management and mitigation are recommended. In addition, the EPBC referral will be another mechanism which will assess the impact on quoll and flying fox populations and that assessment process will separately determine whether the development may proceed (with management mechanisms) or may not proceed having regard to their protection as Matters of National Environmental Significance (MNES).

5.4 Agricultural Land and Environment

The agricultural land and environment assessment notes that the revision to the risk assessment for occurrence of residual UXO has been changed to a 'slight' possibility of occurrence by DEHP. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation.

It is stated that based on the content of the EIS, this assessment concurs with DEHP's recommendation.

On the basis of the overall compatibility of the proposed development, the limited nature of the wind farm footprint within the existing agricultural land use and the provided information regarding socioeconomic benefits of the project in the EIS it is considered that the level of assessment provided in relation to the development is appropriate for the purposes of decision making relating to soil impacts and agricultural land use policy and impact.

No further information was requested or conditions recommended.

5.5 Noise

The acoustic assessment identifies that the submission indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has confirmed in a meeting that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors. As such, it is recommended that conditions be applied that limit noise levels to 35dB dB LA90,10 min at those sensitive receiver locations where predicted noise levels are more than 8 or dB (A) above the existing background noise level at a wind speed between 6 and 12 m/s.

5.6 Traffic Impact

In response to matters raised in the information request a Traffic Report "Technical Note 2 – Traffic Impact Assessment Engineering Response" was prepared on 29 August 2014. This responded to each of the items in the Information Request relating to traffic matters as summarised below:

- Provide a clear description of the whole of the potential access routes to the site for oversized vehicles. This should include at least a high level identification of constraints along the network and identification of measures that would be put in place to allow State Government and Council to assess these impacts
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Further information on how staff travels to site can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Should sufficient measures to restrict staff traffic to 30 vehicles per day not be provided a new assessment identifying the worst case traffic impact on the road network be provided.

An assessment of all the development application material has been undertaken and it is confirmed that the assessment has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council;
- Requirements for permits and escorts to traverse the detailed routes should be identified and obtained when necessary.

These issues may not be able to be assessed at the moment as the details of construction schedule etc is likely subject to change prior to construction occurs. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles etc would be needed to ensure the routes are acceptable, the assessment of the suitability of Hansen Road and Springmount Road could be included as a condition.

In respect of managing staff vehicles it is stated that the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders.”

It is recommended that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery).

5.7 Wind/Aeronautical

The wind / aeronautical assessment concludes that there are no wind / aeronautical matters that generate a reason for refusal, and that any development approval includes a condition to require written confirmation from CASA and the Department of Defence that they have no objection to the development in relation to aviation issues.

5.8 Civil and Electrical

5.8.1 Civil

The civil engineering assessment identified that the responses provided by the relevant referral agencies were not unreasonable and the accompanying Information request responses were satisfactory apart from the need to possibly address the following areas in further detail:

- a. Decommissioning and Rehabilitation of the site.
- a. Assessment of Vertical road grading's to site access.
- b. Assessment of Road Cross sections.
- c. Construction Management Plan.
- d. Sediment and Erosion Control.
- e. Water Quality Management.
- f. Stormwater Management
- g. Noise impact from Road Construction

It is considered that these matters can be secured by appropriate conditions.

5.8.2 Electrical

The electrical engineering identified that whilst no additional details have been provided in the response submission to the matters originally raised, it is likely that matters can be dealt with at the relevant Building Approval / Operational Works stages or via a condition of an approval in respect of the content of construction and operational management plans.

Management plans should include specific reference to site safety and include matters to deal with contamination. In respect of bushfire, a Bushfire Management Plan has been submitted and subsequent amendments to secure such requests can be conditioned.

TLPI 01/12 – S2 (b) requires the MEWF to be readily connected to existing, nearby HV electricity transmission lines without significant environmental, social or amenity impact. However, the information in the DA and response to information request did not include or sufficiently present the impacts of the proposed HV interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. This was advised in Powerlink's agency response as a condition of approval for the MEWF development. The detailed interconnection design and grid connection studies to assess the viability of interconnection of the MEWF to the Powerlink network can be established through this process and are not relevant to the assessment of the development application at this stage.

Minimum clearances of WTG structures to Powerlink's assets need to be complied with and should form a condition of approval for the MEWF development. The required clearance was advised in Powerlink's agency response.

In addition, the compliance of the proposed MEWF with the National Electricity Rules and Codes, as it applies to wind farms, needs to be demonstrated and included in the assessment.

TLPI 01/12 – S5 requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. It is confirmed

that the submission response satisfactorily addresses this. There are no further issues or gaps in this matter.

It is noted in the DA submission that the connection of each WTG and associated transformer at its base to the main substation may use overhead lines, and not exclusively underground cables. This is not recommended in the 'heavily vegetated' area, and presents risk of bush fires from electrical faults, despite management plans being in place. Instead, exclusive use of underground cables should be considered and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the WTG structures and risk of bush fires has not been specifically assessed. It is recommended that an independent lightning impact assessment study be included or conditioned as part of the approval.

DRAFT

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	<p>The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions.</p> <p>The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.</p>
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	<p>The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development.</p> <p>The site is designated as being within the Regional Landscape and Rural Production Area.</p> <p>An assessment against the relevant provisions of the FNRP is provided below in Section 6.4.</p>
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</p> <p>(ii) the planning scheme as being appropriately reflected in the planning scheme;</p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p>Any applicable codes in the following instruments-</p> <p>(i) A structure plan</p> <p>(ii) A master plan</p> <p>(iii) a temporary local planning instrument;</p> <p>(iv) a preliminary approval to which section 242 applies</p> <p>(v) a planning scheme;</p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ("the Planning Scheme") is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<p><i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i></p>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in</p>

<p><i>the priority infrastructure plan.</i></p>	<p>the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the</p>

response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.

The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:

- Response to Ministerial Information Request (Summary)
- Attachment C - Residence assessment report
- Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014.
- Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014.
- Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff
- Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014.
- Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014.

An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in **Section 5.5 above**.

The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.

There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is

	<p>considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
Policy 2.1 Regional Landscape Values	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given 'appropriate recognition in land use planning and development assessment'.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in</p>

	<p>these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<p><i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i></p>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind

	<p>turbines on the skyline present an attractive contrast ('beauty lies in the eye of the beholder').</p> <ul style="list-style-type: none"> The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are '<i>recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions</i>'.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
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Biodiversity	<p>Development:</p> <ul style="list-style-type: none"> (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and (3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts. 	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <ul style="list-style-type: none"> (1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and (2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and (3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and (4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and (5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard, and 	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p>

		<ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 07 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for Wind Farms changed to Impact Assessable (although not affecting this

application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1

Rural Zone Code

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the instrument (definitions, levels</p>

		<p>of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>An assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's , the intent of both being to facilitate the establishment of new wind farms in appropriate locations.</p>
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		<p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
<p>S2 Agricultural activities are protected from incompatible land uses.</p>	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in September 2011. It is</p>

		<p>confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For all Lots</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	PS4.3 Vegetation is retained on land with a slope of 15% or greater.	
For Code Assessable Development		
S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.	Not Applicable – the site is not in the Southedge Potential Tourist Area.
<p><i>For Mona Reserve as identified on Map Z10 as Preferred Area No 2</i></p> <p>S7 Utility services are</p>	PS7 Development is carried out in accordance with a Plan of Development and Land Management and the Supplementary Table of	Not Applicable – the site is not in the Mona Reserve.

<p>provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of the Shire. 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>
<p>S10 Uses not dependent upon good quality agricultural</p>	<p>PS10 No probable solution</p>	<p>The applicant states that the Council's Agricultural land</p>

land are not located on Good Quality Agricultural Land identified on Agricultural land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	prescribed.	quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.
4.80 RECONFIGURING A LOT		
Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.		

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2 **Division 5 - Car Parking Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use.	AS1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	Not Applicable.

S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable condition for parking; and	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.

	<p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	
<p>S8 Adequate shade is provided for car parking areas in excess of 1,000m².</p>	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	<p>Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.</p>
Car Parking Numbers		
<p>S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use2.</p>	<p>AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be provided at the site to accommodate the demand likely to be generated by the</p>

		proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Bicycle Parking		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
Movement and Access		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be designed and constructed in accordance with the Planning Scheme Policy - 4</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site.</p>

	Development Manual.4	<p>The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 Division 17 - Filling and Excavation Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are undertaken to ensure that the visual amenity of the adjoining lots and the area is	AS1 Filling and excavation is no greater than two (2) metres in height or depth.	It is considered unlikely that significant filling and excavation will occur, however it is inevitable that the proposed development will result in some change to

not compromised.		<p>the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
<p>S2 Pest Management</p> <p>Filling and excavation does not result in the spread of declared plants.</p>	<p>AS2 No declared plants¹⁵ are spread during any filling or excavation activities.</p>	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
<p>S3 Stability</p> <p>Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.</p>	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely within the development site is provided with at least a 50mm parapet above the</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project, covering discrete construction areas and which will account for the changing</p>

	<p>allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>
<p>S5 Environment</p> <p>Filling or excavation does not result in a reduction of the</p>	<p>AS5 Filling and excavation does not occur within fifty (50) metres of waterways or</p>	<p>Refer to S4 above.</p>

water quality of receiving waters.	wetlands as identified on the Planning Scheme Maps.	
<p>S6 Environment</p> <p>Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.</p>	<p>AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.</p>	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4 Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Cultural Heritage Places</p> <p>(a) significant elements of the mining history of Mareeba Shire are conserved; and</p> <p>(b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and</p> <p>(c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.</p>	<p>PS1 No probable solution provided.</p>	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby consultation with the appropriate Aboriginal Party for the area is initiated.</p>

		<p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p> <p>(a) There are no significant adverse effects on identified wetlands and identified</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland trigger' has since</p>

<p>waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <ul style="list-style-type: none"> (i) Original in situ building fabric are preserved and restored; and (ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and (iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s. 	<p>PS4 No probable solution provided.</p>	<p>Not Applicable as there are no buildings and places of Local Heritage Significance on the site.</p>
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	<p>PS5 No probable solution provided.</p>	<p>Not applicable as there are no buildings and structures of historic significance on the site.</p>
<p>S6 Retention of Natural Heritage Features and Cultural Heritage Features</p> <p>Buildings or structures within</p>	<p>PS6 No probable solution provided.</p>	<p>Not Applicable as there are no buildings or structures to be retained.</p>

a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.		
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft navigation systems.	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife. PS1.5 (i) Uses involving food processing or	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.

	<p>abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme</p> <p>Map A1. PS1.7 (i) Works or uses are not located within the</p> <p>500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>PS1.7</p> <p>(i) Works or uses are not located within the</p>	<p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Bibbohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Bibbohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibbohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar facility that involve any building, structures or work above 950 AHD.</p>	
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6.6.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> setbacks between buildings/structures and hazardous vegetation, and access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who understand how to respond quickly to fire and use equipment

		<p>available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, swimming pool). <p>For Code Assessment only:</p>	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

	<p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; <p>AND</p> <ul style="list-style-type: none"> • have a formed width 	
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	<p>and gradient, and erosion control devices to local government standards;</p> <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de-sacs, except where a perimeter road isolates the development from 	
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	<p>hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the

Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.

and are maintained during the life of the wind farm.	
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment, economic and social impacts. b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts. c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level. b) An existing 275kV

<p>urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of</p>
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	<p>reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the</p>
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		identified location and site suitability criteria.
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts</p>

		upon the landscape.
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes or (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are</p>	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed</p>

<p>located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <ul style="list-style-type: none"> (i) nuisance (ii) risk to human health or wellbeing (iii) ability to sleep or relax. 	<p>Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an</p>
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		<p>acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and</p>
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		<p>R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A</p>

		<p>condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5; or PS8.2 Internal accesses</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed</p>

<p>standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a</p> <p>Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
S9 Wind Farm Construction	PS9.1 Construction and	The development application

<p>Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include</p>

Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.	monitoring programs; (iii) a Maintenance Management Plan	management techniques and ongoing monitoring programs that will be used. A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable. Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.
S11 Signage Signage and advertising devices are limited in scale and confined to site and development interpretation.	PS11 No probable solution provided.	The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan. Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.
S12 Decommissioning & Rehabilitation Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.	PS12 The site is rehabilitated such that: (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; (iii) the sustainable ecological functioning of the site is maintained or improved; (iv) any agricultural function is restored; (v) wind farm infrastructure is removed from the site.	The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site. Decommissioning the site would involve: <ul style="list-style-type: none">• dismantling the turbines;• removing towers and replacing soil over foundations;• removing all material from site for recycling;• where tracks are of no use to the land owner, the land reinstated;• underground and above ground cabling removed;• the substation and associated buildings

		<p>would be removed.</p> <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** have undertaken an assessment considering impact upon state environmental significance, given the wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires wind farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of state significance. The probable solutions and overall outcome both refer to state significance and whilst there is reference in the specific outcome to impact on ecological values this is 'or' and not 'and'. There being a clear distinction.

It is identified in the Rural Zone Code that compliance with the specific outcomes of the code complies with the code. The specific outcomes do not contain any specific outcomes seeking the avoidance of significant effect on the environment and as such it is concluded that the proposed wind farm development complies with the Rural Zone Code in this regard. It is acknowledged however that the overall outcomes require works to be located, designed and managed to avoid significant effect on the environment.

It is noted within the submitted ecological supporting material, and more specifically the EIS that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

As such it is concluded that the more general consideration of significant effect on the environment does not form part of the assessment, when considering the applicable planning framework however you may wish to seek legal review in respect of this issue.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for your consideration and inclusion if considered necessary:

FLYING FOX MANAGEMENT PLAN

1. Prior to commencement of works, a Flying Fox Management Plan must be prepared in consultation with and approved by the responsible authority.

The management plan must include:

- (a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.
- (b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;
 - (i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:
 - impacts upon Spectacled Flying Fox

- the species, number, age and sex (if possible) and date of any flying strike
 - the number and species of flying fox's struck at lit versus unlit turbines
 - any seasonal and yearly variation in the number of flying fox strikes
 - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the responsible authority.
- (c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine
- (d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities
- (e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines
- (f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority,
- (g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and
- (h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including:
- (i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria
- (ii) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites).
- The development shall be carried out in accordance with the approved management plan. All surveys must be submitted to the responsible authority immediately upon completion.
2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the responsible authority, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the responsible authority, to reduce potential for mortality rates.

NORTHERN QUOLL MANAGEMENT PLAN

3. Before the development starts, a Northern Quoll Management Plan must be prepared in consultation with and approved by the responsible authority.
- The management plan must include:
- (a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.
 - (b) A monitoring program of additional utilisation studies prior to construction;

- (i) requires surveys to be undertaken during breeding seasons to ascertain:
 - the potential preferential use of ridgeline areas for maternal denning;
 - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the responsible authority.
- (c) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);
- (d) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):
 - (i) Construction Phase Management Procedures:
 - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks;
 - daily trapping and relocation of trapped males and non lactating females;
 - Identification of maternal dens through release and tracking of trapped lactating females;
 - Implementation of spotter catcher methodologies during clearing;

The development shall be carried out in accordance with the approved management plan and identified surveys and mitigation.
- 4. Where surveys undertaken pursuant to condition 53 identify substantial mortality of the northern quoll populations, in the opinion of the responsible authority, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the responsible authority, to reduce potential for mortality rates.

7.2 Conclusion

Section 326 (1) (b) of the SPA states:

"The assessment manager's decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument."*

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2012 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that

the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326 (1) (c) (ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the FNQRP recognises wind farms as legitimate land use and emphasis placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

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ATTACHMENT A – RECOMMENDED CONDITIONS

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GENERAL PLANNING REQUIREMENTS

1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.

Table 1: Approved Plans and Documents		
Plan/Document number	Plan/Document name	Date
PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013
PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012
PR100246/R72893	Preliminary Environmental Management Plan	November 2013
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014
Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010

MICRO-SITING OF TURBINES

2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the responsible authority.

Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres.

3. Prior to the commencement of works on the turbine (s), any request for the approval of revised plans for micro-sitting of that turbine (s) shall be submitted to and approved in writing by the responsible authority. The responsible authority will not approve to micro-siting of turbines unless the responsible authority is satisfied that it will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.
4. Any request for the approval of the responsible authority to micro-siting a turbine under condition 3 must be accompanied by supporting material addressing the matters referred to in condition 3, to the satisfaction of the responsible authority. The development shall be carried out in accordance with the approved details.

SPECIFICATIONS

5. The wind farm must meet the following requirements:
 - (a) The wind farm must comprise no more than 63 turbines;
 - (b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;
 - (c) The hub height of any turbine shall not exceed 90m;
 - (d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area, to the satisfaction of the responsible authority;
 - (e) The turbines and blades shall be constructed from non-reflective materials;
 - (f) All cabling should be provided underground, except where crossing water courses or environmentally sensitive locations.
6. Prior to the commencement of works in relation to the operation and maintenance depot details of its location, design and appearance shall be submitted to the responsible authority for approval. The development shall be carried out in accordance with the agreed details.

NOISE

Performance Requirement

7. The operation of the wind farm must comply with this condition to the satisfaction of the responsible authority. The following requirements apply:
 - (a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 7(b);
 - (b) At the specified assessment positions referred to in condition 7(b), the noise limit of 40dB LA90,10 min referred to in condition 7(a) will be modified in the following way when the following circumstances exist:
 - (i) where the background sound level is greater than 35 dB LA90,10 min the noise limit will be the background sound level LA90,10 min plus 5 dB;
 - (ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB LA90;
 - (iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90,10 min applies.

Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) shall reduce output in order to meet the applicable noise criteria.

Noise Compliance Assessment

8. For the purposes of determining compliance, the following requirements apply.
 - (a) Acoustic compliance reports shall be prepared by a suitably qualified and experienced independent acoustic engineer to demonstrate compliance with the noise limits specified in condition 7 shall be submitted to and approved by the responsible authority.
 - (b) Noise assessment positions must be submitted to and agreed with the responsible authority, and shown on a map.
 - (c) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with clause 7(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the "noise assessment".
 - (d) An initial acoustic compliance report must be submitted following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).
 - (e) A final compliance report must be submitted to the responsible authority after a 12 month period following full operation of the facility.
 - (f) Following facility commissioning, all complaints shall be managed following procedures set out in a noise complaints management plan.

Noise Complaints Evaluation

9. Prior to the commencement of operation of the wind farm, the applicant must prepare a complaint register, investigation and response plan to the satisfaction of the responsible authority. The plan shall include:
 - (a) how contact details will be communicated to the public;
 - (b) a toll free telephone number and email contact for complaints and queries;
 - (c) details of the appropriate council contact telephone number and email address (where available);
 - (d) a table outlining complaint information for each complaint received, including:
 - (i) the complainant's name;
 - (ii) any applicable property reference number if connected to a background testing location;
 - (iii) the complainant's address;
 - (iv) a receipt number for each complaint which is to be communicated to the complainant;
 - (v) the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;
 - (vi) the processes of investigation to resolve the complaint.
10. A report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions is to be provided on an annual basis to the satisfaction of the responsible authority.

11. The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the responsible authority on request.

BLADE SHADOW FLICKER

Performance requirement

12. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.

Blade shadow flicker complaint evaluation and response plan

13. Before the first turbine is commissioned, the operator of the wind farm must prepare a detailed shadow flicker complaint evaluation and response plan, to the satisfaction of the responsible authority.

The plan must include the following elements:

- (a) a toll free complaint telephone service;
- (b) a sign on site advising of the complaints telephone number;
- (c) procedures for assessing any alleged breach of condition 11.

The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.

BLADE GLINT, ELECTROMAGNETIC RADIATION, TELEVISION AND RADIO RECEPTION AND INTERFERENCE

14. Before the commencement of construction of the wind farm, a pre-construction survey must be carried out to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], to the satisfaction of the responsible authority.

The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 kms of the site to be determined. The specific locations of testing will be determined by an independent television and radio monitoring specialist, to the satisfaction of the responsible authority.

15. If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.
16. If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality to the satisfaction of the responsible authority.

ACCESS TRACKS

17. Prior to the commencement of any works, detailed design of the access tracks including layout, location, dimensions (including sections) shall be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved details.

18. Access tracks within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas to the satisfaction of the responsible authority.
19. Access tracks must be surfaced in a manner which does not unduly contrast with the surrounding landscape.

LIGHTING INCLUDING AVIATION OBSTACLE LIGHTING

20. External lighting of infrastructure associated with the wind farm is not permitted other than:
 - (a) low-level, low-intensity security lighting;
 - (b) aviation obstacle lighting in accordance with condition 21;
 - (c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times each of which must be to the satisfaction of the responsible authority.
21. Where required, aviation obstacle lighting must meet the following requirements:
 - (a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;
 - (b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);
 - (c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;
 - (d) all lights must flash in unison;
 - (e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;
 - (f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.
22. Before the wind farm is commissioned, a lighting maintenance plan must be prepared to the satisfaction of the responsible authority. When approved, the lighting maintenance plan will then form part of this development approval. The development shall be carried out in accordance with the approved lighting maintenance plan.

AVIATION SAFETY CLEARANCES

23. Pursuant to condition 2, prior to the commencement of works, any proposals for micro-siting of turbines shall be submitted to CASA and the Department of Defence for final approval. Development shall only be carried out in accordance with the approved plans.
24. Prior to the commencement of works, copies of the development plans approved under condition 2 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:
 - (a) the Civil Aviation Safety Authority;
 - (b) the Department of Defence (RAAF Aeronautical Information Service);

- (c) Airservices Australia;
- (d) any aerodrome operator within 15 km of the outside property boundaries of the site;
- (e) the Aerial Agriculture Association of Australia;
- (f) any organisation responsible for providing air ambulance services in the area.

TRAFFIC MANAGEMENT

Construction traffic management plan

25. Prior to the commencement of works, a construction traffic management plan must be prepared in consultation with and approved by the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind farm. The construction traffic management plan must be submitted to and approved by the responsible authority. The construction traffic management plan must include:
- (a) an existing conditions survey of Hansen Road and Springmount Road (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;
 - (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;
 - (c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - (d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;
 - (e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:
 - (i) detailed engineering plans showing the required works;
 - (ii) the timing of when the works are to be undertaken;
 - (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic;
 - (f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads. In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":
 - (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site;
 - (ii) the shuttle bus will service the key townships where the construction workers live;
 - (g) a program to rehabilitate existing public roads of Hansen Road and Springmount Road to the condition identified by the surveys required under sub-section 1 above at the conclusion of the construction of the wind farm.

26. The development must be carried out in accordance with the approved construction traffic management plan.

Traffic management and road upgrade and maintenance works

27. The traffic management and road upgrade and maintenance works identified in the endorsed traffic management plan must be carried out in accordance with the endorsed traffic management plan to the satisfaction of the responsible authority.

PROJECT ENVIRONMENTAL MANAGEMENT PLAN

General requirement for an environmental management plan

28. Prior to the commencement of works, an environmental management plan must be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved plan.

The project environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the responsible authority specified in conditions 28 to 45 or any other agency as directed by the responsible authority;
- (c) may be prepared in sections or stages; and
- (d) must meet the requirements of conditions 28 to 42 below.

The development must be carried out in accordance with the endorsed environmental management plan, to the satisfaction of the responsible authority.

Construction and work site operational management plan

29. Prior to the commencement works, an environmental management plan must be submitted to and approved by the responsible authority. The plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- (d) procedures for managing noise emissions from construction-related activities;
- (e) appropriate sanitary facilities to be provided for construction and maintenance staff;

- (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- (h) measures for dust mitigation, control and monitoring dust gauges;
- (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- (j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- (k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

30. The construction environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- (a) identification of all construction and operational processes that could potentially lead to water contamination;
- (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- (c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- (d) procedures for waste water discharge management;
- (e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;
- (f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- (g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- (h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

31. The environmental management plan must include a hydrocarbon and hazardous substances plan.

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the responsible authority requirements.

Bushfire risk management plan and emergency evacuation plan

32. The environmental management plan must include a bushfire risk management plan and emergency evacuation plan prepared in consultation with and to the satisfaction of the responsible authority.

The Bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.

Threatened species management plan

33. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.

Weed and pest management plan

34. The environmental management plan must include a weed and pest management plan to be prepared in consultation with the responsible authority.

The weed and pest management plan must include:

- (a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests

Rehabilitation plan

35. The environmental management plan must include rehabilitation plan to be prepared in consultation with the responsible authority.

The rehabilitation must include:

- (a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.

Habitat clearing and management plan

36. The environmental management plan must include a habitat clearing and management plan to be prepared in consultation with the responsible authority.

The habitat clearing and management plan must include:

- (a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.

Ecological fire management plan

37. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.

Cultural heritage management plan

38. The environmental management plan must include a cultural heritage management plan to be prepared in consultation with the responsible authority.

The cultural heritage management plan must include:

- (a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.

Environmental management plan training program

39. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.

Environmental management plan reporting program

40. The environmental management plan must include a program for reporting environmental incidents, including:

- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;
- (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation timetable

41. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 25 to 40 above. Thereafter the development shall be carried out in accordance with the approved management plans.

Review of the environmental management plan

42. The environmental management plan must be reviewed and if necessary amended in consultation with the responsible authority and other authorities as directed by the responsible authority every [five] years, to reflect operational experience and changes in environmental management standards and techniques.

The amended environmental management plan must be submitted to the responsible authority for re-endorsement. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan and will form part of this permit.

LANDSCAPING

On-site landscaping plan

43. Prior to the commencement of works, an on-site landscaping plan must be prepared to the satisfaction of the responsible authority. The plans must be fully dimensioned and drawn to a recognised scale.

The on-site landscaping plan must include:

- (a) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);
- (b) details of plant species proposed to be used in the landscaping, including height and spread at maturity;
- (c) a timetable for implementation of all on-site landscaping works;
- (d) a maintenance and monitoring program to ensure the ongoing health of the landscaping.

The landscaping as shown on the approved on-site landscaping plan must be completed in accordance with the approved works and thereafter maintained to the satisfaction of the responsible authority.

SITE SECURITY

44. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public, to the satisfaction of the responsible authority.
45. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public, to the satisfaction of the responsible authority.
46. Public safety warning signs must be located on all towers, to the satisfaction of the responsible authority.

DECOMMISSIONING

47. Within six months after the construction of the wind farm is completed, the operator of the wind farm must provide a decommissioning and rehabilitation plan for approval to the responsible authority.

The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:

- (a) notify the responsible authority in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation
- (b) undertake the following to the satisfaction of the responsible authority within such timeframe as may be specified by the responsible authority:
 - (i) remove all above ground non-operational equipment
 - (ii) remove and clean up any residual contamination
 - (iii) rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm
 - (iv) submit a decommissioning traffic management plan to the responsible authority and, when approved by the responsible authority, implement that plan
 - (v) submit a post-decommissioning revegetation management plan, including a timetable of works, to the responsible authority and, when approved by the responsible authority, implement that plan.

ELECTRICAL INFRASTRUCTURE (POWERLINK)

- 48. Compliance with easement terms and conditions as per Easement Dealing 701758510 and 713030213.
- 49. Further engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.
- 50. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.

ADDITIONAL GUIDANCE

- (a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*
- (b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion Zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under this Act to seek advice from Powerlink.
- (c) *In the event of identification of an unexpected ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

DRAFT

Chris Lee

From: Darren Cleland <Darren.Cleland@dsdip.qld.gov.au>
Sent: Wednesday, 1 October 2014 12:01 PM
To: Jane McInnes
Cc: Mark Saunders
Subject: FW: CONFIDENTIAL: Draft conditions
Attachments: Draft Conditions 003.docx

Jane,

Some comments from us attached as per Robin's e-mail below.

Regards,

Darren Cleland
Regional Director – Far North Queensland
Regional Services - North
Department of State Development,
Infrastructure and Planning
Queensland Government
Cairns Port Authority Building
Cnr Grafton and Hartley Streets, Cairns
PO Box 2358 Cairns QLD 4870

Refused under section 47(3)(b) of the R

www.dsdip.qld.gov.au

Great state. Great opportunity.

Also delivering services on behalf of the departments of:

- Tourism, Major Events, Small Business and Commonwealth Games
- Science, Information Technology, Innovation and the Arts

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From: Robin Clark
Sent: Wednesday, 1 October 2014 8:58 AM
To: Darren Cleland
Subject: RE: CONFIDENTIAL: Draft conditions

Hi Darren, I have some comments on the conditions – see attached. I have asked Ange to look at the noise conditions and decibel limits as they may mean more to her. Overall, I think they are pretty comprehensive and address all the major issues of concern, but in terms of structure, I think the wording could be tightened up to specify who is responsible for the action, and I suggest that the conditions be structured as per SARA model conditions i.e – with standard wording and with the timing listed in a separate column.

Robin Clark
Manager, Planning
North Region
Regional Services
Department of State Development, Infrastructure and Planning
Queensland Government

tel +61 7 4037 3204 (ext 73204)

mobile

Refused under section 64 of the Freedom of Information Act 2009

post PO Box 2358 Cairns, QLD 4870

visit Ground Floor, Port Authority Building, cnr Grafton and Hartley Streets, Cairns

robin.clark@dsdip.qld.gov.au

<http://www.dsdip.qld.gov.au/>

Great state. Great opportunity.

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From: Darren Cleland

Sent: Monday, 29 September 2014 5:00 PM

To: Robin Clark

Cc: Angela Foster

Subject: FW: CONFIDENTIAL: Draft conditions

Importance: High

Robin,

Can you please review and provide me with comments by tomorrow please.

Regards,

Darren Cleland

Regional Director – Far North Queensland

Regional Services - North

Department of State Development,

Infrastructure and Planning

Queensland Government

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- Tourism, Major Events, Small Business and Commonwealth Games
- Science, Information Technology, Innovation and the Arts

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From: Jane McInnes

Sent: Monday, 29 September 2014 3:13 PM

To: brianm@msc.qld.gov.au

Cc: Darren Cleland; Beatriz Gomez; Mark Saunders

Subject: CONFIDENTIAL: Draft conditions

Importance: High

Good afternoon Brian

As discussed, I am seeking your review and comments on the draft conditions for Mount Emerald Wind Farm Ministerial Call In. At this stage, a decision has not been made on the development application however should the Minister decide to approve the development application, the conditions attached have been prepared. Please note, these draft conditions have been prepared by our consultants on our behalf and the department is yet to review them.

A response to the Ministers information request was received on 10 September 2014. At this stage, a decision will be made by 6 November 2014.

I would greatly appreciate your feedback by COB Tuesday, 30 September 2014. I apologise for the short timeframe.

Kind regards

Jane McInnes
Senior Planner

Department of State Development, Infrastructure and Planning

tel +61 7 3452 7690

post PO Box 15009 City East Qld 4002

visit Level 5, 63 George Street, Brisbane

email jane.mcinnnes@dsdip.qld.gov.au

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P Please consider the environment before printing this email

GENERAL PLANNING REQUIREMENTS

1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.

Table 1: Approved Plans and Documents

Plan/Document number	Plan/Document name	Date
PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013
PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012
PR100246/R72893	Preliminary Environmental Management Plan	November 2013
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014
Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010

MICRO-SITING OF TURBINES

2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the responsible authority.

Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres.

3. Prior to the commencement of works on the turbine (s), any request for the approval of revised plans for micro-sitting of that turbine (s) shall be submitted to and approved in writing by the responsible authority. The responsible authority will not approve to micro-siting of turbines unless the responsible authority is satisfied that it will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.
4. Any request for the approval of the responsible authority to micro-siting a turbine under condition 3 must be accompanied by supporting material addressing the matters referred to in condition 3, to the satisfaction of the responsible authority. The development shall be carried out in accordance with the approved details.

Commented [RC2]: Suggest link to conditions 23 -24 re aviation safety clearances

SPECIFICATIONS

5. The wind farm must meet the following requirements:
 - (a) The wind farm must comprise no more than 63 turbines;
 - (b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;
 - (c) The hub height of any turbine shall not exceed 90m;
 - (d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area, to the satisfaction of the responsible authority;
 - (e) The turbines and blades shall be constructed from non-reflective materials;
 - (f) All cabling should be provided underground, except where crossing water courses or environmentally sensitive locations.
6. Prior to the commencement of works in relation to the operation and maintenance depot, details of its location, design and appearance shall be submitted to the responsible authority for approval. The development shall be carried out in accordance with the ~~agreed~~ approved details.

NOISE

Performance Requirement

7. The operation of the wind farm must comply with this condition to the satisfaction of the responsible authority. The following requirements apply:
 - (a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 7(b);
 - (b) At the specified assessment positions referred to in condition 7(b), the noise limit of 40dB LA90,10 min referred to in condition 7(a) will be modified in the following way when the following circumstances exist:
 - (i) where the background sound level is greater than 35 dB LA90,10 min the noise limit will be the background sound level LA90,10 min plus 5 dB;
 - (ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;
 - (iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90,10 min applies.

Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive received, turbine(s) shall reduce output in order to meet the applicable noise criteria.

Commented [RC3]: Shouldn't this guidance note also be a condition?

Noise Compliance Assessment

8. For the purposes of determining compliance, the following requirements apply.
- (a) Acoustic compliance reports shall be prepared by a suitably qualified and experienced independent acoustic engineer to demonstrate compliance with the noise limits specified in condition 7 and shall be submitted to and approved by the responsible authority.
 - (b) Noise assessment positions must be submitted to and agreed with the responsible authority, and shown on a map.
 - (c) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with clause 7(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the "noise assessment".
 - (d) An initial-acoustic compliance report must be submitted to the responsible authority following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).
 - (e) A final compliance report must be submitted to the responsible authority after a 12 month period following full operation of the facility.
 - (f) Following facility commissioning, all complaints shall be managed following procedures set out in a noise complaints management plan.

Commented [RC4]: By when?

Commented [RC5]: Prepared by who, approved by who?

Noise Complaints Evaluation

9. ~~Prior to the commencement of operation of the wind farm, the applicant must prepare a complaint register, investigation and response plan to the satisfaction of the responsible authority. The noise complaint management plan shall include a complaint register, investigation and response plan and include:~~
- (a) how contact details will be communicated to the public;
 - (b) a toll free telephone number and email contact for complaints and queries;
 - (c) details of the appropriate council contact telephone number and email address (where available);
 - (d) a table outlining complaint information for each complaint received, including:
 - (i) the complainant's name;
 - (ii) any applicable property reference number if connected to a background testing location;
 - (iii) the complainant's address;
 - (iv) a receipt number for each complaint which is to be communicated to the complainant;
 - (v) the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;
 - (vi) the processes of investigation to resolve the complaint.

Commented [RC6]: 1. For consistency with other conditions - Suggest new condition: Prior to the commencement of operation of the wind farm, a noise complaint management plan must be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved plan.

10. A report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions is to be provided on an annual basis to the satisfaction of the responsible authority.
11. The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the responsible authority on request.

Commented [RC7]: Suggest re-word – is the responsible authority to be satisfied that a report has been received in 12 months, or satisfied with how the complaints have been dealt with?

BLADE SHADOW FLICKER

Performance requirement

12. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.

Blade shadow flicker complaint evaluation and response plan

13. Before the first turbine is commissioned, the operator of the wind farm must prepare a detailed shadow flicker complaint evaluation and response plan, to the satisfaction of the responsible authority.

The plan must include the following elements:

- (a) a toll free complaint telephone service;
- (b) a sign on site advising of the complaints telephone number;
- (c) procedures for assessing any alleged breach of condition 11.

The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.

Commented [RC8]: Is this the correct condition reference?

BLADE GLINT, ELECTROMAGNETIC RADIATION, TELEVISION AND RADIO RECEPTION AND INTERFERENCE

14. Before the commencement of construction of the wind farm, a pre-construction survey must be carried out to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], to the satisfaction of the responsible authority.

The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 kms of the site to be determined. The specific locations of testing will be determined by an independent television and radio monitoring specialist, to the satisfaction of the responsible authority.

15. If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.
16. If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality to the satisfaction of the responsible authority.

ACCESS TRACKS

17. Prior to the commencement of any works, detailed design of the access tracks including layout, location, dimensions (including sections) shall be submitted to and approved by the

responsible authority. The development shall be carried out in accordance with the approved details.

18. Access tracks within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas to the satisfaction of the responsible authority.
19. Access tracks must be surfaced in a manner which does not unduly contrast with the surrounding landscape.

LIGHTING INCLUDING AVIATION OBSTACLE LIGHTING

20. External lighting of infrastructure associated with the wind farm is not permitted other than:
 - (a) low-level, low-intensity security lighting;
 - (b) aviation obstacle lighting in accordance with condition 21;
 - (c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times each of which must be to the satisfaction of the responsible authority.
21. Where required, aviation obstacle lighting must meet the following requirements:
 - (a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;
 - (b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);
 - (c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;
 - (d) all lights must flash in unison;
 - (e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;
 - (f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.
22. Before the wind farm is commissioned, a lighting maintenance plan must be prepared to the satisfaction of the responsible authority. When approved, the lighting maintenance plan will then form part of this development approval. The development shall be carried out in accordance with the approved lighting maintenance plan.

AVIATION SAFETY CLEARANCES

23. Pursuant to condition 2, prior to the commencement of works, any proposals for micro-siting of turbines shall be submitted to CASA and the Department of Defence for final approval. Development shall only be carried out in accordance with the approved plans.
24. Prior to the commencement of works, copies of the development plans approved under condition 2 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:
 - (a) the Civil Aviation Safety Authority;

Commented [RC9]: Suggest move or link these conditions to condition 2.

- (b) the Department of Defence (RAAF Aeronautical Information Service);
- (c) Airservices Australia;
- (d) any aerodrome operator within 15 km of the outside property boundaries of the site;
- (e) the Aerial Agriculture Association of Australia;
- (f) any organisation responsible for providing air ambulance services in the area.

TRAFFIC MANAGEMENT

Construction traffic management plan

25. Prior to the commencement of works, a construction traffic management plan must be prepared in consultation with and approved by the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind farm. The construction traffic management plan must be submitted to and approved by the responsible authority. The construction traffic management plan must include:
- (a) an existing conditions survey of Hansen Road and Springmount Road (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;
 - (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;
 - (c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - (d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;
 - (e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:
 - (i) detailed engineering plans showing the required works;
 - (ii) the timing of when the works are to be undertaken;
 - (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic;
 - (f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, in general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":
 - (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site;
 - (ii) the shuttle bus will service the key townships where the construction workers live;

Commented [RC10]: Need to clarify responsibility for paying for road upgrades i.e at no cost to State or Council?

- (g) a program to rehabilitate existing public roads of Hansen Road and Springmount Road to the condition identified by the surveys required under sub-section 1 above at the conclusion of the construction of the wind farm.

26. The development must be carried out in accordance with the approved construction traffic management plan.

Traffic management and road upgrade and maintenance works

27. The traffic management and road upgrade and maintenance works identified in the endorsed traffic management plan must be carried out in accordance with the endorsed traffic management plan to the satisfaction of the responsible authority.

PROJECT ENVIRONMENTAL MANAGEMENT PLAN

General requirement for an environmental management plan

28. Prior to the commencement of works, an environmental management plan must be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved plan.

The project environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the responsible authority specified in conditions 28 to 45 or any other agency as directed by the responsible authority;
- (c) may be prepared in sections or stages; and
- (d) must meet the requirements of conditions 28 to 42 below.

The development must be carried out in accordance with the endorsed environmental management plan, to the satisfaction of the responsible authority.

Construction and work site operational management plan

29. Prior to the commencement works, an environmental management plan must be submitted to and approved by the responsible authority. The plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- (d) procedures for managing noise emissions from construction-related activities;

- (e) appropriate sanitary facilities to be provided for construction and maintenance staff;
- (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- (h) measures for dust mitigation, control and monitoring dust gauges;
- (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- (j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- (k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

30. The construction environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- (a) identification of all construction and operational processes that could potentially lead to water contamination;
- (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- (c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- (d) procedures for waste water discharge management;
- (e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;
- (f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- (g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- (h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

31. The environmental management plan must include a hydrocarbon and hazardous substances plan.

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the responsible authority requirements.

Bushfire risk management plan and emergency evacuation plan

32. The environmental management plan must include a bushfire risk management plan and emergency evacuation plan prepared in consultation with and to the satisfaction of the responsible authority.

The Bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.

Threatened species management plan

33. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.

Weed and pest management plan

34. The environmental management plan must include a weed and pest management plan to be prepared in consultation with the responsible authority.

The weed and pest management plan must include:

- (a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests

Rehabilitation plan

35. The environmental management plan must include rehabilitation plan to be prepared in consultation with the responsible authority.

The rehabilitation must include:

- (a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.

Habitat clearing and management plan

36. The environmental management plan must include a habitat clearing and management plan to be prepared in consultation with the responsible authority.

The habitat clearing and management plan must include:

- (a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.

Ecological fire management plan

37. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) management strategies to be implemented in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.

Cultural heritage management plan

38. The environmental management plan must include a cultural heritage management plan to be prepared in consultation with the responsible authority.

The cultural heritage management plan must include:

- (a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.

Environmental management plan training program

39. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.

Environmental management plan reporting program

40. The environmental management plan must include a program for reporting environmental incidents, including:
- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;
 - (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation timetable

41. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 25 to 40 above. Thereafter the development shall be carried out in accordance with the approved management plans.

Review of the environmental management plan

42. The environmental management plan must be reviewed and if necessary amended in consultation with the responsible authority and other authorities as directed by the responsible authority every [five] years, to reflect operational experience and changes in environmental management standards and techniques.

The amended environmental management plan must be submitted to the responsible authority for re-endorsement. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan and will form part of this permit.

LANDSCAPING

On-site landscaping plan

43. Prior to the commencement of works, an on-site landscaping plan must be prepared to the satisfaction of the responsible authority. The plans must be fully dimensioned and drawn to a recognised scale.

The on-site landscaping plan must include:

- (a) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);
- (b) details of plant species proposed to be used in the landscaping, including height and spread at maturity;
- (c) a timetable for implementation of all on-site landscaping works;
- (d) a maintenance and monitoring program to ensure the ongoing health of the landscaping.

The landscaping as shown on the approved on-site landscaping plan must be completed in accordance with the approved works and thereafter maintained to the satisfaction of the responsible authority.

SITE SECURITY

44. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public, to the satisfaction of the responsible authority.
45. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public, to the satisfaction of the responsible authority.
46. Public safety warning signs must be located on all towers, to the satisfaction of the responsible authority.

DECOMMISSIONING

47. Within six months after the construction of the wind farm is completed, the operator of the wind farm must provide a decommissioning and rehabilitation plan for approval to the responsible authority.

The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:

- (a) notify the responsible authority in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation
- (b) undertake the following to the satisfaction of the responsible authority within such timeframe as may be specified by the responsible authority:
 - (i) remove all above ground non-operational equipment
 - (ii) remove and clean up any residual contamination
 - (iii) rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm
 - (iv) submit a decommissioning traffic management plan to the responsible authority and, when approved by the responsible authority, implement that plan
 - (v) submit a post-decommissioning revegetation management plan, including a timetable of works, to the responsible authority and, when approved by the responsible authority, implement that plan.

ELECTRICAL INFRASTRUCTURE (POWERLINK)

- 48. Compliance with easement terms and conditions as per Easement Dealing 701758510 and 713030213.
- 49. Further engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.
- 50. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.

Commented [RC11]: Reword to similar style and format as previous conditions

ADDITIONAL GUIDANCE

- (a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*
- (b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion Zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under this Act to seek advice from Powerlink.

- (c) *In the event of identification of an unexpected ordnance (UXO), the following procedure is recommended:*

Commented [RC12]: Suggest different heading – Further advice, as per SARA templates

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

DRAFT

Chris Lee

From: Darren Cleland <Darren.Cleland@dsdip.qld.gov.au>
Sent: Wednesday, 1 October 2014 8:06 PM
To: Jane McInnes
Cc: Angela Foster; Robin Clark
Subject: Fwd: CONFIDENTIAL: Draft conditions
Attachments: image001.jpg; ATT00001.htm; Draft Conditions 003.docx; ATT00002.htm

Follow Up Flag: Follow up
Flag Status: Flagged

Jane,

Further comment from Angela for your consideration.

Darren

Sent from my iPhone

Begin forwarded message:

From: Angela Foster <Angela.Foster@dsdip.qld.gov.au>
Date: 1 October 2014 4:31:28 pm AEST
To: Robin Clark <Robin.Clark@dsdip.qld.gov.au>
Cc: Darren Cleland <Darren.Cleland@dsdip.qld.gov.au>
Subject: **FW: CONFIDENTIAL: Draft conditions**

Dear Robin

I have had a quick look at the conditions and provide the following comments:

- There are numerous conditions requiring further approval or supervision by the responsible authority (which is not nominated within the conditions package). Ideally conditions are finite, not requiring further approvals. In addition, conditions should not require onerous supervision by the relevant authorities. A simple word search of 'responsible authority' suggests that Mareeba Shire Council (or other unknown authority) would be required to approve or supervise 55 actions as a result of the proposed conditions. According to the DSDIP internal conditions training that has been provided for SARA, this would be considered as not a 'reasonable' imposition on the proponent (and the relevant authority) (S345 of SPA – condition must be relevant or reasonable).
- It may be useful to have the conditions reviewed by Steve Adams or an officer of the SARA Development Assessment Legal Team (DALT) to ensure there is some consistency in how the department is imposing conditions under IDAS and ultimately the SPA.
- Consideration of traffic and construction management was a requirement of TLPI01/11 – this should have formed part of the development application and if no, an information request should have been issued to avoid imposing conditions that require further approvals.
- There is potential that the draft conditions requirements with respect to further management plans would result in the development becoming not viable due to financial imposition. Further consideration could be given to determining if the draft conditions package is reasonable and relevant.

I have also included some comments on the attached document.

Kind Regards

Angela Foster
Principal Planning Officer
Far North Queensland Regional Office
Regional Services
Department of State Development, Infrastructure and Planning
Queensland Government
tel +61 7 4037 3233 (ext 73233)
post PO Box 2358, Cairns Qld 4870 visit Port Authority Building, Cnr Grafton & Hartley Sts
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Please consider the environment before printing this email

GENERAL PLANNING REQUIREMENTS

1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.

Table 1: Approved Plans and Documents		
Plan/Document number	Plan/Document name	Date
PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013
PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012
PR100246/R72893	Preliminary Environmental Management Plan	November 2013
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014
Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010

MICRO-SITING OF TURBINES

2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the responsible authority.

Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres.

3. Prior to the commencement of works on the turbine (s), any request for the approval of revised plans for micro-sitting of that turbine (s) shall be submitted to and approved in writing by the responsible authority. The responsible authority will not approve to micro-siting of turbines unless the responsible authority is satisfied that it will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.
4. Any request for the approval of the responsible authority to micro-siting a turbine under condition 3 must be accompanied by supporting material addressing the matters referred to in condition 3, to the satisfaction of the responsible authority. The development shall be carried out in accordance with the approved details.

Commented [AF2]: Who is the responsible authority? Should this be clearly stated as Mareeba Shire Council even though the conditions have been imposed under a Ministerial call in.

Commented [RC3]: Suggest link to conditions 23 -24 re aviation safety clearances

SPECIFICATIONS

5. The wind farm must meet the following requirements:
- (a) The wind farm must comprise no more than 63 turbines;
 - (b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;
 - (c) The hub height of any turbine shall not exceed 90m;
 - (d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area, to the satisfaction of the responsible authority;
 - (e) The turbines and blades shall be constructed from non-reflective materials;
 - (f) All cabling should be provided underground, except where crossing water courses or environmentally sensitive locations.
6. Prior to the commencement of works in relation to the operation and maintenance depot, details of its location, design and appearance shall be submitted to the responsible authority for approval. The development shall be carried out in accordance with the agreed-approved details.

Commented [AF4]: Was 80 then 75.

NOISE

Performance Requirement

7. The operation of the wind farm must comply with this condition to the satisfaction of the responsible authority. The following requirements apply:
- (a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 7(b);
 - (b) At the specified assessment positions referred to in condition 7(b), the noise limit of 40dB LA90,10 min referred to in condition 7(a) will be modified in the following way when the following circumstances exist:
 - (i) where the background sound level is greater than 35 dB LA90,10 min the noise limit will be the background sound level LA90,10 min plus 5 dB;
 - (ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;
 - (iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90,10 min applies.

Commented [AF5]: Generally consistent with SA and NZ guidelines.

Commented [AF6]: Generally consistent with SPP Noise

Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive received, turbine(s) shall reduce output in order to meet the applicable noise criteria.

Commented [RC7]: Shouldn't this guidance note also be a condition?

Commented [AF8]: Should this be receptor?

Noise Compliance Assessment

8. For the purposes of determining compliance, the following requirements apply.
- (a) Acoustic compliance reports shall be prepared by a suitably qualified and experienced independent acoustic engineer to demonstrate compliance with the noise limits specified in condition 7 and shall be submitted to and approved by the responsible authority.
 - (b) Noise assessment positions must be submitted to and agreed with the responsible authority, and shown on a map.
 - (c) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with clause 7(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the "noise assessment".
 - (d) An initial-acoustic compliance report must be submitted to the responsible authority following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).
 - (e) A final compliance report must be submitted to the responsible authority after a 12 month period following full operation of the facility.
 - (f) Following facility commissioning, all complaints shall be managed following procedures set out in a noise complaints management plan.

Commented [RC9]: By when?

Commented [RC10]: Prepared by who, approved by who?

Noise Complaints Evaluation

9. ~~Prior to the commencement of operation of the wind farm, the applicant must prepare a complaint register, investigation and response plan to the satisfaction of the responsible authority.~~ The noise complaint management plan shall ~~include~~include a complaint register, investigation and response plan and include:
- (a) how contact details will be communicated to the public;
 - (b) a toll free telephone number and email contact for complaints and queries;
 - (c) details of the appropriate council contact telephone number and email address (where available);
 - (d) a table outlining complaint information for each complaint received, including:
 - (i) the complainant's name;
 - (ii) any applicable property reference number if connected to a background testing location;
 - (iii) the complainant's address;
 - (iv) a receipt number for each complaint which is to be communicated to the complainant;
 - (v) the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;
 - (vi) the processes of investigation to resolve the complaint.

Commented [RC11]: 1. For consistency with other conditions
- Suggest new condition: Prior to the commencement of operation of the wind farm, a noise complaint management plan must be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved plan.

10. A report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions is to be provided on an annual basis to the satisfaction of the responsible authority.
11. The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the responsible authority on request.

Commented [RC12]: Suggest re-word – is the responsible authority to be satisfied that a report has been received in 12 months, or satisfied with how the complaints have been dealt with?

BLADE SHADOW FLICKER

Performance requirement

12. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.

Blade shadow flicker complaint evaluation and response plan

13. Before the first turbine is commissioned, the operator of the wind farm must prepare a detailed shadow flicker complaint evaluation and response plan, to the satisfaction of the responsible authority.

The plan must include the following elements:

- (a) a toll free complaint telephone service;
- (b) a sign on site advising of the complaints telephone number;
- (c) procedures for assessing any alleged breach of condition 11.

Commented [RC13]: Is this the correct condition reference?

The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.

BLADE GLINT, ELECTROMAGNETIC RADIATION, TELEVISION AND RADIO RECEPTION AND INTERFERENCE

14. Before the commencement of construction of the wind farm, a pre-construction survey must be carried out to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], to the satisfaction of the responsible authority.

The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 kms of the site to be determined. The specific locations of testing will be determined by an independent television and radio monitoring specialist, to the satisfaction of the responsible authority.

15. If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.
16. If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality to the satisfaction of the responsible authority.

ACCESS TRACKS

17. Prior to the commencement of any works, detailed design of the access tracks including layout, location, dimensions (including sections) shall be submitted to and approved by the

responsible authority. The development shall be carried out in accordance with the approved details.

18. Access tracks within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas to the satisfaction of the responsible authority.
19. Access tracks must be surfaced in a manner which does not unduly contrast with the surrounding landscape.

LIGHTING INCLUDING AVIATION OBSTACLE LIGHTING

20. External lighting of infrastructure associated with the wind farm is not permitted other than:
 - (a) low-level, low-intensity security lighting;
 - (b) aviation obstacle lighting in accordance with condition 21;
 - (c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times each of which must be to the satisfaction of the responsible authority.
21. Where required, aviation obstacle lighting must meet the following requirements:
 - (a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;
 - (b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);
 - (c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;
 - (d) all lights must flash in unison;
 - (e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;
 - (f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.
22. Before the wind farm is commissioned, a lighting maintenance plan must be prepared to the satisfaction of the responsible authority. When approved, the lighting maintenance plan will then form part of this development approval. The development shall be carried out in accordance with the approved lighting maintenance plan.

AVIATION SAFETY CLEARANCES

23. Pursuant to condition 2, prior to the commencement of works, any proposals for micro-siting of turbines shall be submitted to CASA and the Department of Defence for final approval. Development shall only be carried out in accordance with the approved plans.
24. Prior to the commencement of works, copies of the development plans approved under condition 2 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:
 - (a) the Civil Aviation Safety Authority;

Commented [RC14]: Suggest move or link these conditions to condition 2.

- (b) the Department of Defence (RAAF Aeronautical Information Service);
- (c) Airservices Australia;
- (d) any aerodrome operator within 15 km of the outside property boundaries of the site;
- (e) the Aerial Agriculture Association of Australia;
- (f) any organisation responsible for providing air ambulance services in the area.

TRAFFIC MANAGEMENT

Construction traffic management plan

25. Prior to the commencement of works, a construction traffic management plan must be prepared in consultation with and approved by the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind farm. The construction traffic management plan must be submitted to and approved by the responsible authority. The construction traffic management plan must include:

- (a) an existing conditions survey of Hansen Road and Springmount Road (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;
- (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;
- (c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
- (d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;
- (e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:
 - (i) detailed engineering plans showing the required works;
 - (ii) the timing of when the works are to be undertaken;
 - (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic;
- (f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, in general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":
 - (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site;
 - (ii) the shuttle bus will service the key townships where the construction workers live;

Commented [AF15]: Under SARA circumstances like this conditions would identify which roads require upgrading and to what standard ie FNQROC manual and DTMR RPEQ certification.

Commented [AF16]: TLP101/11 required a transportation of infrastructure and equipment to be managed via a Management Plan – was this not included with the application?

Commented [RC17]: Need to clarify responsibility for paying for road upgrades i.e at no cost to State or Council?

Commented [AF18]: Is this considered to be reasonable and relevant under section 345 of SPA.

- (g) a program to rehabilitate existing public roads of Hansen Road and Springmount Road to the condition identified by the surveys required under sub-section 1 above at the conclusion of the construction of the wind farm.

26. The development must be carried out in accordance with the approved construction traffic management plan.

Commented [AF19]: The construction management plan should have formed part of the DA and approval – and no subsequent to the approval.

Traffic management and road upgrade and maintenance works

27. The traffic management and road upgrade and maintenance works identified in the endorsed traffic management plan must be carried out in accordance with the endorsed traffic management plan to the satisfaction of the responsible authority.

PROJECT ENVIRONMENTAL MANAGEMENT PLAN

General requirement for an environmental management plan

28. Prior to the commencement of works, an environmental management plan must be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved plan.

The project environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the responsible authority specified in conditions 28 to 45 or any other agency as directed by the responsible authority;
- (c) may be prepared in sections or stages; and
- (d) must meet the requirements of conditions 28 to 42 below.

The development must be carried out in accordance with the endorsed environmental management plan, to the satisfaction of the responsible authority.

Construction and work site operational management plan

29. Prior to the commencement works, an environmental management plan must be submitted to and approved by the responsible authority. The plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- (d) procedures for managing noise emissions from construction-related activities;

- (e) appropriate sanitary facilities to be provided for construction and maintenance staff;
- (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- (h) measures for dust mitigation, control and monitoring dust gauges;
- (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- (j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- (k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

30. The construction environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- (a) identification of all construction and operational processes that could potentially lead to water contamination;
- (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- (c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- (d) procedures for waste water discharge management;
- (e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;
- (f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- (g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- (h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

31. The environmental management plan must include a hydrocarbon and hazardous substances plan.

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the responsible authority requirements.

Commented [AF20]: What are these requirements? Need to be more specific.

Bushfire risk management plan and emergency evacuation plan

32. The environmental management plan must include a bushfire risk management plan and emergency evacuation plan prepared in consultation with and to the satisfaction of the responsible authority.

The Bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.

Threatened species management plan

33. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.

Weed and pest management plan

34. The environmental management plan must include a weed and pest management plan to be prepared in consultation with the responsible authority.

The weed and pest management plan must include:

- (a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests

Rehabilitation plan

35. The environmental management plan must include rehabilitation plan to be prepared in consultation with the responsible authority.

The rehabilitation must include:

- (a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.

Habitat clearing and management plan

36. The environmental management plan must include a habitat clearing and management plan to be prepared in consultation with the responsible authority.

The habitat clearing and management plan must include:

- (a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.

Ecological fire management plan

37. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) management strategies to be implemented in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.

Cultural heritage management plan

38. The environmental management plan must include a cultural heritage management plan to be prepared in consultation with the responsible authority.

The cultural heritage management plan must include:

- (a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.

Environmental management plan training program

39. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.

Environmental management plan reporting program

40. The environmental management plan must include a program for reporting environmental incidents, including:

- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;
- (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation timetable

41. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 25 to 40 above. Thereafter the development shall be carried out in accordance with the approved management plans.

Commented [AF21]: These plans within a plan seem overly onerous.

Review of the environmental management plan

42. The environmental management plan must be reviewed and if necessary amended in consultation with the responsible authority and other authorities as directed by the responsible authority every [five] years, to reflect operational experience and changes in environmental management standards and techniques.

The amended environmental management plan must be submitted to the responsible authority for re-endorsement. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan and will form part of this permit.

LANDSCAPING

On-site landscaping plan

43. Prior to the commencement of works, an on-site landscaping plan must be prepared to the satisfaction of the responsible authority. The plans must be fully dimensioned and drawn to a recognised scale.

The on-site landscaping plan must include:

- (a) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);
- (b) details of plant species proposed to be used in the landscaping, including height and spread at maturity;
- (c) a timetable for implementation of all on-site landscaping works;
- (d) a maintenance and monitoring program to ensure the ongoing health of the landscaping.

The landscaping as shown on the approved on-site landscaping plan must be completed in accordance with the approved works and thereafter maintained to the satisfaction of the responsible authority.

SITE SECURITY

44. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public, to the satisfaction of the responsible authority.
45. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public, to the satisfaction of the responsible authority.
46. Public safety warning signs must be located on all towers, to the satisfaction of the responsible authority.

DECOMMISSIONING

47. Within six months after the construction of the wind farm is completed, the operator of the wind farm must provide a decommissioning and rehabilitation plan for approval to the responsible authority.

The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:

- (a) notify the responsible authority in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation
- (b) undertake the following to the satisfaction of the responsible authority within such timeframe as may be specified by the responsible authority:
 - (i) remove all above ground non-operational equipment
 - (ii) remove and clean up any residual contamination
 - (iii) rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm
 - (iv) submit a decommissioning traffic management plan to the responsible authority and, when approved by the responsible authority, implement that plan
 - (v) submit a post-decommissioning revegetation management plan, including a timetable of works, to the responsible authority and, when approved by the responsible authority Mareeba Shire Council, implement that plan.

ELECTRICAL INFRASTRUCTURE (POWERLINK)

- 48. Compliance with easement terms and conditions as per Easement Dealing 701758510 and 713030213.
- 49. Further engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.
- 50. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.

Commented [RC22]: Reword to similar style and format as previous conditions

ADDITIONAL GUIDANCE

- (a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*
- (b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

Commented [RC23]: Suggest different heading – Further advice, as per SARA templates

In respect to this application the exclusion Zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under this Act to seek advice from Powerlink.

(c) *In the event of identification of an unexpected ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

DRAFT

Chris Lee

From: Jane McInnes <Jane.McInnes@dsdip.qld.gov.au>
Sent: Wednesday, 1 October 2014 11:09 AM
To: Refused under section 4 cardno.com.au
Cc: Refused under cardno.com.au
Subject: Comments on draft Mount Emearl Assessment Report
Attachments: HRP14122R002 004- DSDIP Draft - Comments.docx; Draft Conditions 003 - Comments.docx

Hi Refuse

Please find attached comments on the draft Mount Emerald Wind Farm Assessment Report and Conditions.

Generally happy with the direction the report is heading. My main concern is with the technical responses being a bit light on and not providing enough discussion around what the technical assessment involved. For each technical area it needs to be clearly stated what the requirements are, how the application meets or does not meet the requirements and whether any conditions have been imposed. I realise that a lot of this information has been provided in the formal assessment however it needs to be included up front.

Given the timeframes, I have not been able to obtain legal advice in relation to ecological issue regarding the flying fox and northern quoll. It has been suggested that the ecological issue be discussed in the technical assessment (in detail) and mentioned in the conclusion/recommendation.

The draft conditions need a bit of work to ensure consistency in terminology and structure of the conditions throughout. The responsible authority needs to be identified.

Please give me a call if you would like further clarification on any of the comments.

Kind regards

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P Please consider the environment before printing this email

Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

September 2014



Document Information

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001	23/09/2014				

Prepared for:
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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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LIST OF ATTACHMENTS

Attachment A – Recommended Conditions

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Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Representative	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological/Environment – impacts of wind farm on protected flora and fauna
- Agricultural Land - Agricultural Land and impact on ability to crop spray
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- preparation and compilation of technical assessment summaries to inform recommendations, including an objective description of the likely impacts, benefits and other considerations at the site, regional and state scale;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommended approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises a technical assessment of the proposed development against the applicable planning framework. It has not addressed any submissions received in respect of the Ministerial Call In. Further, it has not considered any economic matters, which we understand are being assessed separately by DSDIP.

Section 3 – Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Summary of Technical Consultants Responses provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

Commented [JM1]: Include a description of the height of the development.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on ~~or about~~ 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes on to state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

Commented [JM2]: Where possible, include exact dates.

We understand the following statutory processes have been observed-undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on or about 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on or about 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.4 below).
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 242424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

Commented [JM3]: Include dates.

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

The reasons for the call in are as follows:

"State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.

- *The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."*

3.6 Referral Agency and Advice Agency Responses

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3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 Department of Environment and Resource Management – Contaminated Land Matters (Concurrence)

The Department of Environment and Resource Management (DERM) recommend that a number of concurrence agency conditions are attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 Department of Environment and Resource Management – Clearing Vegetation (Concurrence)

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters. On 9 April 2014 the Department of Environment and Resource Management (DERM) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Resource Management – Wetland Management (Advice)

Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland.

The assessment manager is to consider the requirement for a buffer area between any proposed works and the wetland. Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

It is also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

The advice agency advice is that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general

requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 **Summary of Advice Agency Responses (following Ministerial Call In)**

Pursuant to section 427(4), until the minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (EHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 **Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)**

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) confirmed that it has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm.

The DNRM advice agency response advised that their original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the IDAS. An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

3.6.2.2 **Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)**

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*

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- State upfront whether advice differs from original response.
- Be consistent with wording/structure for each agency. If direct quote from response then make that clear.
- Where do the recommendations from the referral agencies get reviewed/discussed in this report? May need a paragraph at the end of each agency section that states that the recommendations have been incorporated in approval package where relevant (if that is what's happened) or mention that these recommendations/advice is discussed further in section xyz of the report.

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- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that Defence recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

Wetland management:

In relation to wetland management, the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue.

3.6.2.3 **Powerlink Queensland – Electricity Easement (Advice)**

Powerlink Queensland advised that it does consider the proposed development involves the "Energy and Water Supply" State Interest under the State Planning Policy.

The single State Planning Policy recognises that providing safe, reliable and affordable energy and water supply is vital to meeting the basic needs of communities and for Queensland's economic prosperity.

The planning system plays an important role in supporting the timely, safe, cost-efficient and reliable provision and operation of energy and water supply infrastructure, which in Powerlink's view includes electricity generating developments, such as wind farms.

The following representations are made:

1. **Electricity Supply** – an important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.
2. **Protecting of Powerlink's infrastructure** – the single State Planning Policy recognises that existing and approved future major electricity infrastructure (including easements) need to be protected from development that would compromise the corridor integrity, and the efficient delivery and functioning of the infrastructure. The land the subject of the development application, being Lot 7 on SP23544, is encumbered by the following Powerlink easements:
 - Easement B on RP906464, Dealing 701758410; and
 - Easement D on SP231871, Dealing 713030213.

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These registered interests protect Powerlink's corridor for the existing Springmount Tee to Woree 275kV transmission line over Lot 7.

Powerlink maintains the position set out in the referral agency response dated 25 May 2012, and requests that Powerlink's requirements be included in any development approval for the proposed development.

The advice agency advice is that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

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3.6.3 **Third party Advice**

3.6.3.1 **Department of Health**

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response ~~identify~~ identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

"There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 **Mareeba Shire Council**

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 **Tablelands Regional Council**

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial

implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.
2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a "planning scheme" as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- "(2) The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) the State planning regulatory provisions;*
 - (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) any applicable codes in the following instruments—*
 - (i) a temporary local planning instrument;*

- (ii) a preliminary approval to which section 242 applies
 - (iii) a planning scheme;
 - (d) if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.
- (3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—
 - (a) the common material;
 - (b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
 - (c) any referral agency's response for the application;
 - (d) the purposes of any instrument containing an applicable code;
- (4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).
- (5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.
- (6) Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed—the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but—
 - (a) Before the day decision stage for the application started; or
 - (b) If the decision stage is stopped-before the day the decision stage is restarted.
- (2) However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—
 - (a) the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or

- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, the following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	Queensland Government policy, which This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	Queensland Government policy, which This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. This is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/07: Housing and Residential Development	This State Planning Policy seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities

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	for housing options that respond to identified needs. The application does not propose housing and therefore it is not relevant applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This is not applicable.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This is not applicable.
SPP 4/10: State Planning Policy for Healthy Waters	The SPP This State Planning Policy aims to will ensure that development for urban purposes under the Sustainable Planning Act 2009, including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the environmental values prescribed in the Environmental Protection (Water) Policy 2009. This is not applicable as it is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land

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	uses. This is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. Not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of wetlands and their environmental values, or enhances these values. This is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. No SCL is identified and therefore this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;
- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;

- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.

- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage
- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in

force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 **The Mareeba Shire Planning Scheme**

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.

- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;

- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2012 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5 and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made
- the SPP.

5 Summary of Technical Responses

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land - Agricultural Land and impact on ability to crop spray;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

This chapter provides a summary of the technical assessment for each technical service.

5.2 Landscape Visual Amenity

An assessment of the visual impact of the proposal has been undertaken and it is confirmed that the documents adequately describe the proposed development and provide sufficient technical assessment to assess visual impacts, including response to the Minister's information request regarding:

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length(km) of visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons;
- Shadow flicker assessment.

It is noted that none of the planning or visual impact technical reports substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. The Mareeba Shire Planning Scheme defines any landform >600 m AHD as a 'significant landscape feature'. At the time of application, it is not clear that the Planning Scheme or any other Code required assessment of visual impacts on significant landscape features, although it is now referred to in P06 of the Draft State Wind Farm Code (and the consultation draft of the Planning Guideline April 2014) -and in S3 of the Mareeba Shire Planning Scheme amendment 01/11 Wind Farms (Sept 2013). Nevertheless, the landscape significance of this mountain range to character and scenic amenity should have been addressed.

It is stated that notwithstanding the approach taken in visual impact assessments, it is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed.

It is stated that the development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array

Commented [JM14]: A bit light on. Copy of their actual response would be appropriate and then keep the summary in this report. Must clearly outline whether the technical assessment supports the DA and whether any conditions are recommended.

Commented [JM15]: The summaries provided are not sufficient.

Commented [JM16]: Needs better justification / discussion.

Commented [JM17]: Can this be confirmed?

Commented [JM18]: Why if the p.scheme not required and the draft code not given weight? This needs to be clarified as its conclusion to require it is not explained.

arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines ~~per se~~ have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

The applicant's technical assessment goes on to state that the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast (~~'beauty lies in the eye of the beholder'~~).

It is concluded that the extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability ~~(or otherwise)~~ of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.

Commented [JM19]: Need to provide an actual assessment – not just sit on the fence.

5.3 Ecological

Ecological impacts have been assessed in terms of State and Local Government regulatory requirements and based on the documentation that has been submitted in support of the proposal it is concluded that:

- the proposal is supported by relevant ecological surveys and assessments that provide an adequate basis for assessment of the application;
- the proposal will have adverse ecological impacts;
- the proposal has specific locational requirements which the proposed site satisfies;
- the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur;
- the proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts;
- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is considered that sufficient documentation has been provided to enable an assessment of the ecological impacts of the proposal to be made and to determine whether:

- the proposal warrants refusal based on the likelihood of significant residual ecological impacts that have no reasonable prospects of being adequately mitigated or offset; or
- the proposal warrants approval subject to an appropriate set of Conditions being imposed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.

There are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues.

Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.

It is important to note that important ecological matters for the development relate to the protection of quoll and flying fox populations, but that these species are not protected by State or local legislation or policies. Nevertheless, the impacts have been assessed and conditions for management and mitigation are recommended. In addition, the EPBC referral will be another mechanism which will assess the impact on quoll and flying fox populations and that assessment process will separately determine whether the development may proceed (with management mechanisms) or may not proceed having regard to their protection as Matters of National Environmental Significance (MNES).

5.4 Agricultural Land and Environment

The agricultural land and environment assessment notes that the revision to the risk assessment for occurrence of residual UXO has been changed to a 'slight' possibility of occurrence by DEHP. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation.

It is stated that based on the content of the EIS, this assessment concurs with DEHP's recommendation.

On the basis of the overall compatibility of the proposed development, the limited nature of the wind farm footprint within the existing agricultural land use and the provided information regarding socioeconomic benefits of the project in the EIS it is considered that the level of assessment provided in relation to the development is appropriate for the purposes of decision making relating to soil impacts and agricultural land use policy and impact.

No further information was requested or conditions recommended.

5.5 Noise

The acoustic assessment identifies that the submission indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has confirmed in a meeting that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors. As such, it is recommended that conditions be applied that limit noise levels to 35dB dB LA90,10 min at those sensitive receiver locations where predicted noise levels are more than 8 or dB (A) above the existing background noise level at a wind speed between 6 and 12 m/s.

5.6 Traffic Impact

In response to matters raised in the information request a Traffic Report "Technical Note 2 – Traffic Impact Assessment Engineering Response" was prepared on 29 August 2014. This responded to each of the items in the Information Request relating to traffic matters as summarised below:

Commented [JM20]: This section does not really provide insight as to what was required to be assessed and if the consultant supports the outcome??

Commented [JM21]: Introduce the UXO issue and provide context rather than go straight into DEHP's amended advice. Should also reference this section earlier on in the report where referral agency responses are discussed.

Commented [JM22]: Clearly indicate:
1.What is the noise std / requirement
2.What is the proposed noise
3.If higher than std why is it ok?
*a lot of good information is included in the formal assessment however should also be included here.

Commented [JM23]: Long sentence. Break up.

Commented [JM24]: State that this will ensure compliance with....

- Provide a clear description of the whole of the potential access routes to the site for oversized vehicles. This should include at least a high level identification of constraints along the network and identification of measures that would be put in place to allow State Government and Council to assess these impacts
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Further information on how staff travels to site can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Should sufficient measures to restrict staff traffic to 30 vehicles per day not be provided a new assessment identifying the worst case traffic impact on the road network be provided.

An assessment of all the development application material has been undertaken and it is confirmed that the assessment has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council;
- Requirements for permits and escorts to traverse the detailed routes should be identified and obtained when necessary.

These issues may not be able to be assessed at the moment as the details of construction schedule etc is likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles etc would be needed to ensure the routes are acceptable, the assessment of the suitability of Hansen Road and Springmount Road ~~could-should~~ be included as a condition.

In respect of managing staff vehicles it is stated that the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

"The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders."

It is recommended that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery).

5.7 Wind/Aeronautical

The wind / aeronautical assessment concludes that there are no wind / aeronautical matters that generate a reason for refusal, and that any development approval includes a condition to require written confirmation from CASA and the Department of Defence that they have no objection to the development in relation to aviation issues.

Commented [JM25]: Does it comply?

5.8 Civil and Electrical

5.8.1 Civil

The civil engineering assessment identified that the responses provided by the relevant referral agencies were not unreasonable and the accompanying Information request responses were satisfactory apart from the need to possibly address the following areas in further detail:

- a. Decommissioning and Rehabilitation of the site.
- a. Assessment of Vertical road grading's to site access.
- b. Assessment of Road Cross sections.
- c. Construction Management Plan.
- d. Sediment and Erosion Control.
- e. Water Quality Management.
- f. Stormwater Management
- g. Noise impact from Road Construction

It is considered that these matters can be secured by appropriate conditions.

5.8.2 Electrical

The electrical engineering identified that whilst no additional details have been provided in the response submission to the matters originally raised, it is likely that matters can be dealt with at the relevant Building Approval / Operational Works stages or via a condition of an approval in respect of the content of construction and operational management plans.

Management plans should include specific reference to site safety and include matters to deal with contamination. In respect of bushfire, a Bushfire Management Plan has been submitted and subsequent amendments to secure such requests can be conditioned.

TLPI 01/12 – S2 (b) requires the MEWF to be readily connected to existing, nearby HV electricity transmission lines without significant environmental, social or amenity impact. However, the information in the DA and response to information request did not include or sufficiently present the impacts of the proposed HV interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. This was advised in Powerlink's agency response as a condition of approval for the MEWF development. The detailed interconnection design and grid connection studies to assess the viability of interconnection of the MEWF to the Powerlink network can be established through this process and are not relevant to the assessment of the development application at this stage.

Minimum clearances of WTG structures to Powerlink's assets need to be complied with and should form a condition of approval for the MEWF development. The required clearance was advised in Powerlink's agency response.

In addition, the compliance of the proposed MEWF with the National Electricity Rules and Codes, as it applies to wind farms, needs to be demonstrated and included in the assessment.

TLPI 01/12 – S5 requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. It is confirmed

that the submission response satisfactorily addresses this. There are no further issues or gaps in this matter.

It is noted in the DA submission that the connection of each WTG and associated transformer at its base to the main substation may use overhead lines, and not exclusively underground cables. This is not recommended in the 'heavily vegetated' area, and presents risk of bush fires from electrical faults, despite management plans being in place. Instead, exclusive use of underground cables should be considered and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the WTG structures and risk of bush fires has not been specifically assessed. It is recommended that an independent lightning impact assessment study be included or conditioned as part of the approval.

GENERAL COMMENTS:

- Have gone for argument that 'does not warrant a refusal' rather than is consistent/meets the relevant requirements (with/without conditions) and therefore support proposal. Would be better where appropriate to have them support proposal rather than 'no grounds for refusal'.
- Fairly light on especially in absence of technical reports. Need a copy of the technical reports to attach to this report.
- Doesn't clearly state:
 - What is relevant standard, requirement is?
 - What it has been assessed against?
 - What the application is proposing (eg noise level)
 - If proposal meets standard
 - If not / can it be addressed/met with conditions – if not – why is it ok?

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6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

Commented [JM26]: Need to provide an overall statement that the proposal is consistent with the relevant requirements under SPA or if not then we need to address the conflicts and why it can be approved.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	<p>The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions.</p> <p>The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.</p>
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	<p>The Far North <i>Queensland Regional Plan 2009 – 2031</i> ('FNRP 2009') is applicable to the development.</p> <p>The site is designated as being within the Regional Landscape and Rural Production Area.</p> <p>An assessment against the relevant provisions of the FNRP is provided below in Section 6.4.</p>
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	<p>Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.</p>
<i>State planning policies, to the extent</i>	<p>An assessment against State Planning Policies</p>

<p><i>the policies are not identified in—</i></p> <p><i>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</i></p> <p><i>(ii) the planning scheme as being appropriately reflected in the planning scheme;</i></p>	<p>in effect at time the application was properly made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p><i>Any applicable codes in the following instruments-</i></p> <p><i>(i) A structure plan</i></p> <p><i>(ii) A master plan</i></p> <p><i>(iii) a temporary local planning instrument;</i></p> <p><i>(iv) a preliminary approval to which section 242 applies</i></p> <p><i>(v) a planning scheme;</i></p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any</p>

	<p>other overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ("the Planning Scheme") is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i>	The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the

<p><i>the priority infrastructure plan.</i></p>	<p>changes adopted by the Council are identified in the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be</p>

	<p>able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5 above.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p>
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	<p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
Policy 2.1 Regional Landscape Values	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given 'appropriate recognition in land use planning and development assessment'.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that</p>

	<p>provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<p><i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i></p>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan.

	<ul style="list-style-type: none"> It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast (<i>'beauty lies in the eye of the beholder'</i>). The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i>.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	<p>Development:</p> <ul style="list-style-type: none"> (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and (3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts. 	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <ul style="list-style-type: none"> (1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and (2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and (3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and (4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and (5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks 	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p>

	<p>associated with the natural hazard, and</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 07 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level

of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1 **Rural Zone Code**

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the</p>

		<p>instrument (definitions, levels of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>An assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's, the intent of both being to facilitate the establishment of new wind farms in appropriate</p>
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		<p>locations.</p> <p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in</p>

		<p>September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	For all Lots	
	PS4.3 Vegetation is retained on land with a slope of 15% or greater.	
For Code Assessable Development		
S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.	Not Applicable – the site is not in the Southedge Potential Tourist Area.
<i>For Mona Reserve as identified on Map Z10 as</i>	PS7 Development is carried out in accordance with a Plan of Development and Land	Not Applicable – the site is not in the Mona Reserve.

<p><i>Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>

the Shire.		
S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	PS10 No probable solution prescribed.	The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.

4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES

Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.
4.80 RECONFIGURING A LOT		
Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.		

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2

Division 5 - Car Parking Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to	AS1 The number of car parking spaces provided for	Not Applicable.

accommodate the demand likely to be generated by the use.	the use is in accordance with the Car Parking Schedule.	
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the

	<p>condition for parking; and</p> <p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Car Parking Numbers		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be</p>

		provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Bicycle Parking		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
Movement and Access		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain</p>

	<p>designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 **Division 17 - Filling and Excavation Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are	AS1 Filling and excavation is no greater than two (2)	It is considered unlikely that significant filling and excavation will occur,

undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	metres in height or depth.	<p>however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project,</p>

	<p>within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>covering discrete construction areas and which will account for the changing surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>

S5 Environment Filling or excavation does not result in a reduction of the water quality of receiving waters.	AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.	Refer to S4 above.
S6 Environment Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.	AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4

Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
S1 Cultural Heritage Places (a) significant elements of the mining history of Mareeba Shire are conserved; and (b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and (c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.	PS1 No probable solution provided.	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby</p>

		<p>consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern</p>

<p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	PS4 No probable solution provided.	Not Applicable as there are no buildings and places of Local Heritage Significance on the site.
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural	PS6 No probable solution	Not Applicable as there are

Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	provided.	no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or racing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife.	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the

navigation systems.	<p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p>	<p>approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>PS1.7</p> <p>(i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Bibbohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Bibbohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibbohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar</p>	
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	facility that involve any building, structures or work above 950 AHD.	
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6.6.6 Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> setbacks between buildings/structures and hazardous vegetation, and access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who

		<p>understand how to respond quickly to fire and use equipment available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, 	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by</p>

	<p>swimming pool).</p> <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; 	<p>detrimental impacts of bushfire.</p>
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	<p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <p>a) have a maximum gradient of 12.5%;and</p> <p>b) b) exclude cul-de-</p>	
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	<p>sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind

Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.

g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment, economic and social impacts. b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts.	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as

<p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An</p>
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		<p>assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind</p>
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		<p>resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p>

		Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts upon the landscape.
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA). Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes <i>or</i> (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>

<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <ul style="list-style-type: none"> (i) nuisance (ii) risk to human health or wellbeing (iii) ability to sleep or relax. 	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated
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	<p>03 September 2014.</p> <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35</p>
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		<p>dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for</p>

		<p>considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-</p>	<p>PS8.1 Internal access gradients are no steeper</p>	<p>Assessment has been prepared by Jacobs (dated 29</p>

<p>controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>than 1:5; or PS8.2 Internal accesses that are steeper than 1:5, or which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is</p>
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		considered that a safe, functional and convenient access can be provided.
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all</p>	<p>PS10 The following controls are developed and implemented:</p> <p>(i) management plans based on condition-pressure</p>	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that</p>

<p>associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>response adaptive management techniques;</p> <p>(ii) specified ongoing monitoring programs;</p> <p>(iii) a Maintenance Management Plan</p>	<p>operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <p>(i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and</p> <p>(ii) the visual amenity of the site is restored;</p> <p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p>	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and replacing soil over foundations; • removing all material from site for recycling; • where tracks are of no use to the land owner, the land reinstated;

	<p>(v) wind farm infrastructure is removed from the site.</p>	<ul style="list-style-type: none">• underground and above ground cabling removed;• the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** have undertaken an assessment considering impact upon state environmental significance, given the wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires winds farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of state significance. The probable solutions and overall outcome both refer to state significance and whilst there is reference in the specific outcome to impact on ecological values [this is 'or' and not 'and']. There being a clear distinction.

It is identified in the Rural Zone Code that compliance with the specific outcomes of the code complies with the code. The specific outcomes do not contain any specific outcomes seeking the avoidance of significant effect on the environment and as such it is concluded that the proposed wind farm development complies with the Rural Zone Code in this regard. It is acknowledged however that the overall outcomes require works to be located, designed and managed to avoid significant effect on the environment.

It is noted within the submitted ecological supporting material, and more specifically the EIS that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

As such it is concluded that the more general consideration of significant effect on the environment does not form part of the assessment, when considering the applicable planning framework however you may wish to seek legal review in respect of this issue.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for your consideration and inclusion if considered necessary:

FLYING FOX MANAGEMENT PLAN

1. Prior to commencement of works, a Flying Fox Management Plan must be prepared in consultation with and approved by the responsible authority.

The management plan must include:

- (a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.
- (b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;
- (i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:
 - impacts upon Spectacled Flying Fox

Commented [JM27]: Is this a relevant consideration? If, not then this should be discussed elsewhere.

Commented [JM28]: Not clearly explained

Commented [JM29]: Does not make sense.

Commented [JM30]: Not appropriate to have this statement.

- the species, number, age and sex (if possible) and date of any flying strike
 - the number and species of flying fox's struck at lit versus unlit turbines
 - any seasonal and yearly variation in the number of flying fox strikes
 - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the responsible authority.
- (c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine
- (d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities
- (e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines
- (f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority,
- (g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and
- (h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including:
- (i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria
- (ii) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites).
- The development shall be carried out in accordance with the approved management plan. All surveys must be submitted to the responsible authority immediately upon completion.
2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the responsible authority, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the responsible authority, to reduce potential for mortality rates.

NORTHERN QUOLL MANAGEMENT PLAN

3. Before the development starts, a Northern Quoll Management Plan must be prepared in consultation with and approved by the responsible authority.
- The management plan must include:
- (a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.
 - (b) A monitoring program of additional utilisation studies prior to construction;

- (i) requires surveys to be undertaken during breeding seasons to ascertain:
 - the potential preferential use of ridgeline areas for maternal denning;
 - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the responsible authority.
 - (c) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);
 - (d) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):
 - (i) Construction Phase Management Procedures:
 - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks;
 - daily trapping and relocation of trapped males and non lactating females;
 - Identification of maternal dens through release and tracking of trapped lactating females;
 - Implementation of spotter catcher methodologies during clearing;
- The development shall be carried out in accordance with the approved management plan and identified surveys and mitigation.
4. Where surveys undertaken pursuant to condition 53 identify substantial mortality of the northern quoll populations, in the opinion of the responsible authority, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the responsible authority, to reduce potential for mortality rates.

7.2 Conclusion

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326 (1) (b) of the SPA states:

"The assessment manager's decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*

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- i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or
- ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument."

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2012 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326 (1) (c) (ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the FNQRP recognises wind farms as legitimate land use and emphasis placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

Recommendation:

Commented [JM32]: Include a recommendation

ATTACHMENT A – RECOMMENDED CONDITIONS

DRAFT

GENERAL PLANNING REQUIREMENTS

1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.

Table 1: Approved Plans and Documents

Plan/Document number	Plan/Document name	Date
PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013
PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013
Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012
PR100246/R72893	Preliminary Environmental Management Plan	November 2013
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014
Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010

Commented [JM1]: Need to include timing. Whole document would benefit from being in a table format.

MICRO-SITING OF TURBINES

2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the responsible authority.

Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres.

3. Prior to the commencement of works on the turbine (s), any request for the approval of revised plans for micro-siting of that turbine (s) shall must be submitted to and approved in writing by the responsible authority. The responsible authority will not approve to micro-siting of turbines unless the responsible authority is satisfied that it will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.
4. Any request for the approval of the responsible authority to micro-siting a turbine under condition 3 must be accompanied by supporting material addressing the matters referred to in condition 3, to the satisfaction of the responsible authority. The development shall be carried out in accordance with the approved details approved plans.

Commented [JM2]: Need to include reference to the original plan that identifies the proposed locations.

Commented [JM3]: Be consistent throughout.

Commented [JM4]: This can be combined to 1 condition with 2 parts. Structure of conditions should be: What they have to do, who they have to give it to and when. E.g. Submit a plan to council which identifies the following
a.)
b.)

SPECIFICATIONS

5. The wind farm must meet the following requirements:

- (a) The wind farm must comprise of no more than 63 turbines;
- (b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;
- (c) The hub height of any turbine shall not exceed 90m;
- (d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area, to the satisfaction of the responsible authority;
- (e) The turbines and blades shall must be constructed from non-reflective materials;
- (f) All cabling should must be provided underground, except where crossing water courses or in environmentally sensitive locations.

6. A. Submit to the responsible authority for approval details of the operation and maintenance depot's location, design and appearance.

6- B. construct the depot in accordance with the approved plan, part a. of this condition. Prior to the commencement of works in relation to the operation and maintenance depot details of its location, design and appearance shall be submitted to the responsible authority for approval. The development shall be carried out in accordance with the agreed details.

Commented [JM5]: what is the process? is this a requirement later on?

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NOISE

Performance Requirement

7. The operation of the wind farm must comply with this condition to the satisfaction of the responsible authority. The following requirements apply:

- (a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90, 10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90, 10 min will be modified as specified in condition 7(b);
- (b) At the specified assessment positions referred to in condition 7(b), the noise limit of 40dB LA90, 10 min referred to in condition 7(a) will be modified in the following way when the following circumstances exist:
 - (i) where the background sound level is greater than 35 dB LA90, 10 min the noise limit will be the background sound level LA90, 10 min plus 5 dB;
 - (ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB LA90;
 - (iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90, 10 min applies.

Commented [JM6]: How is it measured that its to their satisfaction as the condition seems pretty clear as to what needs to be achieved. Therefore might be better to just list the condition unless it is clear what the operator needs to do to have 7(a) modified.

Commented [JM7]: Is this right?

Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) ~~shall reduce~~ output will be reduced in order to meet the applicable noise criteria.

Noise Compliance Assessment

8. For the purposes of determining compliance, the following requirements apply.

- ~~(a)~~ Acoustic compliance reports shall be prepared by a suitably qualified and experienced independent acoustic engineer to demonstrate compliance with the noise limits specified in condition 7 shall be submitted to and approved by the responsible authority.
- ~~(a)~~ Submit for approval to the responsible authority, acoustic compliance reports prepared by a suitably qualified and experienced independent acoustic engineer to demonstrate compliance with condition 7.
- ~~(b)(i)~~ Noise assessment positions must be submitted to and agreed with the responsible authority, and shown on a map.
- ~~(c)(ii)~~ A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with clause 7(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the "noise assessment".
- ~~(d)(iii)~~ An initial acoustic compliance report must be submitted following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).
- ~~(e)(iv)~~ A final compliance report must be submitted to the responsible authority after a 12 month period following full operation of the facility.
- ~~(f)(b)~~ Following facility commissioning, all complaints shall must be managed following procedures set out in a noise complaints management plan.

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Commented [JM8]: Is this meant to be done prior to the acoustic report or part of the report? Is b-e subsections to a?

Noise Complaints Evaluation

9. Prior to the commencement of operation of the wind farm, ~~the applicant must p~~Prepare a complaint register, investigation and response plan to the satisfaction of the responsible authority. The plan ~~shall~~ must include, but not limited to:

Commented [JM9]: Is this noise compliance?? Or should it be part of the noise complaints section??

Commented [JM10]: Timing

- (a) how contact details will be communicated to the public;
- (b) a toll free telephone number and email contact for complaints and queries;
- (c) details of the appropriate council contact telephone number and email address (where available);
- (d) a table outlining complaint information for each complaint received, including:

 - (i) the complainant's name;
 - (ii) any applicable property reference number if connected to a background testing location;
 - (iii) the complainant's address;
 - (iv) a receipt number for each complaint which is to be communicated to the complainant;

- (v) the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;
 - (vi) the processes of investigation to resolve the complaint.
10. A report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions is to be provided on an annual basis to the satisfaction of the responsible authority.
11. The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the responsible authority on request.

Commented [JM11]: Difference between terminology of to the satisfaction of and approval by responsible authority. Be consistent.

BLADE SHADOW FLICKER

Performance requirement

12. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.

Commented [JM12]: How is this measured?

Blade shadow flicker complaint evaluation and response plan

13. Before the first turbine is commissioned, the operator of the wind farm must prepare a detailed shadow flicker complaint evaluation and response plan, to the satisfaction of the responsible authority.

Commented [JM13]: Timing

Commented [JM14]: Be consistent – for approval or satisfaction?

The plan must include the following elements:

- (a) a toll free complaint telephone service;
- (b) a sign on site advising of the complaints telephone number;
- (c) procedures for assessing any alleged breach of condition 11.

Commented [JM15]: 12?

The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.

BLADE GLINT, ELECTROMAGNETIC RADIATION, TELEVISION AND RADIO RECEPTION AND INTERFERENCE

14. Before the commencement of construction of the wind farm, Undertake a pre-construction survey ~~must be carried out~~ to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], to the satisfaction of the responsible authority.

Commented [JM16]: timing

The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 kms of the site to be determined. The specific locations of testing ~~will must~~ be determined by an independent television and radio monitoring specialist, to the satisfaction of the responsible authority.

- 15.a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.

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- 16.b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality to the satisfaction of the responsible authority.

ACCESS TRACKS

15. ~~Prior to the commencement of any works,~~
~~a. submit to the responsible authority for approval detailed design of the access tracks including (but not limited to) layout, location, dimensions (including sections).~~
~~b. carry out the development in accordance with part (a) of this condition.~~
17. ~~detailed design of the access tracks including layout, location, dimensions (including sections) shall be submitted to and approved by the responsible authority. The development shall be carried out in accordance with the approved details.~~
- 18.16. ~~Access tracks within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas to the satisfaction of the responsible authority.~~
- 19.17. ~~Access tracks must be surfaced in a manner which does not unduly contrast with the surrounding landscape.~~

Commented [JM18]: timing

Commented [JM19]: Isn't this part of the condition above? Condition 18 and 19 should be listed as requirements of condition 17a

LIGHTING INCLUDING AVIATION OBSTACLE LIGHTING

- 20.18. ~~External lighting of infrastructure associated with the wind farm is not permitted other than:~~
- (a) ~~low-level, low-intensity security lighting;~~
 - (b) ~~aviation obstacle lighting in accordance with condition 21;~~
 - (c) ~~lighting necessary in the case of an emergency or for operational call-outs at reasonable times each of which must be to the satisfaction of the responsible authority.~~
- 21.19. ~~Where required, aviation obstacle lighting must meet the following requirements:~~
- (a) ~~for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;~~
 - (b) ~~each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);~~
 - (c) ~~each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;~~
 - (d) ~~all lights must flash in unison;~~
 - (e) ~~the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;~~
 - (f) ~~the lights are to switch on and off during ambient lighting conditions as recommended by CASA.~~

Commented [JM20]: How will this happen / what's the process?

Commented [JM21]: Is this not governed by another Act therefore not required to be re-iterated in a condition?

22. ~~Before the wind farm is commissioned,~~
~~a. Prepare for approval by the responsible authority a lighting maintenance plan must be prepared to the satisfaction of the responsible authority. When approved, the lighting maintenance plan will then form part of this development approval. The development shall be carried out in accordance with the approved lighting maintenance plan.~~
~~b. carry out the development in accordance with the approved lighting maintenance plan specified in part a. of this condition.~~

Commented [JM22]: timing

Commented [JM23]: Not necessary to specify this. Also have not specified if for any of the other approved plans required by conditions.

20. AVIATION SAFETY CLEARANCES

23.21. Pursuant to condition 2, prior to the commencement of works, any proposals for micro-siting of turbines shall be submitted to CASA and the Department of Defence for final approval. Development shall only be carried out in accordance with the approved plans.

24.22. Prior to the commencement of works, copies of the development plans approved under condition 2 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:

- (a) the Civil Aviation Safety Authority;
- (b) the Department of Defence (RAAF Aeronautical Information Service);
- (c) Airservices Australia;
- (d) any aerodrome operator within 15 km of the outside property boundaries of the site;
- (e) the Aerial Agriculture Association of Australia;
- (f) any organisation responsible for providing air ambulance services in the area.

TRAFFIC MANAGEMENT

Construction traffic management plan

25.23. Prior to the commencement of works, a construction traffic management plan must be prepared in consultation with and approved by the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind farm. The construction traffic management plan must be submitted to and approved by the responsible authority. The construction traffic management plan must include:

- (a) an existing conditions survey of Hansen Road and Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;
- (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;
- (c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
- (d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;
- (e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:
 - (i) detailed engineering plans showing the required works;
 - (ii) the timing of when the works are to be undertaken;
 - (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic;

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Commented [JM24]: Reword as per previous comments re structure of conditions. Also is the process that location is approved by council and then CASA? Do both need to approved or should council be responsible?

Commented [JM25]: Wont these be provided as part of previous condition. Could these two conditions become 1?

Commented [JM26]: Reword as per previous comments. Is it appropriate to require numerous approval authorities? Maybe should be prepared in consultation with relevant authorities and approved by one authority?

- (f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, in general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":
 - (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site;
 - (ii) the shuttle bus will service the key townships where the construction workers live;
- (g) a program to rehabilitate existing public roads of Hansen Road, ~~and~~ Springmount Road ~~and Kippen Drive~~ to the condition identified by the surveys required under sub-section 1(a) above at the conclusion of the construction of the wind farm.

~~26-24.~~ The development must be carried out in accordance with the approved construction traffic management plan.

Traffic management and road upgrade and maintenance works

~~27-25.~~ The traffic management and road upgrade and maintenance works identified in the ~~endorsed~~ traffic management plan must be carried out in accordance with the ~~endorsed~~ ~~approved~~ traffic management plan to the satisfaction of the responsible authority.

PROJECT ENVIRONMENTAL MANAGEMENT PLANS

General requirement for an environmental management plan

~~28-26.~~ Prior to the commencement of works, ~~a.~~ ~~A~~ an environmental management plan must be submitted to and approved by the responsible authority. ~~..~~ ~~b.~~ The development shall be carried out in accordance with the approved plan.

The project environmental management plan:

- ~~(a)~~ ~~I.~~ must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- ~~(b)~~ ~~II.~~ must be prepared in consultation with the responsible authority specified in conditions 28 to 45 or any other agency as directed by the responsible authority;
- ~~(c)~~ ~~III.~~ may be prepared in sections or stages; and
- ~~(d)~~ ~~IV.~~ must meet the requirements of conditions ~~28 to 42~~ below.

The development must be carried out in accordance with the endorsed environmental management plan, to the satisfaction of the responsible authority.

Construction and work site operational management plan

~~29-27.~~ Prior to the commencement ~~of~~ works, ~~an~~ environmental management plan must be submitted to and approved by the responsible authority. The plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;

Commented [JM27]: Include preamble to identify clearing what is required by the EMP plan with subsections.

Commented [JM28]: timing

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Commented [JM29]: check numbers

Commented [JM30]: how does this EMP differ from previous comments other than providing a construction and work operational management plan? Check wording.

- (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- (d) procedures for managing noise emissions from construction-related activities;
- (e) appropriate sanitary facilities to be provided for construction and maintenance staff;
- (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- (h) measures for dust mitigation, control and monitoring dust gauges;
- (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- (j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- (k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

30.28. The ~~construction~~ environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- (a) identification of all construction and operational processes that could potentially lead to water contamination;
- (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- (c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- (d) procedures for waste water discharge management;
- (e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;

- (f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- (g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- (h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

31.29. The environmental management plan must include a hydrocarbon and hazardous substances plan.

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the responsible authority requirements.

Commented [JM31]: Repetition. If the preamble clearly states upfront that EMP is to include a number of plans then it doesn't need to be reiterated. Each plan must indicate if it needs endorsement by council, needs to be submitted to council / or whoever is responsible or to just undertake it.

Bushfire risk management plan and emergency evacuation plan

32.30. The environmental management plan must include a bushfire risk management plan and emergency evacuation plan prepared in consultation with and to the satisfaction of the responsible authority.

The bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.

Threatened species management plan

33.31. The environmental management plan must include a threatened species management plan to be prepared in consultation with the responsible authority.

The threatened species management plan must include:

- (a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.

Weed and pest management plan

34.32. The environmental management plan must include a weed and pest management plan to be prepared in consultation with the responsible authority.

The weed and pest management plan must include:

- (a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests

Rehabilitation plan

35.33. The environmental management plan must include a rehabilitation plan to be prepared in consultation with the responsible authority.

The rehabilitation must include:

- (a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.

Habitat clearing and management plan

36.34. The environmental management plan must include a habitat clearing and management plan to be prepared in consultation with the responsible authority.

The habitat clearing and management plan must include:

- (a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.

Ecological fire management plan

37.35. The environmental management plan must include a threatened species ecological fire management plan to be prepared in consultation with the responsible authority.

The threatened species ecological fire management plan must include:

- (a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.

Commented [JM32]: Could this not form part of the bushfire management plan.

Cultural heritage management plan

38.36. The environmental management plan must include a cultural heritage management plan to be prepared in consultation with the responsible authority.

The cultural heritage management plan must include:

- (a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.

Environmental management plan training program

39.37. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.

Environmental management plan reporting program

40.38. The environmental management plan must include a program for reporting environmental incidents, including:

- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;

- (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation timetable

41.39. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 25 to 40 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.

Commented [JM33]: Check numbering

Review of the environmental management plan

42.40. The environmental management plan must be reviewed and if necessary amended in consultation with the responsible authority and other authorities as directed by the responsible authority every [five] years, to reflect operational experience and changes in environmental management standards and techniques.

The amended environmental management plan must be submitted to the responsible authority for re-endorsement. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan and will form part of this permit.

Commented [JM34]: As per format structure of other conditions.

LANDSCAPING

On-site landscaping plan

43.41. Prior to the commencement of works, a. submit for approval to the responsible authority, an on-site landscaping plan prepared by a suitably qualified landscape architect, an on-site landscaping plan must be prepared to the satisfaction of the responsible authority. The plans must be fully dimensioned and drawn to a recognised scale.

Commented [JM35]: Timing

The on-site landscaping plan must include:

- (a)(i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);
- (b)(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;
- (c)(iii) a timetable for implementation of all on-site landscaping works;
- (d)(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.

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b. The landscaping as shown on the approved on-site landscaping plan must be completed in accordance with the approved works and thereafter maintained to the satisfaction of the responsible authority.

SITE SECURITY

44.42. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public, to the satisfaction of the responsible authority.

Commented [JM36]: Process for it to be to the satisfaction? Do they need to submit a strategy?

45.43. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public, to the satisfaction of the responsible authority.

Commented [JM37]: ?

46-44. Public safety warning signs must be located on all towers, to the satisfaction of the responsible authority.

Commented [JM38]: ?

DECOMMISSIONING

47-45. Within six months after the construction of the wind farm is completed, the operator of the wind farm must provide a decommissioning and rehabilitation plan for approval to the responsible authority.

Commented [JM39]: timing

The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:

- (a) notify the responsible authority in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation
- (b) undertake the following to the satisfaction of the responsible authority within such timeframe as may be specified by the responsible authority:
 - (i) remove all above ground non-operational equipment;
 - (ii) remove and clean up any residual contamination;
 - (iii) rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm;
 - (iv) submit a decommissioning traffic management plan to the responsible authority and, when approved by the responsible authority, implement that plan;
 - (v) submit a post-decommissioning revegetation management plan, including a timetable of works, to the responsible authority and, when approved by the responsible authority, implement that plan.

ELECTRICAL INFRASTRUCTURE (POWERLINK)

48-46. Compliance with easement terms and conditions as per Easement Dealing 701758510 and 713030213.

49-47. Further engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.

50-48. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.

ADDITIONAL GUIDANCE **GENERAL ADVICE**

Commented [JM40]: use council wording.

- (a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.

In respect to this application the exclusion ~~z~~Zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 ~~this Act~~ to seek advice from Powerlink.

(c) In the event of identification of an ~~unexpected-unexplored~~ ordnance (UXO), the following procedure is recommended:

- Do not touch or disturb the object;
- Take action, where appropriate, to prevent it being disturbed by another person;
- Note its approximate dimensions and general appearance;
- Note the route to its location; and
- Advise the Police as soon as possible.

Chris Lee

From: [Refused under section 47(3)(b) of the Freedom of Information Act] <[redacted]@cardno.com.au>
Sent: Tuesday, 7 October 2014 10:28 AM
To: Jane McInnes
Cc: [Refused under section 47(3)(b) of the Freedom of Information Act] Steve Reynolds
Subject: RE: Comments on draft Mount Emeard Assessment Report
Attachments: HRP14122.R02.Final (incl Appendix).pdf; HRP14122R002.Final.docx; Conditions Package - FINAL.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Jane,

Many thanks for your feedback on the draft report relating to a technical assessment of the Mount Emerald Wind Farm application.

We have reviewed and updated the report and the conditions package pursuant to your feedback. Please see the final report attached (pdf, with conditions enclosed as Appendix A). I have also attached the final report and conditions as separate word documents, should you wish to utilise the text for your internal purposes.

I provide below a number of responses in respect of your comments.

Report

- The majority of DSDIP comments have been incorporated into the final report.
- DSDIP sought additional detail with regards to the technical inputs in Chapter 5. We note that Cardno were engaged to undertake a holistic assessment, with the end product being a single assessment report incorporating all technical components and coming to a recommendation for DSDIP. As a result, the technical assessments are contained in the report and not as separate reports. We note your comments regarding additional detail and approach, and have updated the technical summaries accordingly. They now provide a more detailed assessment for each specialty, however please keep in mind that further assessment is contained within the response to the planning framework in Chapter 6.
- Regarding DSDIP comments about whether there is 'grounds to approve' or 'grounds to refuse', we note that the assessment need only demonstrate that the proposal is appropriate when assessed against the planning scheme. This is the approach taken in the report – we have revised some wording accordingly, however have maintained others where appropriate.
- We have updated the conclusion (Chapter 7) to identify the SPA provisions, followed by a discussion summarising the assessment / conflicts. We have retained the ecological matters discussion (with some amendment) as in the absence of legal advice that this is not appropriate, we believe it should be retained. The chapter ends with a concise recommendation.

Conditions

- The majority of DSDIP comments have been incorporated into the final conditions package.
- Key DSDIP comments relating to format, style / approach to conditions, terminology, timing, etc have been reflected.
- Original condition 21 (aviation lighting) is retained as we believe it is an appropriate matter to identify in the approval. Our conditions package is a recommendation, and DSDIP, as the assessment manager, may remove or include material as considered appropriate and subject to any legal review to be undertaken.

- We recommend that original condition 23 and original condition 24 both be included, as they refer to slightly different processes.
- We recommend that original condition 35 (ecological fire management) be retained as a separate condition to the bushfire management condition, as they relate to different matters and management techniques.

Please do not hesitate to call me should you have any queries.

Kind regards,

Refused under section 47(3)(b) of the RTI Act.

SENIOR PLANNER
CARDNO HRP



Refused under section 47(3)(b) of the RTI Act.

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email Refused under section 47(3)(b) of the RTI Act. Web www.cardno.com/cardnohrp

Cardno HRP is relocating. As of Monday the 20th October our new office address will be:

Level 11

515 St Pauls Terrace

Fortitude Valley QLD 4006

Our phone number, fax number and staff email addresses will remain the same.

Cardno operates a quality management system that has been certified to ISO 9001.

Any advice contained in this email (including attachments) is only provided on the basis that our standard Terms and Conditions apply. Ask for a copy or visit our web site [Terms & Conditions](#). Comments and conclusions in or construed from this advice relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal representatives with respect to matters of law. This email and any files transmitted with it may be confidential and privileged and intended solely for the individual to whom it is addressed. If you have received this email in error please notify the sender immediately. It may not be reviewed or re-transmitted by any other person. Please ensure before opening or using attachments, to check them for viruses and defects. Our liability is limited to re-supplying any affected attachments

From: Jane McInnes [<mailto:Jane.McInnes@dsdip.qld.gov.au>]

Sent: Wednesday, 1 October 2014 11:10 AM

To: Refused under section 47(3)(b) of the RTI Act.

Cc: Refused under section 47(3)(b) of the RTI Act.

Subject: Comments on draft Mount Emeard Assessment Report

Hi Refused under section 47(3)(b) of the RTI Act.

Please find attached comments on the draft Mount Emerald Wind Farm Assessment Report and Conditions.

Generally happy with the direction the report is heading. My main concern is with the technical responses being a bit light on and not providing enough discussion around what the technical assessment involved. For each technical area it needs to be clearly stated what the requirements are, how the application meets or does not meet the requirements and whether any conditions have been imposed. I realise that a lot of this information has been provided in the formal assessment however it needs to be included up front.

Given the timeframes, I have not been able to obtain legal advice in relation to ecological issue regarding the flying fox and northern quoll. It has been suggested that the ecological issue be discussed in the technical assessment (in detail) and mentioned in the conclusion/recommendation.

The draft conditions need a bit of work to ensure consistency in terminology and structure of the conditions throughout. The responsible authority needs to be identified.

Please give me a call if you would like further clarification on any of the comments.

Kind regards

Jane McInnes
Senior Planner

Department of State Development, Infrastructure and Planning

tel +61 7 3452 7690

post PO Box 15009 City East Qld 4002

visit Level 5, 63 George Street, Brisbane

email jane.mcinnnes@dsdip.qld.gov.au

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P Please consider the environment before printing this email

Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

October 2014

Document Information

Prepared for Department of State Development, Infrastructure and Planning (DSDIP)

Project Name Mt. Emerald Wind Farm, Kippin Drive, Arriga

File Reference HRP14122R001.001 Part A Report

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Date October 2014

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Prepared for:
Department of State Development, Infrastructure and Planning (DSDIP)
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Prepared by: Cardno HRP

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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Attachment A – Recommended Conditions

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Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Representative	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological/Environment – impacts of wind farm on protected flora and fauna
- Agricultural Land - Agricultural Land and impact on ability to crop spray
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- preparation and compilation of technical assessment summaries to inform recommendations, including an objective description of the likely impacts, benefits and other considerations at the site, regional and state scale;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommended approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises a technical assessment of the proposed development against the applicable planning framework. It has not addressed any submissions received in respect of the Ministerial Call In. Further, it has not considered any economic matters, which we understand are being assessed separately by DSDIP.

Section 3 – Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Summary of Technical Consultants Responses provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes on to state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)*

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 *Department of Health*

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

"There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 *Mareeba Shire Council*

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 *Tablelands Regional Council*

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

“(2) The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—

- (a) the State planning regulatory provisions;*
- (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
- (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
- (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
- (e) any applicable codes in the following instruments-*
 - (i) a temporary local planning instrument;*

- (ii) *a preliminary approval to which section 242 applies*
 - (iii) *a planning scheme;*
- (d) *if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.*
- (3) *In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—*
 - (a) *the common material;*
 - (b) *any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;*
 - (c) *any referral agency's response for the application;*
 - (d) *the purposes of any instrument containing an applicable code;*
- (4) *If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).*
- (5) *The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.*
- (6) *Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.*

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) *In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-*
 - (a) *Before the day decision stage for the application started; or*
 - (b) *If the decision stage is stopped-before the day the decision stage is restarted.*
- (2) *However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)*

According to Section 326 of the SPA:

- “(1) *The assessment manager's decision must not conflict with a relevant instrument unless—*
 - (a) *the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*

- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;

- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and

will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage

- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and

wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;
- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme

and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5 and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made
- the SPP.

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land - Agricultural Land and impact on ability to crop spray;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

This chapter comprises the technical assessment for each technical service.

5.2 Landscape Visual Amenity

An assessment of the visual impact of the proposal has been undertaken against the relevant planning framework and the common material.

In terms of the material submitted by the applicant, the following material adequately describes the proposed development and provides sufficient technical assessment to assess visual impacts:

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length(km) of visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons;
- Shadow flicker assessment.

The material submitted has been adequate for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. The distance between residences and the proposed wind turbines provides sufficient buffer to reduce the shadow flicker impacts and the proportion of rural views affected to acceptably low levels. However, it is noted that none of the planning or visual impact technical reports substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of regional landscape significance. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure. It is also relevant that the mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11(Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, provided they have "*minimal impact on the environment and on amenity (both at a local and*

wider area scale)". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code; the latter includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code includes (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

At the time of application, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it has subsequently become a requirement under Planning Scheme amendment 01/11 Wind Farms (Sept 2013) where the Wind Farm Code (Division 23) require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant view scapes' (S3a). The assessment of wind farm visual impacts on significant landscape features identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application.

It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

Notwithstanding the lack of a statutory requirement to assess visual impacts on the Mt Emerald - Walsh Bluff mountain range system, and the absence of visual impact concerns in the responses from referral agencies, the landscape significance of Mt Emerald - Walsh Bluff mountain range should have been at least noted in the assessment.

In any case, in summary, the material submitted is comprehensive and technically thorough, and addresses visual and shadow flicker impacts on residents in the district.

It is apparent from the photographs submitted, and from field inspection, that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the treeline), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, is not 'minimal impact' as sought by TLPI 01/11 or the Wind Farm Code. The wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

However the Mareeba Shire Planning Scheme does not protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is concluded that the extent and nature of the impacts have been generally well analysed (noting earlier comments about significant landscape features) and technically assessed in the EIS documentation. However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment.

It is therefore concluded that the likely impacts of the proposed wind farm on visual amenity, although locally significant, are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to conditions. The visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Appropriate conditions include non-reflective colours and materials for turbines and especially blades, as per Specific Outcome S3b of the Wind Farm Code; and underground electrical connections (Specific Outcome S3c of the Wind Farm Code).

5.3 Ecological

Ecological impacts have been assessed in terms of State and Local Government regulatory requirements and based on the documentation that has been submitted in support of the proposal it is concluded that:

- the proposal is supported by relevant ecological surveys and assessments that provide an adequate basis for assessment of the application;
- the proposal will have adverse ecological impacts;
- the proposal has specific locational requirements which the proposed site satisfies;
- the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur;
- the proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts;
- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is considered that sufficient documentation has been provided to enable an assessment of the ecological impacts of the proposal to be made and to determine whether:

- the proposal warrants refusal based on the likelihood of significant residual ecological impacts that have no reasonable prospects of being adequately mitigated or offset; or
- the proposal warrants approval subject to an appropriate set of Conditions being imposed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.

There are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on

ecological issues. The proposal is therefore acceptable and approval can be granted subject to the inclusion of appropriate conditions.

Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Such conditions largely relate to the 'environmental management plans' suggested to be adopted and implemented by the applicant.

It is important to note that important ecological matters for the development relate to the protection of quoll and flying fox populations, but that these species are not protected by State or local legislation or policies. Nevertheless, the impacts have been assessed and conditions for management and mitigation are recommended. In addition, the EPBC referral will be another mechanism which will assess the impact on quoll and flying fox populations and that assessment process will separately determine whether the development may proceed (with management mechanisms) or may not proceed having regard to their protection as Matters of National Environmental Significance (MNES).

5.4 Agricultural Land and Environment

Agricultural land impacts and UXO have been assessed with reference to the following considerations:

- The potential for residual UXO contamination to be uncovered/or disturbed by the development, with consequential risk to human health and safety as per the requirements of the contamination module of the SPP.
- The potential for the development to adversely or positively impact the agricultural land use values of the local area as per the requirements of the Economic Growth Module of the Single State Planning Policy.

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist an UXO assessment is required to be completed in order to facilitate the development. Documentation provided in support of the application concludes the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of development application materials by DEHP indicated a substantial risk existed and UXO commentary appearing to identify the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment was issued to a 'slight' possibility of occurrence of UXO by DEHP. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the EIS appears to concur with DEHP's recommendation regarding the assessment of UXO related matters. Accordingly the UXO issues present on site appear manageable and the development is supported in this regard. It is not recommended that any particular development approval conditions are attached other than advice regarding a procedure for the possibility of UXO disturbance.

In terms of agricultural land, the development has been assessed against the relevant provisions of the Mareeba Shire Planning Scheme and the Economic Growth Module of the Single State Planning Policy. The application materials supplied appears to satisfactorily address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;

- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development;
- a response to the matter of impact to aerial spraying.

On the basis of the overall compatibility of the proposed development, the limited nature of the wind farm footprint within the existing agricultural land use and the provided information regarding socioeconomic benefits of the project in the EIS it is considered that the level of assessment provided in relation to the development is appropriate for the purposes of decision making relating to soil impacts and agricultural land use policy and impact. The proposal is considered acceptable in terms of the agricultural land use values of the local area and no conditions are required to be imposed.

5.5 Noise

An acoustic assessment has been undertaken in terms of the material submitted by the applicant and against applicable planning framework. In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain a probable solution but does make reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

A condition should be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise. Where this condition is imposed, together with additional conditions to demonstrate compliance and complaints management, the proposal is considered to be appropriate in acoustic terms.

5.6 Traffic Impact

In response to matters raised in the information request a Traffic Report “Technical Note 2 – Traffic Impact Assessment Engineering Response” was prepared on 29 August 2014. This responded to each of the items in the Information Request relating to traffic matters as summarised below:

- Provide a clear description of the whole of the potential access routes to the site for oversized vehicles. This should include at least a high level identification of constraints along the network and identification of measures that would be put in place to allow State Government and Council to assess these impacts
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Further information on how staff travels to site can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Should sufficient measures to restrict staff traffic to 30 vehicles per day not be provided a new assessment identifying the worst case traffic impact on the road network be provided.

An assessment of all the development application material has been undertaken and it is confirmed that the assessment has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council;
- Requirements for permits and escorts to traverse the detailed routes should be identified and obtained when necessary.

These issues may not be able to be assessed at the moment as the details of construction schedule, etc is likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles etc would be needed to ensure the routes are acceptable, the assessment of the suitability of Hansen Road and Springmount Road should be included as a condition.

In respect of managing staff vehicles it is stated that the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders."

It is recommended that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known. Where this condition is imposed, the proposal is considered to be appropriate in traffic terms.

5.7 Wind/Aeronautical

The material provided by the application throughout the application included evidence of consultation with CASA. The consultation recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, nor any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

The application is therefore considered to be appropriate subject to recommended conditions in respect of the overall maximum height not exceeding 1179.5m AHD and that any micro-siting of turbines be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts. Overall, the wind / aeronautical assessment concludes that wind / aeronautical matters are appropriate having regard to the relevant planning framework.

5.8 Civil and Electrical

5.8.1 Civil

The civil engineering assessment identified that the responses provided by the relevant referral agencies were not unreasonable and the accompanying Information request responses were satisfactory apart from the need to possibly address the following areas in further detail:

- a. Decommissioning and Rehabilitation of the site.
- a. Assessment of Vertical road grading's to site access.
- b. Assessment of Road Cross sections.
- c. Construction Management Plan.
- d. Sediment and Erosion Control.
- e. Water Quality Management.
- f. Stormwater Management
- g. Noise impact from Road Construction

It is considered that these matters can be secured by appropriate conditions.

5.8.2 Electrical

The electrical engineering identified that whilst no additional details have been provided in the response submission to the matters originally raised, it is likely that matters can be dealt with at the relevant Building Approval / Operational Works stages or via a condition of an approval in respect of the content of construction and operational management plans.

Management plans should include specific reference to site safety and include matters to deal with contamination. In respect of bushfire, a Bushfire Management Plan has been submitted and subsequent amendments to secure such requests can be conditioned.

TLPI 01/12 – S2 (b) requires the MEWF to be readily connected to existing, nearby HV electricity transmission lines without significant environmental, social or amenity impact. However, the information in the DA and response to information request did not include or sufficiently present the impacts of the proposed HV interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. This was advised in Powerlink's agency response as a condition of approval for the MEWF development. The detailed interconnection design and grid connection studies to assess the viability of interconnection of the MEWF to the Powerlink network can be established through this process and are not relevant to the assessment of the development application at this stage.

Minimum clearances of WTG structures to Powerlink's assets need to be complied with and should form a condition of approval for the MEWF development. The required clearance was advised in Powerlink's agency response.

In addition, the compliance of the proposed MEWF with the National Electricity Rules and Codes, as it applies to wind farms, needs to be demonstrated and included in the assessment.

TLPI 01/12 – S5 requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. It is confirmed that the submission response satisfactorily addresses this. There are no further issues or gaps in this matter.

It is noted in the DA submission that the connection of each WTG and associated transformer at its base to the main substation may use overhead lines, and not exclusively underground cables. This is not recommended in the 'heavily vegetated' area, and presents risk of bush fires from electrical faults, despite management plans being in place. Instead, exclusive use of underground cables should be considered and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the WTG structures and risk of bush fires has not been specifically assessed. It is recommended that an independent lightning impact assessment study be included or conditioned as part of the approval.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the additional information provided by the applicant, in response to the Minister's request for additional information in respect of economic matters. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

"Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context."

The applicant's discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....".

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	<p>The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions.</p> <p>The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.</p>
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	<p>The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development.</p> <p>The site is designated as being within the Regional Landscape and Rural Production Area.</p> <p>An assessment against the relevant provisions of the FNRP is provided below in Section 6.4.</p>
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	<p>Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.</p>
<i>State planning policies, to the extent the policies are not identified in—</i>	<p>An assessment against State Planning Policies in effect at time the application was properly</p>

<p>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</p> <p>(ii) the planning scheme as being appropriately reflected in the planning scheme;</p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p>Any applicable codes in the following instruments-</p> <p>(i) A structure plan</p> <p>(ii) A master plan</p> <p>(iii) a temporary local planning instrument;</p> <p>(iv) a preliminary approval to which section 242 applies</p> <p>(v) a planning scheme;</p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ("the Planning Scheme") is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<p><i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i></p>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in</p>

<p><i>the priority infrastructure plan.</i></p>	<p>the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the</p>

	<p>response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5 above.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is</p>
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	<p>considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
Policy 2.1 Regional Landscape Values	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given <i>'appropriate recognition in land use planning and development assessment'</i>.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in</p>

	<p>these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<p><i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i></p>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind

	<p>turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are '<i>recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions</i>'.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	<p>Development:</p> <ul style="list-style-type: none"> (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and (3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts. 	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <ul style="list-style-type: none"> (1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and (2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and (3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and (4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and (5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks 	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p>

	associated with the natural hazard, and	<p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 07 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level

of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1

Rural Zone Code

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the</p>

		<p>instrument (definitions, levels of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>An assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's , the intent of both being to facilitate the establishment of new wind farms in appropriate</p>
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		<p>locations.</p> <p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
<p>S2 Agricultural activities are protected from incompatible land uses.</p>	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in</p>

		<p>September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	For all Lots	
	PS4.3 Vegetation is retained on land with a slope of 15% or greater.	
For Code Assessable Development		
S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.	Not Applicable – the site is not in the Southedge Potential Tourist Area.
<i>For Mona Reserve as identified on Map Z10 as</i>	PS7 Development is carried out in accordance with a Plan of Development and Land	Not Applicable – the site is not in the Mona Reserve.

<p><i>Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>

the Shire.		
S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	PS10 No probable solution prescribed.	The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.
4.80 RECONFIGURING A LOT		
Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.		

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2 **Division 5 - Car Parking Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to	AS1 The number of car parking spaces provided for	Not Applicable.

accommodate the demand likely to be generated by the use.	the use is in accordance with the Car Parking Schedule.	
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the

	<p>condition for parking; and</p> <p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Car Parking Numbers		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be</p>

		provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Bicycle Parking</i>		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
<i>Movement and Access</i>		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain</p>

	<p>designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 Division 17 - Filling and Excavation Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
<p>S1 Visual Amenity</p> <p>Filling and excavation are</p>	<p>AS1 Filling and excavation is no greater than two (2)</p>	<p>It is considered unlikely that significant filling and excavation will occur,</p>

undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	metres in height or depth.	<p>however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project,</p>

	<p>within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>covering discrete construction areas and which will account for the changing surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>

<p>S5 Environment</p> <p>Filling or excavation does not result in a reduction of the water quality of receiving waters.</p>	<p>AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.</p>	<p>Refer to S4 above.</p>
<p>S6 Environment</p> <p>Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.</p>	<p>AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.</p>	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4 **Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code**

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Cultural Heritage Places</p> <p>(a) significant elements of the mining history of Mareeba Shire are conserved; and</p> <p>(b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and</p> <p>(c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.</p>	<p>PS1 No probable solution provided.</p>	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby</p>

		<p>consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern</p>

<p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	<p>PS4 No probable solution provided.</p>	<p>Not Applicable as there are no buildings and places of Local Heritage Significance on the site.</p>
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	<p>PS5 No probable solution provided.</p>	<p>Not applicable as there are no buildings and structures of historic significance on the site.</p>
<p>S6 Retention of Natural</p>	<p>PS6 No probable solution</p>	<p>Not Applicable as there are</p>

Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	provided.	no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife.	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the

<p>navigation systems.</p>	<p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p>	<p>approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>PS1.7</p> <p>(i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Bibbohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Bibbohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibbohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar</p>	
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	facility that involve any building, structures or work above 950 AHD.	
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6.6.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation¹⁸ of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who

		<p>understand how to respond quickly to fire and use equipment available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, 	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by</p>

	<p>swimming pool).</p> <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; 	<p>detrimental impacts of bushfire.</p>
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	<p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de- 	
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	<p>sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind

Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.

g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment,	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow

<p>economic and social impacts.</p> <p>b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated</p>
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		<p>16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have</p>
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		<p>undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <ul style="list-style-type: none"> a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes. b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts. c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable. 	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses</p>

		<p>and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts upon the landscape.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes or (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values</p>

		and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p> <p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G –

		<p>Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014.</p> <ul style="list-style-type: none"> Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a</p>
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		<p>35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11</p>

		<p>June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is</p>

		<p>considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a</p> <p>Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a</p> <p>Maintenance Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction</p>

		<p>Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are</p>

		controlled and maintained at acceptable levels and carried out at acceptable times.
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and

	<p>restored;</p> <p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p> <p>(v) wind farm infrastructure is removed from the site.</p>	<p>replacing soil over foundations;</p> <ul style="list-style-type: none">• removing all material from site for recycling;• where tracks are of no use to the land owner, the land reinstated;• underground and above ground cabling removed;• the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326 (1) (b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2012 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme

as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired and are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (those applicable at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326(1)(c)(ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the Far North Queensland Regional Plan recognises wind farms as legitimate land use and emphasis is placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

7.2 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** includes an assessment considering impact upon State environmental significance, given the precise

wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires wind farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of State significance. The probable solutions and overall outcome both refer to State environmental significance.

The proposed development is considered to appropriately address matters of State environmental significance and therefore complies with the Rural Zone Code in this regard.

However, it is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the 	<p>Prior to the commencement of site / operational / building work</p>

<p>satisfaction of the Council.</p> <ul style="list-style-type: none"> (c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine (d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities (e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines (f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority, (g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and (h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including: (i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria (j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites). <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

Northern Quoll Management	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <ul style="list-style-type: none"> (a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations. (b) A monitoring program of additional utilisation studies prior to construction; (c) requires surveys to be undertaken during breeding seasons to ascertain: <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. (d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months); (e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to): <ul style="list-style-type: none"> (ii) Construction Phase Management Procedures: <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.	To be maintained
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7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																											
General / Planning Requirements																													
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29/08/2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	While site / operational / building work is occurring and then to be maintained
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Micro-siting of Turbines																													
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																											
<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p>		Prior to commencement of																											

<p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and</p>	<p>Prior to commencement of site / operational /</p>

<p>maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>(a) Submit to the Council for approval, acoustic compliance reports prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>For the purpose of determining compliance, the following requirements apply for the acoustic compliance reports.</p> <p>(i) Identify all noise assessment positions, as shown on a map.</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>(ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment.</p> <p>(b) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(c) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>(a) Following facility commissioning, all complaints must be managed following procedures set out in a noise complaints management plan. Submit to the Council for approval a noise complaints management plan, including register, investigation and response plan. The plan must include, but is not limited to:</p> <p>(i) how contact details will be communicated to the public;</p> <p>(ii) a toll free telephone number and email contact for complaints and queries;</p> <p>(iii) details of the appropriate council contact telephone number and email address (where available);</p> <p>(iv) a table outlining complaint information for each complaint received, including:</p> <p>a. the complainant's name;</p> <p>b. any applicable property reference number if connected to a background testing location;</p> <p>c. the complainant's address;</p> <p>d. a receipt number for each complaint which is to be communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the</p>	<p>As indicated</p>

<p>complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) A report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions is to be provided on an annual basis for approval by the Council.</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
<p>9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.</p> <p><i>Guidance Note: The optimum method of assessment of shadow flicker is as follows:</i></p> <ul style="list-style-type: none"> • <i>Determine the extent of shadows from turbines</i> • <i>Identify all residences within the extent of shadows from proposed turbine positions</i> • <i>Use modelling software with relevant modelling parameters, as identified below, to calculate the theoretical annual shadow flicker duration at each residence, accounting for topography and cumulative effects</i> 	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	

<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>
<p>Access Tracks</p>	
<p>12. Access tracks within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks including (but not limited to) layout, location, dimensions (including sections).</p> <p>(b) Carry out the development in accordance with part (a) of this</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

condition.	
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <ul style="list-style-type: none"> (a) low-level, low-intensity security lighting; (b) aviation obstacle lighting in accordance with condition 14; (c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times. <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <ul style="list-style-type: none"> (a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction; (b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA); (c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree; (d) all lights must flash in unison; (e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA; (f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA. 	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <ul style="list-style-type: none"> (a) Prepare for approval by the Council a lighting maintenance plan. (b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition 	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <p>(a) the Civil Aviation Safety Authority;</p> <p>(b) the Department of Defence (RAAF Aeronautical Information Service);</p> <p>(c) Airservices Australia;</p> <p>(d) any aerodrome operator within 15 km of the outside property boundaries of the site;</p> <p>(e) the Aerial Agriculture Association of Australia;</p> <p>(f) any organisation responsible for providing air ambulance services in the area.</p>	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <p>(a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;</p> <p>(b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and</p>	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans

Note: An environmental management plan is required to be prepared and approved for the wind farm to ensure that all environmental matters are addressed prior to operation, and that the wind farm operates without environmental impacts. The following conditions identify the requirements of the environmental management plan. The environmental management plan must include the following components:

- *a construction and work site operational management plan*
- *a sediment, erosion and storm water management plan*
- *a hydrocarbon and hazardous substances plan*
- *a bushfire risk management plan and emergency evacuation plan*
- *a threatened species management plan*
- *a weed and pest management plan*
- *a rehabilitation plan*
- *a habitat clearing and management plan*
- *an ecological fire management plan*
- *a cultural heritage management plan*
- *an environmental management plan training program*
- *an environmental management plan reporting program*

The environmental management plan must also address implementation and periodic review.

19. Submit for approval by the Council an environmental management plan.

The environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;
- (c) may be prepared in sections or stages;
- (d) must meet the requirements of conditions 20 to 33.

Prior to the commencement of site / operational / building work

<p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The environmental management plan must include a construction and work site operational management plan.</p> <p>The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; 	<p>Prior to the commencement of site / operational / building work</p>

<p>(j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The environmental management plan must include a sediment, erosion and storm water management plan.</p> <p>The sediment, erosion and storm water management plan must include:</p> <p>(a) identification of all construction and operational processes that could potentially lead to water contamination;</p> <p>(b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:</p> <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; <p>(c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;</p> <p>(d) procedures for waste water discharge management;</p> <p>(e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;</p> <p>(f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;</p> <p>(g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;</p> <p>(h) a program of inspection and remediation of localised erosion within</p>	<p>Prior to the commencement of site / operational / building work</p>

a specified response time.	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <ul style="list-style-type: none"> (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas; (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements. 	Prior to the commencement of site / operational / building work
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <ul style="list-style-type: none"> (a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage; (b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods; (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles; (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires. 	Prior to the commencement of site / operational / building work
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <ul style="list-style-type: none"> (a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones. 	Prior to the commencement of site / operational / building work
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p> <ul style="list-style-type: none"> (a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests. 	Prior to the commencement of site / operational / building work

Rehabilitation plan 26. The rehabilitation must include: (a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.	Prior to the commencement of site / operational / building work
Habitat clearing and management plan 27. The habitat clearing and management plan must include: (a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.	Prior to the commencement of site / operational / building work
Ecological fire management plan 28. The ecological fire management plan must include: (a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.	Prior to the commencement of site / operational / building work
Cultural heritage management plan 29. The cultural heritage management plan must include: (a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.	Prior to the commencement of site / operational / building work
Environmental management plan training program 30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.	Prior to the commencement of site / operational / building work
Environmental management plan reporting program 31. The environmental management plan must include a program for reporting environmental incidents, including: (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints; (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.	Prior to the commencement of site / operational / building work
Implementation timetable 32. The environmental management plan must include a timetable for	Prior to the commencement of

implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.	site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Landscaping	
<p>34. On-site landscaping plan</p> <p>(a) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <ul style="list-style-type: none"> (i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines); (ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity; (iii) a timetable for implementation of all on-site landscaping works; (iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping. <p>(b) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	Prior to the commencement of site / operational / building work
Site Security	
35. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.	To be maintained
36. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained

37. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>38. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
39. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
40. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.	To be maintained

41. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
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GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexploded ordnance (UXO), the following procedure is recommended:*

- Do not touch or disturb the object;*
- Take action, where appropriate, to prevent it being disturbed by another person;*
- Note its approximate dimensions and general appearance;*
- Note the route to its location; and*
- Advise the Police as soon as possible.*

Chris Lee

From: Jane McInnes <Jane.McInnes@dsdip.qld.gov.au>
Sent: Thursday, 9 October 2014 1:29 PM
To: Refused under section 4
Cc: cardno.com.au
Subject: RE: Comments on draft Mount Emeard Assessment Report
Attachments: HRP14122R002 Final - DSDIP COMMENTS.DOCX; Conditions Package - FINAL - DSDIP comments.docx

Hi Refuse

Thank for your email.

As discussed yesterday, I still have some concerns with the report which I would like addressed -

Report

- The introduction needs to include the economic assessment undertaken by Foresight Partners. Currently still reads that DSDIP is undertaking the assessment. Also the economic assessment needs to be included in the technical assessment introduction.
- Please check the date of commencement for the TLPI 01/11, should be 5 October 2011.
- Technical assessments need to be consistent with one another in terms of the:
 - o structure,
 - o language (e.g. the information request response is referred to as 'response to matters raised in the information request' and response to submission to the matters originally raised'). Some sections conclude with 'considered appropriate' and 'considered acceptable'. Please ensure the same terminology is used throughout the report.

I have also made some comments throughout the report and conditions.

Could you please make the changes and submit an amended report by Tuesday, 14 October 2014?

Please give me a bell if you would like to discuss any of the above.

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au



Great State. Great Opportunity. And a plan for the future.
Please consider the environment before printing this email

From: [Refused under section 47(3)(b) of the RT] cardno.com.au]
Sent: Tuesday, 7 October 2014 10:28 AM
To: Jane McInnes
Cc: [Refused under section] Steve Reynolds
Subject: RE: Comments on draft Mount Emeard Assessment Report

Dear Jane,

Many thanks for your feedback on the draft report relating to a technical assessment of the Mount Emerald Wind Farm application.

We have reviewed and updated the report and the conditions package pursuant to your feedback. Please see the final report attached (pdf, with conditions enclosed as Appendix A). I have also attached the final report and conditions as separate word documents, should you wish to utilise the text for your internal purposes.

I provide below a number of responses in respect of your comments.

Report

- The majority of DSDIP comments have been incorporated into the final report.
- DSDIP sought additional detail with regards to the technical inputs in Chapter 5. We note that Cardno were engaged to undertake a holistic assessment, with the end product being a single assessment report incorporating all technical components and coming to a recommendation for DSDIP. As a result, the technical assessments are contained in the report and not as separate reports. We note your comments regarding additional detail and approach, and have updated the technical summaries accordingly. They now provide a more detailed assessment for each specialty, however please keep in mind that further assessment is contained within the response to the planning framework in Chapter 6.
- Regarding DSDIP comments about whether there is 'grounds to approve' or 'grounds to refuse', we note that the assessment need only demonstrate that the proposal is appropriate when assessed against the planning scheme. This is the approach taken in the report – we have revised some wording accordingly, however have maintained others where appropriate.
- We have updated the conclusion (Chapter 7) to identify the SPA provisions, followed by a discussion summarising the assessment / conflicts. We have retained the ecological matters discussion (with some amendment) as in the absence of legal advice that this is not appropriate, we believe it should be retained. The chapter ends with a concise recommendation.

Conditions

- The majority of DSDIP comments have been incorporated into the final conditions package.
- Key DSDIP comments relating to format, style / approach to conditions, terminology, timing, etc have been reflected.
- Original condition 21 (aviation lighting) is retained as we believe it is an appropriate matter to identify in the approval. Our conditions package is a recommendation, and DSDIP, as the assessment manager, may remove or include material as considered appropriate and subject to any legal review to be undertaken.
- We recommend that original condition 23 and original condition 24 both be included, as they refer to slightly different processes.
- We recommend that original condition 35 (ecological fire management) be retained as a separate condition to the bushfire management condition, as they relate to different matters and management techniques.

Please do not hesitate to call me should you have any queries.

Kind regards,

Refused under section

SENIOR PLANNER
CARDNO HRP



Phone Refused under section 47(3)(b) of the RTI Act

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email Refused under section 47(3)(b) of Web www.cardno.com/cardnohrp

Cardno HRP is relocating. As of Monday the 20th October our new office address will be:

Level 11

515 St Pauls Terrace

Fortitude Valley QLD 4006

Our phone number, fax number and staff email addresses will remain the same.

Cardno operates a quality management system that has been certified to ISO 9001.

Any advice contained in this email (including attachments) is only provided on the basis that our standard Terms and Conditions apply. Ask for a copy or visit our web site [Terms & Conditions](#). Comments and conclusions in or construed from this advice relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal representatives with respect to matters of law. This email and any files transmitted with it may be confidential and privileged and intended solely for the individual to whom it is addressed. If you have received this email in error please notify the sender immediately. It may not be reviewed or re-transmitted by any other person. Please ensure before opening or using attachments, to check them for viruses and defects. Our liability is limited to re-supplying any affected attachments

From: Jane McInnes [<mailto:Jane.McInnes@dndip.qld.gov.au>]

Sent: Wednesday, 1 October 2014 11:10 AM

To: Refused under section

Cc:

Subject: Comments on draft Mount Emerald Assessment Report

Hi Refused

Please find attached comments on the draft Mount Emerald Wind Farm Assessment Report and Conditions.

Generally happy with the direction the report is heading. My main concern is with the technical responses being a bit light on and not providing enough discussion around what the technical assessment involved. For each technical area it needs to be clearly stated what the requirements are, how the application meets or does not meet the requirements and whether any conditions have been imposed. I realise that a lot of this information has been provided in the formal assessment however it needs to be included up front.

Given the timeframes, I have not been able to obtain legal advice in relation to ecological issue regarding the flying fox and northern quoll. It has been suggested that the ecological issue be discussed in the technical assessment (in detail) and mentioned in the conclusion/recommendation.

The draft conditions need a bit of work to ensure consistency in terminology and structure of the conditions throughout. The responsible authority needs to be identified.

Please give me a call if you would like further clarification on any of the comments.

Kind regards

Jane McInnes
Senior Planner

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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

October 2014



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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Representative	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological/Environment – impacts of wind farm on protected flora and fauna
- Agricultural Land - Agricultural Land and impact on ability to crop spray
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- preparation and compilation of technical assessment summaries to inform recommendations, including an objective description of the likely impacts, benefits and other considerations at the site, regional and state scale;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommended approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises a technical assessment of the proposed development against the applicable planning framework. It has not addressed any submissions received in respect of the Ministerial Call In. Further, it has not considered any economic matters, which we understand are being assessed separately by DSDIP.

Commented [JM1]: Update

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Summary of Technical Consultants Responses provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes on to state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

"State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 **Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)**

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 **Department of Environment and Resource Management – Clearing Vegetation (Concurrence)**

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referrable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 Department of Health

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

"There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 Mareeba Shire Council

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 Tablelands Regional Council

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a "planning scheme" as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- "(2) The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) the State planning regulatory provisions;*
 - (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) any applicable codes in the following instruments—*
 - (i) a temporary local planning instrument;*

- (ii) a preliminary approval to which section 242 applies
 - (iii) a planning scheme;
 - (d) if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.
- (3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—
 - (a) the common material;
 - (b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
 - (c) any referral agency's response for the application;
 - (d) the purposes of any instrument containing an applicable code;
- (4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).
- (5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.
- (6) Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed—the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but—
 - (a) Before the day decision stage for the application started; or
 - (b) If the decision stage is stopped-before the day the decision stage is restarted.
- (2) However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—
 - (a) the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or

- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;

- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and

will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage

- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and

wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;
- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme

and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5 and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made the SPP.

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land - Agricultural Land and impact on ability to crop spray;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Wind/Air/Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

This chapter comprises the technical assessment for each technical service.

5.2 Landscape Visual Amenity

An assessment of the visual impact of the proposal has been undertaken against the relevant planning framework and the common material.

In terms of the material submitted by the applicant, the following material adequately describes the proposed development and provides sufficient technical assessment to assess visual impacts:

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length(km) of visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons;
- Shadow flicker assessment.

The material submitted has been adequate for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. The distance between residences and the proposed wind turbines provides sufficient buffer to reduce the shadow flicker impacts and the proportion of rural views affected to acceptably low levels. However, it is noted that none of the planning or visual impact technical reports substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of regional landscape significance. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure. It is also relevant that the mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11(Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, provided they have *"minimal impact on the environment and on amenity (both at a local and*

Commented [JM2]: Should the conflict with the planning scheme be mentioned in this section?

wider area scale)". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code; the latter includes "... the scenic values of the Shire are maintained". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code includes (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

At the time of application, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it has subsequently become a requirement under Planning Scheme amendment 01/11 Wind Farms (Sept 2013) where the Wind Farm Code (Division 23) require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant view scapes' (S3a). The assessment of wind farm visual impacts on significant landscape features identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application.

It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

Notwithstanding the lack of a statutory requirement to assess visual impacts on the Mt Emerald - Walsh Bluff mountain range system, and the absence of visual impact concerns in the responses from referral agencies, the landscape significance of Mt Emerald - Walsh Bluff mountain range should have been at least noted in the assessment.

In any case, in summary, the material submitted is comprehensive and technically thorough, and addresses visual and shadow flicker impacts on residents in the district.

It is apparent from the photographs submitted, and from field inspection, that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the treeline), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, is not 'minimal impact' as sought by TLPI 01/11 or the Wind Farm Code. The wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

However the Mareeba Shire Planning Scheme does not protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is concluded that the extent and nature of the impacts have been generally well analysed (noting earlier comments about significant landscape features) and technically assessed in the EIS documentation. However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment.

It is therefore concluded that the likely impacts of the proposed wind farm on visual amenity, although locally significant, are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to conditions. The visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Appropriate conditions include non-reflective colours and materials for turbines and especially blades, as per Specific Outcome S3b of the Wind Farm Code; and underground electrical connections (Specific Outcome S3c of the Wind Farm Code).

5.3 Ecological

Ecological impacts have been assessed in terms of State and Local Government regulatory requirements and based on the documentation that has been submitted in support of the proposal it is concluded that:

- the proposal is supported by relevant ecological surveys and assessments that provide an adequate basis for assessment of the application;
- the proposal will have adverse ecological impacts;
- the proposal has specific locational requirements which the proposed site satisfies;
- the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur;
- the proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts;
- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is considered that sufficient documentation has been provided to enable an assessment of the ecological impacts of the proposal to be made and to determine whether:

- the proposal warrants refusal based on the likelihood of significant residual ecological impacts that have no reasonable prospects of being adequately mitigated or offset; or
- the proposal warrants approval subject to an appropriate set of Conditions being imposed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.

There are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on

ecological issues. The proposal is therefore acceptable and approval can be granted subject to the inclusion of appropriate conditions.

Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Such conditions largely relate to the 'environmental management plans' suggested to be adopted and implemented by the applicant.

It is important to note that important ecological matters for the development relate to the protection of quoll and flying fox populations, but that these species are not protected by State or local legislation or policies. Nevertheless, the impacts have been assessed and conditions for management and mitigation are recommended. In addition, the EPBC referral will be another mechanism which will assess the impact on quoll and flying fox populations and that assessment process will separately determine whether the development may proceed (with management mechanisms) or may not proceed having regard to their protection as Matters of National Environmental Significance (MNES).

5.4 Agricultural Land and Environment

Agricultural land impacts and UXO have been assessed with reference to the following considerations:

- The potential for residual UXO contamination to be uncovered/or disturbed by the development, with consequential risk to human health and safety as per the requirements of the contamination module of the SPP.
- The potential for the development to adversely or positively impact the agricultural land use values of the local area as per the requirements of the Economic Growth Module of the Single State Planning Policy.

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist an UXO assessment is required to be completed in order to facilitate the development. Documentation provided in support of the application concludes the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of development application materials by DEHP indicated a substantial risk existed and UXO commentary appearing to identify the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment was issued to a 'slight' possibility of occurrence of UXO by DEHP. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the EIS appears to concur with DEHP's recommendation regarding the assessment of UXO related matters. Accordingly the UXO issues present on site appear manageable and the development is supported in this regard. It is not recommended that any particular development approval conditions are attached other than advice regarding a procedure for the possibility of UXO disturbance.

In terms of agricultural land, the development has been assessed against the relevant provisions of the Mareeba Shire Planning Scheme and the Economic Growth Module of the Single State Planning Policy. The application materials supplied appears to satisfactorily address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;

- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development;
- a response to the matter of impact to aerial spraying.

On the basis of the overall compatibility of the proposed development, the limited nature of the wind farm footprint within the existing agricultural land use and the provided information regarding socioeconomic benefits of the project in the EIS it is considered that the level of assessment provided in relation to the development is appropriate for the purposes of decision making relating to soil impacts and agricultural land use policy and impact. The proposal is considered acceptable in terms of the agricultural land use values of the local area and no conditions are required to be imposed.

Commented [JM3]: Does not make sense.

5.5 Noise

An acoustic assessment has been undertaken in terms of the material submitted by the applicant and against applicable planning framework. In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain a probable solution but does make reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

A condition should be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise. Where this condition is imposed, together with additional conditions to demonstrate compliance and complaints management, the proposal is considered to be appropriate in acoustic terms.

5.6 Traffic Impact

In response to matters raised in the information request a Traffic Report "Technical Note 2 – Traffic Impact Assessment Engineering Response" was prepared on 29 August 2014. This responded to each of the items in the Information Request relating to traffic matters as summarised below:

- Provide a clear description of the whole of the potential access routes to the site for oversized vehicles. This should include at least a high level identification of constraints along the network and identification of measures that would be put in place to allow State Government and Council to assess these impacts
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Further information on how staff travels to site can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Should sufficient measures to restrict staff traffic to 30 vehicles per day not be provided a new assessment identifying the worst case traffic impact on the road network be provided.

An assessment of all the development application material has been undertaken and it is confirmed that the assessment has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council;
- Requirements for permits and escorts to traverse the detailed routes should be identified and obtained when necessary.

These issues may not be able to be assessed at the moment as the details of construction schedule, etc is likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles etc would be needed to ensure the routes are acceptable, the assessment of the suitability of Hansen Road and Springmount Road should be included as a condition.

In respect of managing staff vehicles it is stated that the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

"The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders."

It is recommended that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known. Where this condition is imposed, the proposal is considered to be appropriate in traffic terms.

Commented [JM4]: Provide an overall conclusion not just in relating traffic management condition.

5.7 Wind/Aeronautical

The material provided by the ~~application~~ applicant throughout the application included evidence of consultation with CASA. The consultation recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, nor any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

The application is therefore considered to be appropriate subject to recommended conditions in respect of the overall maximum height not exceeding 1179.5m AHD and that any micro-siting of turbines be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts. Overall, the wind / aeronautical assessment concludes that wind / aeronautical matters are appropriate having regard to the relevant planning framework.

Commented [JM5]: Wind is not mentioned in this section? Either take out wind or Include part from assessment against the code -
'Wind farms are located in areas with a viable wind resource'

5.8 Civil and Electrical

5.8.1 Civil

The civil engineering assessment identified that the responses provided by the relevant referral agencies were not unreasonable and the accompanying Information request responses were satisfactory apart from the need to possibly address the following areas in further detail:

- Decommissioning and Rehabilitation of the site.
- Assessment of Vertical road grading's to site access.
- Assessment of Road Cross sections.
- Construction Management Plan.
- Sediment and Erosion Control.
- Water Quality Management.
- Stormwater Management
- Noise impact from Road Construction

It is considered that these matters can be secured by appropriate conditions.

Commented [JM6]: what referral agency provided a response in relation to civil engineering?
This section does not provide what the application was assessed against etc. very light on still.

5.8.2 Electrical

The electrical engineering identified that whilst no additional details have been provided in the response to submission to the matters originally raised, it is likely that matters can be dealt with at the relevant Building Approval / Operational Works stages or via a condition of an approval in respect of the content of construction and operational management plans.

Commented [JM7]: Does this relate to the actual conditions that have been provided?

Commented [JM8]: Why wasn't this raised earlier?

Commented [JM9]: Response to the information request?
Be consistent

Management plans should include specific reference to site safety and include matters to deal with contamination. In respect of bushfire, a Bushfire Management Plan has been submitted and subsequent amendments to secure such requests can be conditioned.

TLPI 01/12 – S2 (b) requires the MEWF to be readily connected to existing, nearby HV electricity transmission lines without significant environmental, social or amenity impact. However, the information in the DA and response to information request did not include or sufficiently present the impacts of the proposed HV interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. This was advised in Powerlink's agency response as a condition of approval for the MEWF development. The detailed interconnection design and grid connection studies to assess the viability of interconnection of the MEWF to the Powerlink network can be established through this process and are not relevant to the assessment of the development application at this stage.

Minimum clearances of WTG structures to Powerlink's assets need to be complied with and should form a condition of approval for the MEWF development. The required clearance was advised in Powerlink's agency response.

In addition, the compliance of the proposed MEWF with the National Electricity Rules and Codes, as it applies to wind farms, needs to be demonstrated and included in the assessment.

TLPI 01/12 – S5 requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. It is confirmed that the submission response satisfactorily addresses this. There are no further issues or gaps in this matter.

It is noted in the DA submission that the connection of each WTG and associated transformer at its base to the main substation may use overhead lines, and not exclusively underground cables. This is not recommended in the 'heavily vegetated' area, and presents risk of bush fires from electrical faults, despite management plans being in place. Instead, exclusive use of underground cables should be considered and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the WTG structures and risk of bush fires has not been specifically assessed. It is recommended that an independent lightning impact assessment study be included or conditioned as part of the approval.

Commented [JM10]: Was this included in the assessment?

Commented [JM11]: Application material?

Commented [JM12]: Include an overall conclusion for this section.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the additional information provided by the applicant, in response to the Minister's request for additional information in respect of economic matters. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

"Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context."

The applicant's discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....".

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</p> <p>(ii) the planning scheme as being appropriately reflected in the planning scheme;</p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p>Any applicable codes in the following instruments-</p> <p>(i) A structure plan</p> <p>(ii) A master plan</p> <p>(iii) a temporary local planning instrument;</p> <p>(iv) a preliminary approval to which section 242 applies</p> <p>(v) a planning scheme;</p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ("the Planning Scheme") is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in</p>

<p><i>the priority infrastructure plan.</i></p>	<p>the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the</p>

	<p>response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5 above.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is</p>
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	<p>considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
Policy 2.1 Regional Landscape Values	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given 'appropriate recognition in land use planning and development assessment'.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in</p>

	<p>these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<p><i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i></p>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind

	<p>turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are '<i>recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions</i>'.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	<p>Development:</p> <ul style="list-style-type: none"> (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and (3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts. 	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <ul style="list-style-type: none"> (1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and (2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and (3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and (4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and (5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks 	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p>

	<p>associated with the natural hazard, and</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 07 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level

of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1 **Rural Zone Code**

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the</p>

	<p>instrument (definitions, levels of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>An assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's, the intent of both being to facilitate the establishment of new wind farms in appropriate</p>
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		<p>locations.</p> <p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in</p>

		<p>September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	For all Lots	
	PS4.3 Vegetation is retained on land with a slope of 15% or greater.	
For Code Assessable Development		
S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.	Not Applicable – the site is not in the Southedge Potential Tourist Area.
<i>For Mona Reserve as identified on Map Z10 as</i>	PS7 Development is carried out in accordance with a Plan of Development and Land	Not Applicable – the site is not in the Mona Reserve.

<p><i>Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>

the Shire.		
S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	PS10 No probable solution prescribed.	The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.
4.80 RECONFIGURING A LOT		
Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.		

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2

Division 5 - Car Parking Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to	AS1 The number of car parking spaces provided for	Not Applicable.

accommodate the demand likely to be generated by the use.	the use is in accordance with the Car Parking Schedule.	
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the

	<p>condition for parking; and</p> <p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Car Parking Numbers		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be</p>

		provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Bicycle Parking		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
Movement and Access		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain</p>

	<p>designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 **Division 17 - Filling and Excavation Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are	AS1 Filling and excavation is no greater than two (2)	It is considered unlikely that significant filling and excavation will occur,

undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	metres in height or depth.	<p>however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project,</p>

	<p>within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>covering discrete construction areas and which will account for the changing surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>

S5 Environment Filling or excavation does not result in a reduction of the water quality of receiving waters.	AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.	Refer to S4 above.
S6 Environment Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.	AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4

Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
S1 Cultural Heritage Places (a) significant elements of the mining history of Mareeba Shire are conserved; and (b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and (c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.	PS1 No probable solution provided.	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby</p>

		<p>consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern</p>

<p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	PS4 No probable solution provided.	Not Applicable as there are no buildings and places of Local Heritage Significance on the site.
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural	PS6 No probable solution	Not Applicable as there are

Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	provided.	no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or racing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife.	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the

navigation systems.	<p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p>	<p>approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>PS1.7</p> <p>(i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) Works or uses are not located within the buffer zones for the Biboohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Biboohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Biboohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar</p>	
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	facility that involve any building, structures or work above 950 AHD.	
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6.6.6 Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation 18 of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who

		<p>understand how to respond quickly to fire and use equipment available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, 	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by</p>

	<p>swimming pool).</p> <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; 	<p>detrimental impacts of bushfire.</p>
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	<p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <p>a) have a maximum gradient of 12.5%;and</p> <p>b) b) exclude cul-de-</p>	
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	<p>sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind

Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.

g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment,	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow

<p>economic and social impacts.</p> <p>b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>	<p>flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated</p>
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		<p>16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have</p>
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		<p>undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses</p>

		<p>and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts upon the landscape.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA). Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes or (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values</p>

		and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p> <p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the</p> <p>Environment Protection (Noise) Policy 2008 and the New</p> <p>Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G –

		<p>Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014.</p> <ul style="list-style-type: none"> Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard.</p> <p>Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a</p>
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		<p>35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11</p>

		<p>June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is</p>

		<p>considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5; or PS8.2 Internal accesses that are steeper than 1:5, or which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction</p>

		<p>Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are</p>

		controlled and maintained at acceptable levels and carried out at acceptable times.
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and

	<p>restored;</p> <p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p> <p>(v) wind farm infrastructure is removed from the site.</p>	<p>replacing soil over foundations;</p> <ul style="list-style-type: none"> removing all material from site for recycling; where tracks are of no use to the land owner, the land reinstated; underground and above ground cabling removed; the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326 (1) (b) of the SPA states:

"The assessment manager's decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument."*

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2012²¹ and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme

as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired and are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (those applicable at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326(1)(c)(ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the Far North Queensland Regional Plan recognises wind farms as legitimate land use and emphasis is placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

7.2 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** includes an assessment considering impact upon State environmental significance, given the precise

wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires wind farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of State significance. The probable solutions and overall outcome both refer to State environmental significance.

The proposed development is considered to appropriately address matters of State environmental significance and therefore complies with the Rural Zone Code in this regard.

However, it is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the 	<p>Prior to the commencement of site / operational / building work</p>

<p>satisfaction of the Council.</p> <p>(c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine</p> <p>(d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities</p> <p>(e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines</p> <p>(f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority,</p> <p>(g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and</p> <p>(h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including:</p> <p>(i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria</p> <p>(j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites).</p> <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

Northern Quoll Management	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <p>(a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.</p> <p>(b) A monitoring program of additional utilisation studies prior to construction;</p> <p>(c) requires surveys to be undertaken during breeding seasons to ascertain:</p> <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. <p>(d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);</p> <p>(e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):</p> <p>(ii) Construction Phase Management Procedures:</p> <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.	To be maintained
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7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																											
General / Planning Requirements																													
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29/08/2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	While site / operational / building work is occurring and then to be maintained
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Micro-siting of Turbines																													
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																											
<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p>		Prior to commencement of																											

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<p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and</p>	<p>Prior to commencement of site / operational /</p>

<p>maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>(a) Submit to the Council for approval, Aacoustic compliance reports <u>must be</u> prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>For the purpose of determining compliance, the following requirements apply for the acoustic compliance reports.</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

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<p>(i) Identify <u>on a map</u> all noise assessment positions, as shown on a map.</p> <p>(ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment.</p> <p>(b)(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(e)(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>Following facility commissioning, aAll complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) <u>(a)</u> Submit to the Council for approval a noise complaints management plan, including register, investigation and response plan. The plan must include, but is not limited to:</p> <p>(i) how contact details will be communicated to the public;</p> <p>(ii) a toll free telephone number and email contact for complaints and queries;</p> <p>(iii) details of the appropriate council contact telephone number and email address (where available);</p> <p>(iv) a table outlining complaint information for each complaint received, including:</p> <p>a. the complainant's name;</p> <p>b. any applicable property reference number if connected to a background testing location;</p> <p>c. the complainant's address;</p>	<p>As indicated</p> <p><u>(a) Following facility commissioning</u></p> <p><u>g</u></p> <p><u>(b) On an annual basis</u></p> <p><u>(c)</u></p>

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<p>d. a receipt number for each complaint which is to be communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) <u>Submit to council for approval</u> A report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions is to be provided on an annual basis for approval by the Council.</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
<p>9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.</p> <p><i>Guidance Note: The optimum method of assessment of shadow flicker is as follows:</i></p> <ul style="list-style-type: none"> • <i>Determine the extent of shadows from turbines</i> • <i>Identify all residences within the extent of shadows from proposed turbine positions</i> • <i>Use modelling software with relevant modelling parameters, as identified below, to calculate the theoretical annual shadow flicker duration at each residence, accounting for topography and cumulative effects</i> 	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p>	Prior to commencement of operation of first turbine, and to be maintained

The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.	
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	Prior to commencement of site / operational / building work, and as indicated
Access Tracks	
<p>12. Access tracks within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access</p>	Prior to commencement of site / operational / building work, and to

<p>tracks including (but not limited to) layout, location, dimensions (including sections).</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	be maintained
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p> <p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	Prior to commencement of use, and to be maintained
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	Prior to commencement of use, and to be maintained
15. Lighting maintenance plan	Prior to commencement of

<p>(a) Prepare for approval by the Council a lighting maintenance plan,</p> <p>(a) (i)</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>use, and to be maintained</p>
Aviation Safety Clearances	
<p>16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <p>(a) the Civil Aviation Safety Authority;</p> <p>(b) the Department of Defence (RAAF Aeronautical Information Service);</p> <p>(c) Airservices Australia;</p> <p>(d) any aerodrome operator within 15 km of the outside property boundaries of the site;</p> <p>(e) the Aerial Agriculture Association of Australia;</p> <p>(f) any organisation responsible for providing air ambulance services in the area.</p>	<p>Prior to the commencement of site / operational / building work</p>
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <p>(a) an existing conditions survey of Hansen Road ,Springmount Road</p>	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

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<p>and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;</p> <p>(b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this</p>	
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<p>condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
<p>Environmental Management Plans</p> <p><i>Note: An environmental management plan is required to be prepared and approved for the wind farm to ensure that all environmental matters <u>and impacts</u> are addressed prior to operation, and that the wind farm operates without environmental impacts. The following conditions identify the requirements of the environmental management plan. The environmental management plan must include the following components:</i></p> <ul style="list-style-type: none"> <i>a construction and work site operational management plan</i> <i>a sediment, erosion and storm water management plan</i> <i>a hydrocarbon and hazardous substances plan</i> <i>a bushfire risk management plan and emergency evacuation plan</i> <i>a threatened species management plan</i> <i>a weed and pest management plan</i> <i>a rehabilitation plan</i> <i>a habitat clearing and management plan</i> <i>an ecological fire management plan</i> <i>a cultural heritage management plan</i> <i>an environmental management plan training program</i> <i>an environmental management plan reporting program</i> <p><i>The environmental management plan must also address implementation and periodic review.</i></p>	
<p>19. Submit for approval by the Council an environmental management plan.</p> <p>The environmental management plan:</p> <p>(a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;</p> <p>(b) must be prepared in consultation with the Council specified in</p>	<p>Prior to the commencement of site / operational / building work</p>

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<p>conditions 20 to 33 or any other agency as directed by the Council;</p> <p>(c) may be prepared in sections or stages;</p> <p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The environmental management plan must include a construction and work site operational management plan.</p> <p>The construction and work site operational management plan must include:</p> <p>(a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;</p> <p>(b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;</p> <p>(c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;</p> <p>(d) procedures for managing noise emissions from construction-related activities;</p> <p>(e) appropriate sanitary facilities to be provided for construction and maintenance staff;</p> <p>(f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;</p> <p>(g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;</p>	<p>Prior to the commencement of site / operational / building work</p>

<ul style="list-style-type: none"> (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna; (k) the removal of works, buildings and staging areas on completion of the construction phase of the project. 	
<p>Sediment, erosion and storm water management plan</p> <p>21. The environmental management plan must include a sediment, erosion and storm water management plan.</p> <p>The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (d) procedures for waste water discharge management; (e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other 	<p>Prior to the commencement of site / operational / building work</p>

<p>potential source of pollution to ground or surface waters;</p> <p>(g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;</p> <p>(h) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>

Weed and pest management plan 25. The weed and pest management plan must include: (a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.	Prior to the commencement of site / operational / building work
Rehabilitation plan 26. The rehabilitation must include: (a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.	Prior to the commencement of site / operational / building work
Habitat clearing and management plan 27. The habitat clearing and management plan must include: (a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.	Prior to the commencement of site / operational / building work
Ecological fire management plan 28. The ecological fire management plan must include: (a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.	Prior to the commencement of site / operational / building work
Cultural heritage management plan 29. The cultural heritage management plan must include: (a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.	Prior to the commencement of site / operational / building work
Environmental management plan training program 30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.	Prior to the commencement of site / operational / building work
Environmental management plan reporting program 31. The environmental management plan must include a program for reporting environmental incidents, including: (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to	Prior to the commencement of site / operational / building work

<p>such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.</p>	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	<p>As indicated</p>
<p>Landscaping</p>	
<p>34. On-site landscaping plan</p> <p>(a) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <ul style="list-style-type: none"> (i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines); (ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity; (iii) a timetable for implementation of all on-site landscaping works; (iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping. <p>(b) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>

Site Security	
35. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.	To be maintained
36. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
37. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>38. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	<p>Within six months after completion of construction, and as indicated</p>
Electrical Infrastructure	

39. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
40. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.	To be maintained
41. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexploded ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

Chris Lee

From: Ursula O'Donnell <Ursula.O'Donnell@dilgp.qld.gov.au>
Sent: Thursday, 9 October 2014 4:13 PM
To: Kristel Dumbrell
Subject: FW: Mt Emerald wind farm call-in: further acoustic services sought

Importance: High

Hi Kristel,

FYI – I have been requested by Steve to procure some consultant services which are associated with the wind farm SDAP code.

Once I hear back from Refuse regarding the scope below, could I please get your help organising the procurement/documentation for appointment? We envisage this package of work will be <\$5k.

Cheers,
Ursula.

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7659
ursula.odonnell@dsdip.qld.gov.au

From: Ursula O'Donnell
Sent: Thursday, 9 October 2014 3:13 PM
To: Refused under section 47(3)(b) of savery.com.au
Cc: Refused under section 47(3)(b) of savery.com.au; Steve Conner (Steve.Conner@dsdip.qld.gov.au)
Subject: Mt Emerald wind farm call-in: further acoustic services sought
Importance: High

Hi Refuse

Thanks for your time earlier to discuss further technical acoustic services that we are seeking from you and your team regarding the Mt Emerald wind farm Ministerial call-in.

As discussed, a technical review of the draft noise conditions that have been prepared for the Mt Emerald wind farm call-in is required, so as to ensure that any final content that is issued as part of conditions for the development (if approved) is aligned as closely as possible with the future noise policy intent for wind farm developments (i.e. the draft SDAP code).

As part of the brief, we request that you undertake a review of the noise components contained in the Mt Emerald wind farm call-in material (information request and applicant's response to information request) as well as the draft conditions that have been prepared by an independent third party.

Below is the information request that was issued to the proponent on 11 June 2014 (Items 4-19 contain the acoustic content):

<http://www.dsdip.qld.gov.au/resources/report/development-applications/info-request-arriga.pdf>

A document containing the applicant response from 10 September 2014 (Part C of the report) and detailed technical assessment reports (Attachment B, D and E contain acoustic content) are located in the link below :

<http://www.dsdip.qld.gov.au/development-applications/ministerial-call-in.html>

I have also attached a copy of the technical assessment report including draft conditions that was prepared by an independent third party for DSDIP.

Could you please get back to me as soon as possible with a cost estimate for these services, so that I can get the procurement process initiated. Also, it would be beneficial to get an idea of your availability tomorrow so we can discuss in person.

Regards,
Ursula.

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government
tel +61 7 3452 7659
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ursula.odonnell@dsdip.qld.gov.au www.dsdip.qld.gov.au



Great state. Great opportunity.

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From: [Ursula O'Donnell](#)
To: [Steve Adams](#)
Cc: [Kristel Dumbrell](#)
Subject: Meeting with Savery & Associates
Date: Friday, 10 October 2014 8:56:55 AM
Attachments: [image001.png](#)
[RE Mt Emerald wind farm call-in further acoustic services sought \(342 KB\).msg](#)
Importance: High

Steve,

Kristel is arranging a meeting this afternoon with Savery & Assoc regarding the attached scope of works.

It would be great if you could join me, as Steve C cannot attend.

Also, I intend to include Jane McInnes in this meeting, as she has critical project information that will be relevant to the noise conditions (i.e. additional noise monitoring data supplied by the proponent and an understanding of why certain decisions may have been made in the condition drafting process). I will forward meeting invite to relevant external parties as soon as Kristel has prepared (THANK YOU AGAIN KRISTEL!).

Cheers,

Ursula.

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government
tel +61 7 3452 7659
post PO Box 15009 City East Qld 4002
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ursula.odonnell@dsdip.qld.gov.au www.dsdip.qld.gov.au



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Chris Lee

From: [Refused under section 47(3)(b) of t] cardno.com.au>
Sent: Tuesday, 14 October 2014 12:54 PM
To: Jane McInnes
Cc: [Refused under section 4] Steve Reynolds
Subject: RE: Comments on draft Mount Emeard Assessment Report
Attachments: Conditions Package - FINAL - 13 October 2014.docx; HRP14122R002 - FINAL - 13 October 2014.docx; HRP14122R002 - FINAL - 13 October 2014 (incl Appendix).pdf

Hi Jane,

Many thanks for your further comments.

Please find attached an updated report and conditions package, taking into consideration your comments. I trust that this version of the report appropriately addresses your comments – please do not hesitate to call me with any further queries.

With regards to your particular comments in the report, I note the following.

- The technical assessments have been updated to generate greater consistency to the approach and terminology.
- Section 5.2 (Landscape Visual Amenity) – I suggest that the ‘conflict’ matter need not be mentioned in this section, as that relates to a specific planning scheme provision about height as compared to surrounding structures, not a broader landscape visual amenity assessment. The ‘conflict’ matter is appropriately addressed in the detailed planning assessment.
- Section 5.8.1 (Civil Engineering) – the various matters identified as requiring further details are indeed reflected in the conditions. Road grading and cross sections are in Condition 12, construction management plan is in condition 20 (and 18 in terms of traffic management), sediment and erosion, water quality and stormwater management in condition 21, and decommissioning in condition 40.
- Various comments in section 5.8.2 (Electrical Engineering) are acknowledged – I note that the various matters were assessed by the electrical engineer, and this is now better reflected in the response provided.

With regards to the conditions, I note the following.

- We have reflected all of your comments.
- There were 2 ecological conditions that were accidentally omitted from the previous version. These have now been included (conditions 34 and 35, relating to vegetation clearing and environmental offsets). Condition 35 refers to the offsets plan submitted by the applicant (within the EIS) and has also been included as an approved document (attached for your reference). Similarly, the lightning condition is included as condition 44.

Please do not hesitate to call should you have any further queries.

Kind regards,

[Refused under section 47(3)(b) of t]
SENIOR PLANNER
CARDNO HRP

Refused under section 47(3)(b) of the RTI Act.

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email Web www.cardno.com/cardnohrp

Cardno HRP is relocating. As of Monday the 20th October our new office address will be:

Level 11
515 St Pauls Terrace
Fortitude Valley QLD 4006

Our phone number, fax number and staff email addresses will remain the same.

Cardno operates a quality management system that has been certified to ISO 9001.

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From: Jane McInnes [<mailto:Jane.McInnes@dsdip.qld.gov.au>]

Sent: Thursday, 9 October 2014 1:29 PM

To:

Cc:

Subject: RE: Comments on draft Mount Emeald Assessment Report

H

Thank for your email.

As discussed yesterday, I still have some concerns with the report which I would like addressed -

Report

- The introduction needs to include the economic assessment undertaken by Foresight Partners. Currently still reads that DSDIP is undertaking the assessment. Also the economic assessment needs to be included in the technical assessment introduction.
- Please check the date of commencement for the TLPI 01/11, should be 5 October 2011.
- Technical assessments need to be consistent with one another in terms of the:
 - o structure,
 - o language (e.g. the information request response is referred to as 'response to matters raised in the information request' and response to submission to the matters originally raised'). Some sections conclude with 'considered appropriate' and 'considered acceptable'. Please ensure the same terminology is used throughout the report.

I have also made some comments throughout the report and conditions.

Could you please make the changes and submit an amended report by Tuesday, 14 October 2014?

Please give me a bell if you would like to discuss any of the above.

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
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post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au



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From: [Refused under section 47(3)(b) of the RTI] cardno.com.au
Sent: Tuesday, 7 October 2014 10:28 AM
To: Jane McInnes
Cc: [Refused under section] Steve Reynolds
Subject: RE: Comments on draft Mount Emeard Assessment Report

Dear Jane,

Many thanks for your feedback on the draft report relating to a technical assessment of the Mount Emerald Wind Farm application.

We have reviewed and updated the report and the conditions package pursuant to your feedback. Please see the final report attached (pdf, with conditions enclosed as Appendix A). I have also attached the final report and conditions as separate word documents, should you wish to utilise the text for your internal purposes.

I provide below a number of responses in respect of your comments.

Report

- The majority of DSDIP comments have been incorporated into the final report.
- DSDIP sought additional detail with regards to the technical inputs in Chapter 5. We note that Cardno were engaged to undertake a holistic assessment, with the end product being a single assessment report incorporating all technical components and coming to a recommendation for DSDIP. As a result, the technical assessments are contained in the report and not as separate reports. We note your comments regarding additional detail and approach, and have updated the technical summaries accordingly. They now provide a more detailed assessment for each specialty, however please keep in mind that further assessment is contained within the response to the planning framework in Chapter 6.
- Regarding DSDIP comments about whether there is 'grounds to approve' or 'grounds to refuse', we note that the assessment need only demonstrate that the proposal is appropriate when assessed against the planning scheme. This is the approach taken in the report – we have revised some wording accordingly, however have maintained others where appropriate.
- We have updated the conclusion (Chapter 7) to identify the SPA provisions, followed by a discussion summarising the assessment / conflicts. We have retained the ecological matters discussion (with some amendment) as in the absence of legal advice that this is not appropriate, we believe it should be retained. The chapter ends with a concise recommendation.

Conditions

- The majority of DSDIP comments have been incorporated into the final conditions package.
- Key DSDIP comments relating to format, style / approach to conditions, terminology, timing, etc have been reflected.
- Original condition 21 (aviation lighting) is retained as we believe it is an appropriate matter to identify in the approval. Our conditions package is a recommendation, and DSDIP, as the assessment manager, may remove or include material as considered appropriate and subject to any legal review to be undertaken.
- We recommend that original condition 23 and original condition 24 both be included, as they refer to slightly different processes.
- We recommend that original condition 35 (ecological fire management) be retained as a separate condition to the bushfire management condition, as they relate to different matters and management techniques.

Please do not hesitate to call me should you have any queries.

Kind regards,

Refused under sect

SENIOR PLANNER
CARDNO HRP



Refused under section 47(3)(b) of the RTI Act.

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email Refused under section 47(3)(b) of t Web www.cardno.com/cardnohrp

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515 St Pauls Terrace

Fortitude Valley QLD 4006

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From: Jane McInnes [<mailto:Jane.McInnes@dsdip.qld.gov.au>]

Sent: Wednesday, 1 October 2014 11:10 AM

To: Refused under section

Cc:

Subject: Comments on draft Mount Emeard Assessment Report

Hi Refused

Please find attached comments on the draft Mount Emerald Wind Farm Assessment Report and Conditions.

Generally happy with the direction the report is heading. My main concern is with the technical responses being a bit light on and not providing enough discussion around what the technical assessment involved. For each technical area it needs to be clearly stated what the requirements are, how the application meets or does not meet the requirements and whether any conditions have been imposed. I realise that a lot of this information has been provided in the formal assessment however it needs to be included up front.

Given the timeframes, I have not been able to obtain legal advice in relation to ecological issue regarding the flying fox and northern quoll. It has been suggested that the ecological issue be discussed in the technical assessment (in detail) and mentioned in the conclusion/recommendation.

The draft conditions need a bit of work to ensure consistency in terminology and structure of the conditions throughout. The responsible authority needs to be identified.

Please give me a call if you would like further clarification on any of the comments.

Kind regards

Jane McInnes
Senior Planner
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tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

October 2014

Document Information

Prepared for Department of State Development, Infrastructure and Planning (DSDIP)
Project Name Mt. Emerald Wind Farm, Kippin Drive, Arriga
File Reference HRP14122R001.001 Part A Report
Job Reference HRP14122
Date October 2014

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Prepared for:
Department of State Development, Infrastructure and Planning (DSDIP)
100 George Street
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City East
Brisbane QLD 4002

Prepared by: Cardno HRP

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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Attachment A – Recommended Conditions

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Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Represent.	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological – impacts of wind farm on protected flora and fauna
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray and environmental / contaminated land matters
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical Engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the wind farm was undertaken by Foresight Partners in parallel with this assessment.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- technical assessments to inform recommendations;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of, assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommending approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises an assessment of the proposed development against the applicable planning framework. It includes an assessment in terms of planning and technical matters, and incorporates the outcomes of an economic assessment undertaken in parallel by Foresight Partners. It has not addressed any submissions received in respect of the Ministerial Call In.

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Technical Assessment provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment of Development Application provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes onto state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)*

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referrable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 **Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)**

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 Department of Health

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

“There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life.”

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 Mareeba Shire Council

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 Tablelands Regional Council

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- “(2) *The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) *the State planning regulatory provisions;*
 - (b) *the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) *any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) *State planning policies, to the extent the policies are not identified in—*
 - (i) *any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) *the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) *any applicable codes in the following instruments—*
 - (i) *a temporary local planning instrument;*

- (ii) *a preliminary approval to which section 242 applies*
 - (iii) *a planning scheme;*
 - (d) *if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.*
- (3) *In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—*
 - (a) *the common material;*
 - (b) *any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;*
 - (c) *any referral agency's response for the application;*
 - (d) *the purposes of any instrument containing an applicable code;*
- (4) *If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).*
- (5) *The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.*
- (6) *Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.*

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) *In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-*
 - (a) *Before the day decision stage for the application started; or*
 - (b) *If the decision stage is stopped-before the day the decision stage is restarted.*
- (2) *However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)*

According to Section 326 of the SPA:

- “(1) *The assessment manager's decision must not conflict with a relevant instrument unless—*
 - (a) *the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*

- (b) *there are sufficient grounds to justify the decision, despite the conflict;*
or
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This is SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;

- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and

will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage

- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and

wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;
- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme

and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5 and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made
- the SPP.

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray, and environmental / contaminated land matters;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the Mount Emerald Wind Farm was undertaken by Foresight Partners in parallel with this assessment.

This chapter summarises the outcomes of the technical assessment for each technical service, including the economic review undertaken in parallel by Foresight Partners.

5.2 Landscape Visual Amenity

A landscape visual amenity assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the landscape visual amenity assessment is to determine the visual impact of the proposed wind farm on the local context and views, particularly with regards to areas of regional landscape significance, significant landscape features, and landscape and scenic values as described by the applicable planning framework. The assessment also assesses shadow flicker.

In this regard, of particular relevance to the landscape visual amenity assessment is the material prepared by the applicant that describes and presents the visual impacts of the proposed development. The following material prepared by the applicant adequately describes the proposed development in landscape visual amenity terms.

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length (in kilometres) of the visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons; and
- Shadow flicker assessment.

The material prepared by the applicant adequately allows for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. However, it is noted that none of the planning or visual impact technical material substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. This is addressed in this assessment.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of 'regional landscape significance'. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure.

It is also relevant that the Mt Emerald – Walsh Bluff mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Planning Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11 (Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, and seeks that they have "*minimal impact on the environment and on amenity (both at a local and wider area scale)*". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code; the latter includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code includes (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

At the time the application was made, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it has subsequently become a requirement under Planning Scheme amendment 01/11 Wind Farms (Sept 2013) where the Wind Farm Code (Division 23) require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant views' (Specific Outcome S3a). The assessment of wind farm visual impacts on significant landscape features is identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application.

It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

Notwithstanding the lack of a statutory requirement to assess visual impacts on the Mt Emerald - Walsh Bluff mountain range system, and the absence of visual impact concerns in the responses from referral agencies, the landscape significance of Mt Emerald - Walsh Bluff mountain range should have been at least noted in the assessment.

It is apparent from the material prepared by the applicant, and from field inspection, that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, is unavoidably a significant visual impact. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, is not 'minimal impact' as sought by TLPI 01/11 or the Wind Farm Code. The wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

However the Mareeba Shire Planning Scheme does not protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is concluded that the extent and nature of the impacts have been generally well analysed and technically assessed (noting earlier comments about reference or otherwise to significant landscape features). However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment.

It is therefore determined that the likely impacts of the proposed wind farm on visual amenity, although locally significant, are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to the inclusion of appropriate conditions. In terms of those conditions, the visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Recommended visual amenity conditions include (refer to Appendix A for full conditions):

- non-reflective colours and materials are used for turbines and especially blades (as per Specific Outcome S3b of the Wind Farm Code); and
- electrical connections are provided underground in all instances, where practicable (as per Specific Outcome S3c of the Wind Farm Code).

An assessment of shadow flicker has identified that the distance between residences and the proposed wind turbines provides sufficient buffer to reduce potential shadow flicker impacts and the proportion of rural views affected to acceptably low levels. The proposed development may be approved subject to the inclusion of a condition that ensures compliance with shadow flicker requirements is maintained. The recommended shadow flicker condition is:

- the measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.

5.3 Ecological

An ecological assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the ecological assessment is to determine the impact of the proposed wind farm on State and local ecological features, including Matters of State Environmental Significance, and if so, whether appropriate impact mitigation and management measures and offset commitments can reduce the magnitude of ecological impacts.

In this regard, of particular relevance to the ecological assessment is the draft Environmental Impact Statement and the Statement of Commitments, as prepared by the applicant. The material prepared by the applicant includes relevant ecological surveys and assessments that provide an adequate basis for assessment of the application.

The ecological assessment has identified that the proposal will have adverse ecological impacts. This is recognised by the applicant in the application material, including in the Environmental Impact Statement. The adverse ecological impacts primarily relate to:

- direct loss and degradation of vegetation and fauna habitat resource associated with the construction of the proposed wind farm; and

- fauna mortality, morbidity and habitat degradation/alienation associated with operation of the proposed wind farm.

In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur.

The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. Some impact mitigation and management measures are identified in a 'Statement of Commitments' prepared by the applicant, which include a range of 'environmental management plans'. With regards to that documentation:

- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on native fauna such as, but not limited to, flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed, mitigated or offset pursuant to the range of 'environmental management plans' being appropriately implemented. Therefore, the proposed development is not contrary to any statutory provisions applicable to the ecological assessment. The proposal may be approved subject to the inclusion of appropriate conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Recommended conditions include (refer to Appendix A for full conditions):

- approval and implementation of the 'environmental management plans' identified in the material prepared by the applicant and referenced above;
- where the development involves the clearance of native vegetation and wildlife habitat, detailed Significant Species Management Plans must be prepared; and
- where the development involves the clearance of native vegetation and wildlife habitat, an appropriate Environmental Offset must be secured.

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES), such as the Northern Quoll and Spectacled Flying-Fox. Nevertheless, conditions are identified (refer Chapter 7) relating to the management of these species.

5.4 Agricultural Land and Environment

An agricultural land and environmental assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

Agricultural Land

The purpose of the agricultural land assessment is to determine whether the proposed development has the potential to adversely or positively impact the agricultural land use

values of the local area (including as identified in the Economic Growth Module of the State Planning Policy).

Of particular relevance to the agricultural land assessment are the provisions of the Mareeba Shire Planning Scheme and the State Planning Policy. The application material appears to adequately address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;
- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development; and
- a response to the matter of impact to aerial spraying.

It is noted that the applicant suggests that the land is not considered Good Quality Agricultural Land under the Planning Scheme, which is confirmed to be consistent with the Council's planning scheme maps. Further, the State government mapping does not identify the site as Agricultural Land Class A or B, or Strategic Cropping Land. The site is not currently used for cultivation, and only stock grazing is possible.

Matters of spray drift associated with aerial spraying have been assessed and have been determined to be acceptable.

It is concluded that the proposed wind farm is compatible with the rural nature of the site, as identified by the FNQ Regional Plan. Further, having regard to the wind farm footprint and to the broader socioeconomic benefits of the project, this assessment identifies that the proposal is acceptable in terms of the agricultural land values of the site and the local area. The proposal may be approved; no conditions are required to be imposed.

Environmental / Contamination

The purpose of the environmental assessment is to determine whether there is potential for residual unexploded ordnance (UXO) contamination to be uncovered or disturbed by the development, with consequential risk to human health and safety (as per the Contamination Module of the State Planning Policy).

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist a UXO assessment is required to be completed in order to facilitate the development.

The application material states the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of the application material by DEHP indicated a substantial risk existed, and UXO commentary identified the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment by DEHP was issued to a 'slight' possibility of occurrence of UXO. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO matters. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the Environmental Impact Statement appears to concur with DEHP's recommendation regarding the assessment of UXO related matters.

It is therefore concluded that the UXO issues present on site have been assessed to be able to be managed. The proposal may be approved subject to the inclusion of appropriate 'general advice' attached to the approval that identifies the relevant procedure for the possibility of UXO disturbance.

5.5 Noise

An acoustic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the acoustic assessment is to determine the impact of the proposed wind farm on the local acoustic environment, in particular, on any nearby sensitive receivers.

In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain any statutory text to the probable solution but does include a note that makes reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

It is concluded that that the proposed wind farm will be able to be appropriate in acoustic terms, where particular noise criteria are enforced and complied with. The proposal may be approved subject to the inclusion of appropriate conditions that enforce particular noise criteria. Recommended conditions include (refer to Appendix A for full conditions):

- ensure the development meets appropriate noise criteria of 35dB(A) in particular circumstances (as discussed above), and 40 dB(A) otherwise; and
- demonstrate compliance and complaints management with regards to the noise criteria specified above.

5.6 Traffic Impact

A traffic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the traffic assessment is to determine whether the traffic likely to be generated by the proposed development during construction and operation is appropriate having regard to the immediate and broader road network.

Of particular relevance to the traffic assessment is the Traffic Report prepared by Jacobs in response to the Information Request, titled "Technical Note 2 – Traffic Impact Assessment Engineering Response" and dated 29 August 2014. That traffic report addressed various traffic matters as follows.

- A clear description of the whole of the potential access routes to the site for oversized vehicles, including a high level identification of constraints along the network.
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Likely staff travel movements to the site, and how these can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Where sufficient measures to restrict staff traffic to 30 vehicles per day are not able to be provided, assessment identifying the worst case traffic impact on the road network.

An assessment of the application material has been undertaken and it is confirmed that the application material has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council; and
- Requirements for permits and escorts to traverse the detailed routes.

These matters are not able to be fully assessed at the moment as the details of construction schedule and other variables are likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any traffic issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles, when these details are known, will be required to ensure the routes are acceptable, and as such the assessment of the suitability of Hansen Road and Springmount Road for oversized vehicle movements should be included as a condition.

In respect of managing staff vehicles, the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders.”

It is determined that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery, which can be managed). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known.

It is concluded that that the proposed wind farm is able to be appropriately managed in terms of traffic matters, including during construction. The proposal may be approved subject to the inclusion of appropriate conditions relating to traffic management. Recommended conditions include (refer to Appendix A for full conditions):

- preparation and approval of a construction traffic management plan, prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind energy facility, that includes:
 - existing conditions survey of Hansen Road and Springmount Road;
 - designation of all vehicle access points to the site from surrounding roads;
 - designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways;
 - recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements;
 - measures to be taken to manage traffic impacts associated with the ongoing operation of the wind energy facility;
 - a program to rehabilitate existing public roads of Hansen Road and Springmount Road, to its existing condition where required.

5.7 Aeronautical

An aeronautical assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the aeronautical assessment is to determine whether appropriate aeronautical matters have been addressed in the proposed wind farm development.

The application material includes evidence of consultation with the Civil Aviation Safety Authority (CASA). The consultation with CASA recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, and will not affect any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links.

Subsequent to that consultation, turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

It is concluded that the application is appropriate in aeronautical terms, subject to conditions relating to turbine height and further approval from relevant authorities should the wind farm layout be altered. The proposal may be approved subject to the inclusion of those conditions. Recommended conditions include (refer to Appendix A for full conditions):

- limitations on the overall maximum height not exceeding 1179.5m AHD; and
- details of any micro-siting of turbines must be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts.

5.8 Civil and Electrical Engineering

5.8.1 Civil

A civil engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the civil engineering assessment is to determine whether appropriate civil engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is appropriate, in civil engineering terms, and is able to be appropriately developed. Matters considered in the assessment that were determined to be appropriate, in principle, include design and construction of wind farm layout, access roads, crane hardstands, and construction effects.

However, the nature of civil engineering matters is that they are largely and often fully assessed at detailed design stage, following the initial land use assessment contemplated by this development application.

Pursuant to the above, the following identifies matters that will need to be further addressed when detailed design progresses in response to conditions and Operational Works applications.

- Vertical road grading to site access. Road grading in specific areas is subject to detailed design at Operational Works stage to ensure the heavy low loader vehicles can navigate the roadway without constraints. The traffic assessment has identified that the road access is appropriate, in principle.
- Road cross sections. Depending on the side slope of the local topography, further detail is required at Operational Works stage to ensure that the batters developed from the associated road grading do not cause stability and rehabilitation issues on the constructed batters adjacent to the roadway.
- Construction management plan. A construction management plan should be prepared and approved prior to commencement of construction.
- Sediment and erosion control. Details of sediment and erosion control should be prepared and approved prior to commencement of construction, so that the development does not generate unreasonable sediment and erosion impacts, particularly with regards to road grading in steeper areas.
- Water quality management. Details of water quality management should be prepared and approved prior to commencement of construction, so that the development does not generate unreasonable water quality impacts, particularly in steeper areas.
- Stormwater management. Details of stormwater management should be prepared and approved prior to commencement of construction, so that the development does not generate unreasonable stormwater impacts, particularly in steeper areas.

- Decommissioning and rehabilitation of the site. Further details regarding decommissioning and rehabilitation should be conditioned.

It is concluded that the application is appropriate, in principle, in civil engineering terms, subject to further details being provided at Operational Work stage and as detailed design progresses. The proposal may be approved subject to the inclusion of conditions relating to the matters identified above (refer to Appendix A for full conditions).

5.8.2 **Electrical**

An electrical engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the electrical engineering assessment is to determine whether appropriate electrical engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is sound, in electrical engineering terms, and can be appropriately developed. However, the nature of some electrical engineering matters is that they are largely developed at detailed design stage, following the initial land use assessment contemplated by this development application.

In this regard, the electrical engineering assessment identified that the material provided in response to the information request did not include all of the information requested, it is considered that these matters can be addressed at detailed design stage pursuant to the relevant Building Works and Operational Works applications, or via conditions.

The electrical assessment identified that Specific Outcome S2(b) of the TLPI requires the wind farm to be readily connected to existing, nearby high voltage electricity transmission lines without significant environmental, social or amenity impact. The application material does not include or sufficiently present the impacts of the proposed high voltage interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. Powerlink, in their advice agency response, identified that whilst there is no connection agreement in place, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the applicant complying with its obligations under relevant electricity laws. A condition is recommended in terms of connection to the Powerlink network. As such, the viability of interconnection design and grid connection to the Powerlink network can be established through the ongoing engagement with Powerlink pursuant to that condition.

Minimum clearances of turbine structures to Powerlink's assets need to be complied with and should form a condition of approval for the wind farm development. The required clearance of structures to Powerlink's assets was advised in Powerlink's advice agency response. A condition is recommended in terms of clearance between structures and Powerlink assets.

The electrical assessment also considered the proposed wind farm against the National Electricity Rules and Codes, as it applies to wind farms. The connection to Powerlink's network will need to comply with the National Electricity Rules and Codes, as is standard practice for such connections.

The electrical assessment identified that Specific Outcome S5 of the TLPI requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. The application material adequately addresses this matter and the proposed considered appropriate in this regard.

It is noted in application material that the high voltage reticulation within the development may use overhead lines, and not exclusively underground cables. This is not recommended in the heavily vegetated areas, and presents risk of bush fires from electrical faults, despite management plans being proposed. Instead, exclusive use of underground cables is recommended (except where physically constrained) and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the turbine structures and risk of bush fires has not been assessed in detail, although preliminary commitments to management plans has been identified in the application material. It is recommended that a lightning and earthing system to mitigate against the risk of bushfires caused by direct lightning strikes on turbines be conditioned. In respect of bushfire, a Bushfire Risk Management Plan is also recommended to be conditioned.

It is concluded that the application is appropriate, in principle, in electrical engineering terms, subject to further details being provided as detailed design progresses, at Operational Work and Building Work stage and in response to conditions. The proposal may be approved subject to the inclusion of conditions identified below (refer to Appendix A for full conditions).

- engagement with Powerlink must occur with regards to a connection to Powerlink's transmission line network;
- further technical assessments regarding safe clearance between turbines and Powerlink infrastructure must be prepared and approved;
- electrical high voltage reticulation within the development must be underground (except where physically constrained);
- a suitable lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines must be designed and installed; and
- a Bushfire Risk Management Plan shall be prepared and approved.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the application material, particular that which was prepared in respect of economic matters in response to the Minister's request for additional information. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sindair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

"Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant's discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister....."

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p><i>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</i></p> <p><i>(ii) the planning scheme as being appropriately reflected in the planning scheme;</i></p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p><i>Any applicable codes in the following instruments-</i></p> <p><i>(i) A structure plan</i></p> <p><i>(ii) A master plan</i></p> <p><i>(iii) a temporary local planning instrument;</i></p> <p><i>(iv) a preliminary approval to which section 242 applies</i></p> <p><i>(v) a planning scheme;</i></p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ('the Planning Scheme') is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in</p>

<p><i>the priority infrastructure plan.</i></p>	<p>the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the</p>

	<p>response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5 above.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is</p>
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	<p>considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<i>Policy 2.1 Regional Landscape Values</i>	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given 'appropriate recognition in land use planning and development assessment'.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in</p>

	<p>these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind

	<p>turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i>.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	<p>Development:</p> <p>(1) enhances matters of state environmental significance where possible, and</p> <p>(2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and</p> <p>(3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts.</p>	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <p>(1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and</p> <p>(2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and</p> <p>(3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and</p> <p>(4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and</p> <p>(5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks</p>	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p>

	associated with the natural hazard, and	<p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 05 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level

of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1 **Rural Zone Code**

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code.**

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the</p>

		<p>instrument (definitions, levels of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>An assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's , the intent of both being to facilitate the establishment of new wind farms in appropriate</p>
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		<p>locations.</p> <p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in</p>

		<p>September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	For all Lots	
	PS4.3 Vegetation is retained on land with a slope of 15% or greater.	
For Code Assessable Development		
S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.	Not Applicable – the site is not in the Southedge Potential Tourist Area.
<i>For Mona Reserve as identified on Map Z10 as</i>	PS7 Development is carried out in accordance with a Plan of Development and Land	Not Applicable – the site is not in the Mona Reserve.

<p><i>Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>

the Shire.		
S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	PS10 No probable solution prescribed.	The applicant states that the Council's Agricultural Land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural Land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.

4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES

Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.

4.80 RECONFIGURING A LOT

Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2 Division 5 - Car Parking Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to	AS1 The number of car parking spaces provided for	Not Applicable.

accommodate the demand likely to be generated by the use.	the use is in accordance with the Car Parking Schedule.	
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
Car Parking Design		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the

	<p>condition for parking; and</p> <p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Car Parking Numbers		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be</p>

		provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Bicycle Parking		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
Movement and Access		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain</p>

	<p>designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 **Division 17 - Filling and Excavation Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are	AS1 Filling and excavation is no greater than two (2)	It is considered unlikely that significant filling and excavation will occur,

undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	metres in height or depth.	<p>however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
<p>S2 Pest Management</p> <p>Filling and excavation does not result in the spread of declared plants.</p>	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
<p>S3 Stability</p> <p>Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.</p>	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project,</p>

	<p>within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>covering discrete construction areas and which will account for the changing surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>

S5 Environment Filling or excavation does not result in a reduction of the water quality of receiving waters.	AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.	Refer to S4 above.
S6 Environment Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.	AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4 **Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code**

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
S1 Cultural Heritage Places (a) significant elements of the mining history of Mareeba Shire are conserved; and (b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and (c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.	PS1 No probable solution provided.	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby</p>

		<p>consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern</p>

<p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	PS4 No probable solution provided.	Not Applicable as there are no buildings and places of Local Heritage Significance on the site.
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural	PS6 No probable solution	Not Applicable as there are

Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	provided.	no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: <ul style="list-style-type: none"> (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: <ul style="list-style-type: none"> (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft 	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife.	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the

<p>navigation systems.</p>	<p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p>	<p>approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>PS1.7</p> <ul style="list-style-type: none"> (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and (ii) Works or uses are not located within the buffer zones for the Bibohra VOR facility that: <ul style="list-style-type: none"> (a) involve any building or works within 300 metre buffer zone of the Bibohra VOR; and (b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibohra VOR: <ul style="list-style-type: none"> (i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or (ii) involve overhead power lines exceeding 5m in height; or (iii) involve metallic structures exceeding 7.5m in height; or (iii) involve trees and open lattice towers exceeding 10m in height; or (iv) involve wooden structures exceeding 13m in height; and (iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar 	
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	facility that involve any building, structures or work above 950 AHD.	
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6.6.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation 18 of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who

		<p>understand how to respond quickly to fire and use equipment available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, 	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by</p>

	<p>swimming pool).</p> <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; 	<p>detrimental impacts of bushfire.</p>
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	<p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de- 	
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	<p>sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind

Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.

g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment,	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow

<p>economic and social impacts.</p> <p>b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated</p>
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		<p>16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have</p>
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		<p>undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses</p>

		<p>and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts upon the landscape.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes or (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values</p>

		and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <ul style="list-style-type: none"> (i) nuisance (ii) risk to human health or wellbeing (iii) ability to sleep or relax. 	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G –

		<p>Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014.</p> <ul style="list-style-type: none"> Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a</p>
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		<p>35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11</p>

		<p>June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is</p>

		<p>considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a</p> <p>Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a</p> <p>Maintenance Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction</p>

		<p>Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are</p>

		controlled and maintained at acceptable levels and carried out at acceptable times.
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and

	<p>restored;</p> <p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p> <p>(v) wind farm infrastructure is removed from the site.</p>	<p>replacing soil over foundations;</p> <ul style="list-style-type: none"> • removing all material from site for recycling; • where tracks are of no use to the land owner, the land reinstated; • underground and above ground cabling removed; • the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326 (1) (b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme

as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired and are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (those applicable at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326(1)(c)(ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the Far North Queensland Regional Plan recognises wind farms as legitimate land use and emphasis is placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

7.2 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** includes an assessment considering impact upon State environmental significance, given the precise

wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires wind farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of State significance. The probable solutions and overall outcome both refer to State environmental significance.

The proposed development is considered to appropriately address matters of State environmental significance and therefore complies with the Rural Zone Code in this regard.

However, it is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the 	<p>Prior to the commencement of site / operational / building work</p>

<p>satisfaction of the Council.</p> <ul style="list-style-type: none"> (c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine (d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities (e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines (f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority, (g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and (h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including: (i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria (j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites). <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

Northern Quoll Management	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <ul style="list-style-type: none"> (a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations. (b) A monitoring program of additional utilisation studies prior to construction; (c) requires surveys to be undertaken during breeding seasons to ascertain: <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. (d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months); (e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to): <ul style="list-style-type: none"> (ii) Construction Phase Management Procedures: <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.	To be maintained
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7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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PR100246/R72893	Preliminary Environmental Management Plan	November 2013																														
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014																														
Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010																														
Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014																														
Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <ul style="list-style-type: none"> (a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning). (b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility. 	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <ul style="list-style-type: none"> (a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to: <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
Access Tracks and Roads	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> (a) the Civil Aviation Safety Authority; (b) the Department of Defence (RAAF Aeronautical Information Service); (c) Airservices Australia; (d) any aerodrome operator within 15 km of the outside property boundaries of the site; (e) the Aerial Agriculture Association of Australia; (f) any organisation responsible for providing air ambulance services in the area. 	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <ul style="list-style-type: none"> (a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads; (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and 	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans	
<p>19. Submit for approval by the Council an environmental management plan.</p> <p>The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):</p> <ul style="list-style-type: none"> • a construction and work site operational management plan • a sediment, erosion and storm water management plan • a hydrocarbon and hazardous substances plan • a bushfire risk management plan and emergency evacuation plan • a threatened species management plan • a weed and pest management plan • a rehabilitation plan • a habitat clearing and management plan • an ecological fire management plan • a cultural heritage management plan • an environmental management plan training program • an environmental management plan reporting program <p>The environmental management plan must also address implementation and periodic review</p> <p>The environmental management plan:</p> <p>(a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;</p> <p>(b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;</p> <p>(c) may be prepared in sections or stages;</p>	<p>Prior to the commencement of site / operational / building work</p>

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
Landscaping	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
Site Security	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <ul style="list-style-type: none"> (a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and (b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans. <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <ul style="list-style-type: none"> (a) The wind farm must comprise of no more than 63 turbines; (b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD; (c) The hub height of any turbine shall not exceed 90 metres; (d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area; (e) The turbines and blades must be constructed from non-reflective materials; (f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations. <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <p>(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
<p>9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.</p>	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
<p>Access Tracks and Roads</p>	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Lighting (including aviation obstacle lighting)</p>	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <p>(a) the Civil Aviation Safety Authority;</p> <p>(b) the Department of Defence (RAAF Aeronautical Information Service);</p> <p>(c) Airservices Australia;</p> <p>(d) any aerodrome operator within 15 km of the outside property boundaries of the site;</p> <p>(e) the Aerial Agriculture Association of Australia;</p> <p>(f) any organisation responsible for providing air ambulance services in the area.</p>	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <p>(a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads;</p> <p>(b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and</p>	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans

19. Submit for approval by the Council an environmental management plan.

The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):

- a construction and work site operational management plan
- a sediment, erosion and storm water management plan
- a hydrocarbon and hazardous substances plan
- a bushfire risk management plan and emergency evacuation plan
- a threatened species management plan
- a weed and pest management plan
- a rehabilitation plan
- a habitat clearing and management plan
- an ecological fire management plan
- a cultural heritage management plan
- an environmental management plan training program
- an environmental management plan reporting program

The environmental management plan must also address implementation and periodic review

The environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;
- (c) may be prepared in sections or stages;

Prior to the commencement of site / operational / building work

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
<p>Landscaping</p>	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <ul style="list-style-type: none"> (i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines); (ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity; (iii) a timetable for implementation of all on-site landscaping works; (iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping. <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Site Security</p>	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

Chris Lee

From: [Refused under section 47(3)(b) of t] cardno.com.au>
Sent: Wednesday, 15 October 2014 2:50 PM
To: Jane McInnes
Subject: Mount Emerald Wind Farm
Attachments: Conditions Package - FINAL - 13 October 2014.docx; HRP14122R002 - FINAL - 15 October 2014 (incl Appendix).pdf; HRP14122R002 - FINAL - 15 October 2014.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jane,

Further to our discussion yesterday and today, please see an updated version of the report.

This version has only minor amendments to the Technical Assessments section, relating reference to the Planning Scheme (either instead of, or in support of, the TLPI), recognizing that the detailed planning assessment gives considerable weight to the planning scheme.

Should you have any queries please do not hesitate to call.

Kind regards,

[Refused under section

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email [Refused under section 47(3)(b) of] Web www.cardno.com/cardnohrp

Cardno HRP is relocating. As of Monday the 20th October our new office address will be:

Level 11
515 St Pauls Terrace
Fortitude Valley QLD 4006

Our phone number, fax number and staff email addresses will remain the same.

Cardno operates a quality management system that has been certified to ISO 9001.

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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

October 2014

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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LIST OF ATTACHMENTS

Attachment A – Recommended Conditions

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Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Represent.	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological – impacts of wind farm on protected flora and fauna
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray and environmental / contaminated land matters
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical Engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the wind farm was undertaken by Foresight Partners in parallel with this assessment.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- technical assessments to inform recommendations;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of, assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommending approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises an assessment of the proposed development against the applicable planning framework. It includes an assessment in terms of planning and technical matters, and incorporates the outcomes of an economic assessment undertaken in parallel by Foresight Partners. It has not addressed any submissions received in respect of the Ministerial Call In.

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Technical Assessment provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment of Development Application provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes onto state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)*

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referrable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 **Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)**

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 Department of Health

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

“There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life.”

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 Mareeba Shire Council

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 Tablelands Regional Council

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- “(2) *The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) *the State planning regulatory provisions;*
 - (b) *the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) *any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) *State planning policies, to the extent the policies are not identified in—*
 - (i) *any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) *the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) *any applicable codes in the following instruments—*
 - (i) *a temporary local planning instrument;*

- (ii) *a preliminary approval to which section 242 applies*
 - (iii) *a planning scheme;*
 - (d) *if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.*
- (3) *In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—*
 - (a) *the common material;*
 - (b) *any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;*
 - (c) *any referral agency's response for the application;*
 - (d) *the purposes of any instrument containing an applicable code;*
- (4) *If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).*
- (5) *The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.*
- (6) *Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.*

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) *In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-*
 - (a) *Before the day decision stage for the application started; or*
 - (b) *If the decision stage is stopped-before the day the decision stage is restarted.*
- (2) *However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)*

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—*
 - (a) *the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*

- (b) *there are sufficient grounds to justify the decision, despite the conflict;*
or
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This is SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;

- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and

will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage

- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and

wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;
- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme

and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5) and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made
- the SPP.

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray, and environmental / contaminated land matters;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the Mount Emerald Wind Farm was undertaken by Foresight Partners in parallel with this assessment.

This chapter summarises the outcomes of the technical assessment for each technical service, including the economic review undertaken in parallel by Foresight Partners.

5.2 Landscape Visual Amenity

A landscape visual amenity assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the landscape visual amenity assessment is to determine the visual impact of the proposed wind farm on the local context and views, particularly with regards to areas of regional landscape significance, significant landscape features, and landscape and scenic values as described by the applicable planning framework. The assessment also assesses shadow flicker.

In this regard, of particular relevance to the landscape visual amenity assessment is the material prepared by the applicant that describes and presents the visual impacts of the proposed development. The following material prepared by the applicant adequately describes the proposed development in landscape visual amenity terms.

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length (in kilometres) of the visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons; and
- Shadow flicker assessment.

The material prepared by the applicant adequately allows for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. However, it is noted that none of the planning or visual impact technical material substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. This is addressed in this assessment.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of 'regional landscape significance'. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure.

It is also relevant that the Mt Emerald – Walsh Bluff mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Planning Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11 (Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, and sought that they have "*minimal impact on the environment and on amenity (both at a local and wider area scale)*". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code. The Wind Farm Code altered the above TLPI wording to seek that development "*will not have unacceptably adverse impacts in the environment and on existing amenity (at both a local and wider area scale)*...". The Rural Zone Code includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code includes (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and demonstrable impacts associated with wind farms*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

At the time the application was made, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it has subsequently become a requirement under Planning Scheme amendment 01/11 Wind Farms (September 2013) where the Wind Farm Code (Division 23) require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant views' (Specific Outcome S3a). The assessment of wind farm visual impacts on significant landscape features is identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application.

It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

Notwithstanding the lack of a statutory requirement to assess visual impacts on the Mt Emerald - Walsh Bluff mountain range system, and the absence of visual impact concerns in the responses from referral agencies, the landscape significance of Mt Emerald - Walsh Bluff mountain range should have been at least noted in the assessment.

It is apparent from the material prepared by the applicant, and from field inspection, that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, is unavoidably a significant visual impact. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, is not 'minimal impact' as sought by TLPI 01/11. The wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant

views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

However, the term 'minimal impact' is replaced in the Wind Farm Code of the amended Mareeba Shire Planning Scheme (September 2013) with 'unacceptably adverse impacts', and this is given considerable weight in the planning assessment. The following determines whether the impacts of the wind farm are unacceptably adverse.

The Mareeba Shire Planning Scheme does not protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is concluded that the extent and nature of the impacts have been generally well analysed and technically assessed (noting earlier comments about reference or otherwise to significant landscape features). However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment.

It is therefore determined that the likely impacts of the proposed wind farm on visual amenity, although locally significant, are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to the inclusion of appropriate conditions. In terms of those conditions, the visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Recommended visual amenity conditions include (refer to Appendix A for full conditions):

- non-reflective colours and materials are used for turbines and especially blades (as per Specific Outcome S3b of the Wind Farm Code); and
- electrical connections are provided underground in all instances, where practicable (as per Specific Outcome S3c of the Wind Farm Code).

An assessment of shadow flicker has identified that the distance between residences and the proposed wind turbines provides sufficient buffer to reduce potential shadow flicker impacts and the proportion of rural views affected to acceptably low levels. The proposed development may be approved subject to the inclusion of a condition that ensures compliance with shadow flicker requirements is maintained. The recommended shadow flicker condition is:

- the measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling (as per Specific Outcome PS6(b) of the Wind Farm Code).

5.3 Ecological

An ecological assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the ecological assessment is to determine the impact of the proposed wind farm on State and local ecological features, including Matters of State Environmental Significance, and if so, whether appropriate impact mitigation and management measures and offset commitments can reduce the magnitude of ecological impacts.

In this regard, of particular relevance to the ecological assessment is the draft Environmental Impact Statement and the Statement of Commitments, as prepared by the applicant. The

material prepared by the applicant includes relevant ecological surveys and assessments that provide an adequate basis for assessment of the application.

The ecological assessment has identified that the proposal will have adverse ecological impacts. This is recognised by the applicant in the application material, including in the Environmental Impact Statement. The adverse ecological impacts primarily relate to:

- direct loss and degradation of vegetation and fauna habitat resource associated with the construction of the proposed wind farm; and
- fauna mortality, morbidity and habitat degradation/alienation associated with operation of the proposed wind farm.

In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur.

The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. Some impact mitigation and management measures are identified in a 'Statement of Commitments' prepared by the applicant, which include a range of 'environmental management plans'. With regards to that documentation:

- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on native fauna such as, but not limited to, flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed, mitigated or offset pursuant to the range of 'environmental management plans' being appropriately implemented. Therefore, the proposed development is not contrary to any statutory provisions applicable to the ecological assessment. The proposal may be approved subject to the inclusion of appropriate conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Recommended conditions include (refer to Appendix A for full conditions):

- approval and implementation of the 'environmental management plans' identified in the material prepared by the applicant and referenced above;
- where the development involves the clearance of native vegetation and wildlife habitat, detailed Significant Species Management Plans must be prepared; and
- where the development involves the clearance of native vegetation and wildlife habitat, an appropriate Environmental Offset must be secured.

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES), such as the Northern Quoll and Spectacled Flying-Fox. Nevertheless, conditions are identified (refer Chapter 7) relating to the management of these species.

5.4 Agricultural Land and Environment

An agricultural land and environmental assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

Agricultural Land

The purpose of the agricultural land assessment is to determine whether the proposed development has the potential to adversely or positively impact the agricultural land use values of the local area (including as identified in the Economic Growth Module of the State Planning Policy).

Of particular relevance to the agricultural land assessment are the provisions of the Mareeba Shire Planning Scheme and the State Planning Policy. The application material appears to adequately address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;
- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development; and
- a response to the matter of impact to aerial spraying.

It is noted that the applicant suggests that the land is not considered Good Quality Agricultural Land under the Planning Scheme, which is confirmed to be consistent with the Council's planning scheme maps. Further, the State government mapping does not identify the site as Agricultural Land Class A or B, or Strategic Cropping Land. The site is not currently used for cultivation, and only stock grazing is possible.

Matters of spray drift associated with aerial spraying have been assessed and have been determined to be acceptable.

It is concluded that the proposed wind farm is compatible with the rural nature of the site, as identified by the FNQ Regional Plan. Further, having regard to the wind farm footprint and to the broader socioeconomic benefits of the project, this assessment identifies that the proposal is acceptable in terms of the agricultural land values of the site and the local area. The proposal may be approved; no conditions are required to be imposed.

Environmental / Contamination

The purpose of the environmental assessment is to determine whether there is potential for residual unexploded ordnance (UXO) contamination to be uncovered or disturbed by the development, with consequential risk to human health and safety (as per the Contamination Module of the State Planning Policy).

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist a UXO assessment is required to be completed in order to facilitate the development.

The application material states the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of the application material by DEHP indicated a substantial risk existed, and UXO commentary identified the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment by DEHP was issued to a 'slight' possibility of occurrence of UXO. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO matters. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible

to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the Environmental Impact Statement appears to concur with DEHP's recommendation regarding the assessment of UXO related matters.

It is therefore concluded that the UXO issues present on site have been assessed to be able to be managed. The proposal may be approved subject to the inclusion of appropriate 'general advice' attached to the approval that identifies the relevant procedure for the possibility of UXO disturbance.

5.5 Noise

An acoustic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the acoustic assessment is to determine the impact of the proposed wind farm on the local acoustic environment, in particular, on any nearby sensitive receivers.

In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain any statutory text to the probable solution but does include a note that makes reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

It is concluded that that the proposed wind farm will be able to be appropriate in acoustic terms, where particular noise criteria are enforced and complied with. The proposal may be

approved subject to the inclusion of appropriate conditions that enforce particular noise criteria. Recommended conditions include (refer to Appendix A for full conditions):

- ensure the development meets appropriate noise criteria of 35dB(A) in particular circumstances (as discussed above), and 40 dB(A) otherwise; and
- demonstrate compliance and complaints management with regards to the noise criteria specified above.

5.6 Traffic Impact

A traffic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the traffic assessment is to determine whether the traffic likely to be generated by the proposed development during construction and operation is appropriate having regard to the immediate and broader road network.

Of particular relevance to the traffic assessment is the Traffic Report prepared by Jacobs in response to the Information Request, titled "Technical Note 2 – Traffic Impact Assessment Engineering Response" and dated 29 August 2014. That traffic report addressed various traffic matters as follows.

- A clear description of the whole of the potential access routes to the site for oversized vehicles, including a high level identification of constraints along the network.
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Likely staff travel movements to the site, and how these can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Where sufficient measures to restrict staff traffic to 30 vehicles per day are not able to be provided, assessment identifying the worst case traffic impact on the road network.

An assessment of the application material has been undertaken and it is confirmed that the application material has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council; and
- Requirements for permits and escorts to traverse the detailed routes.

These matters are not able to be fully assessed at the moment as the details of construction schedule and other variables are likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any traffic issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles, when these details are known, will be required to ensure the routes are acceptable, and as such the assessment of the suitability of Hansen Road and Springmount Road for oversized vehicle movements should be included as a condition.

In respect of managing staff vehicles, the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders.”

It is determined that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery, which can be managed). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known.

It is concluded that that the proposed wind farm is able to be appropriately managed in terms of traffic matters, including during construction. The proposal may be approved subject to the inclusion of appropriate conditions relating to traffic management. Recommended conditions include (refer to Appendix A for full conditions):

- preparation and approval of a construction traffic management plan, prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind energy facility, that includes:
 - existing conditions survey of Hansen Road and Springmount Road;
 - designation of all vehicle access points to the site from surrounding roads;
 - designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways;
 - recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements;
 - measures to be taken to manage traffic impacts associated with the ongoing operation of the wind energy facility;
 - a program to rehabilitate existing public roads of Hansen Road and Springmount Road, to its existing condition where required.

5.7 Aeronautical

An aeronautical assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the aeronautical assessment is to determine whether appropriate aeronautical matters have been addressed in the proposed wind farm development.

The application material includes evidence of consultation with the Civil Aviation Safety Authority (CASA). The consultation with CASA recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, and will not affect any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Subsequent to that consultation, turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

It is concluded that the application is appropriate in aeronautical terms, subject to conditions relating to turbine height and further approval from relevant authorities should the wind farm layout be altered. The proposal may be approved subject to the inclusion of those conditions. Recommended conditions include (refer to Appendix A for full conditions):

- limitations on the overall maximum height not exceeding 1179.5m AHD; and
- details of any micro-siting of turbines must be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts.

5.8 Civil and Electrical Engineering

5.8.1 Civil

A civil engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the civil engineering assessment is to determine whether appropriate civil engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is appropriate, in civil engineering terms, and is able to be appropriately developed. Matters considered in the assessment that were determined to be appropriate, in principle, include design and construction of wind farm layout, access roads, crane hardstands, and construction effects.

However, the nature of civil engineering matters is that they are largely and often fully assessed at detailed design stage, following the initial land use assessment contemplated by this development application.

Pursuant to the above, the following identifies matters that will need to be further addressed when detailed design progresses in response to conditions and Operational Works applications.

- Vertical road grading to site access. Road grading in specific areas is subject to detailed design at Operational Works stage to ensure the heavy low loader vehicles can navigate the roadway without constraints. The traffic assessment has identified that the road access is appropriate, in principle.
- Road cross sections. Depending on the side slope of the local topography, further detail is required at Operational Works stage to ensure that the batters developed from the associated road grading do not cause stability and rehabilitation issues on the constructed batters adjacent to the roadway.
- Construction management plan. A construction management plan should be prepared and approved prior to commencement of construction.
- Sediment and erosion control. Details of sediment and erosion control should be prepared and approved prior to commencement of construction, so that the development does not generate unreasonable sediment and erosion impacts, particularly with regards to road grading in steeper areas.

- Water quality management. Details of water quality management should be prepared and approved prior to commencement of construction, so that the development does not generate unreasonable water quality impacts, particularly in steeper areas.
- Stormwater management. Details of stormwater management should be prepared and approved prior to commencement of construction, so that the development does not generate unreasonable stormwater impacts, particularly in steeper areas.
- Decommissioning and rehabilitation of the site. Further details regarding decommissioning and rehabilitation should be conditioned.

It is concluded that the application is appropriate, in principle, in civil engineering terms, subject to further details being provided at Operational Work stage and as detailed design progresses. The proposal may be approved subject to the inclusion of conditions relating to the matters identified above (refer to Appendix A for full conditions).

5.8.2 **Electrical**

An electrical engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the electrical engineering assessment is to determine whether appropriate electrical engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is sound, in electrical engineering terms, and can be appropriately developed. However, the nature of some electrical engineering matters is that they are largely developed at detailed design stage, following the initial land use assessment contemplated by this development application.

In this regard, the electrical engineering assessment identified that the material provided in response to the information request did not include all of the information requested, it is considered that these matters can be addressed at detailed design stage pursuant to the relevant Building Works and Operational Works applications, or via conditions.

The electrical assessment identified that Specific Outcome S2(b) of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires the wind farm to be readily connected to existing, nearby high voltage electricity transmission lines without significant environmental, social or amenity impact. The application material does not include or sufficiently present the impacts of the proposed high voltage interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. Powerlink, in their advice agency response, identified that whilst there is no connection agreement in place, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the applicant complying with its obligations under relevant electricity laws. A condition is recommended in terms of connection to the Powerlink network. As such, the viability of interconnection design and grid connection to the Powerlink network can be established through the ongoing engagement with Powerlink pursuant to that condition.

Minimum clearances of turbine structures to Powerlink's assets need to be complied with and should form a condition of approval for the wind farm development. The required clearance of structures to Powerlink's assets was advised in Powerlink's advice agency response. A condition is recommended in terms of clearance between structures and Powerlink assets.

The electrical assessment also considered the proposed wind farm against the National Electricity Rules and Codes, as it applies to wind farms. The connection to Powerlink's network will need to comply with the National Electricity Rules and Codes, as is standard practice for such connections.

The electrical assessment identified that Specific Outcome S5 of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible

impact on residents nearby. The application material adequately addresses this matter and the proposed considered appropriate in this regard.

It is noted in application material that the high voltage reticulation within the development may use overhead lines, and not exclusively underground cables. This is not recommended in the heavily vegetated areas, and presents risk of bush fires from electrical faults, despite management plans being proposed. Instead, exclusive use of underground cables is recommended (except where physically constrained) and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the turbine structures and risk of bush fires has not been assessed in detail, although preliminary commitments to management plans has been identified in the application material. It is recommended that a lightning and earthing system to mitigate against the risk of bushfires caused by direct lightning strikes on turbines be conditioned. In respect of bushfire, a Bushfire Risk Management Plan is also recommended to be conditioned.

It is concluded that the application is appropriate, in principle, in electrical engineering terms, subject to further details being provided as detailed design progresses, at Operational Work and Building Work stage and in response to conditions. The proposal may be approved subject to the inclusion of conditions identified below (refer to Appendix A for full conditions).

- engagement with Powerlink must occur with regards to a connection to Powerlink's transmission line network;
- further technical assessments regarding safe clearance between turbines and Powerlink infrastructure must be prepared and approved;
- electrical high voltage reticulation within the development must be underground (except where physically constrained);
- a suitable lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines must be designed and installed; and
- a Bushfire Risk Management Plan shall be prepared and approved.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the application material, particular that which was prepared in respect of economic matters in response to the Minister's request for additional information. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

"Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant's discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval,

the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....”.

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p><i>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</i></p> <p><i>(ii) the planning scheme as being appropriately reflected in the planning scheme;</i></p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p><i>Any applicable codes in the following instruments-</i></p> <p><i>(i) A structure plan</i></p> <p><i>(ii) A master plan</i></p> <p><i>(iii) a temporary local planning instrument;</i></p> <p><i>(iv) a preliminary approval to which section 242 applies</i></p> <p><i>(v) a planning scheme;</i></p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ('the Planning Scheme') is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in</p>

<p><i>the priority infrastructure plan.</i></p>	<p>the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the</p>

	<p>response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5 above.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is</p>
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	<p>considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<i>Policy 2.1 Regional Landscape Values</i>	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given <i>'appropriate recognition in land use planning and development assessment'</i>.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in</p>

	<p>these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind

	<p>turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i>.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	<p>Development:</p> <p>(1) enhances matters of state environmental significance where possible, and</p> <p>(2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and</p> <p>(3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts.</p>	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <p>(1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and</p> <p>(2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and</p> <p>(3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and</p> <p>(4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and</p> <p>(5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks</p>	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p>

	associated with the natural hazard, and	<p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 05 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level

of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1 **Rural Zone Code**

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code.**

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non-compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the</p>

		<p>instrument (definitions, levels of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>Further, an assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's , the intent of both being to facilitate the establishment of new wind farms in appropriate</p>
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		<p>locations.</p> <p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI (and its inclusion in the planning scheme) and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the</p>

		<p>only Tableland based aerial spraying contractor in September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	<p>For all Lots</p> <p>PS4.3 Vegetation is retained on land with a slope of 15% or greater.</p>	
For Code Assessable Development		
<p>S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.</p>	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.</p>	<p>Not Applicable – the site is not in the Southedge Potential Tourist Area.</p>
<i>For Mona Reserve as</i>	PS7 Development is carried	Not Applicable – the site is

<p><i>identified on Map Z10 as Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>out in accordance with a Plan of Development and Land Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	<p>not in the Mona Reserve.</p>
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>

the Shire.		
S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	PS10 No probable solution prescribed.	The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.

4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES

Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.

4.80 RECONFIGURING A LOT

Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2 Division 5 - Car Parking Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to	AS1 The number of car parking spaces provided for	Not Applicable.

accommodate the demand likely to be generated by the use.	the use is in accordance with the Car Parking Schedule.	
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the

	<p>condition for parking; and</p> <p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Car Parking Numbers		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be</p>

		provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Bicycle Parking</i>		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
<i>Movement and Access</i>		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain</p>

	designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4	<p>detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 **Division 17 - Filling and Excavation Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are	AS1 Filling and excavation is no greater than two (2)	It is considered unlikely that significant filling and excavation will occur,

undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	metres in height or depth.	<p>however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either: (i) A retaining wall entirely	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project,</p>

	<p>within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>covering discrete construction areas and which will account for the changing surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>

S5 Environment Filling or excavation does not result in a reduction of the water quality of receiving waters.	AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.	Refer to S4 above.
S6 Environment Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.	AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4 **Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code**

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
S1 Cultural Heritage Places (a) significant elements of the mining history of Mareeba Shire are conserved; and (b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and (c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.	PS1 No probable solution provided.	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby</p>

		<p>consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern</p>

<p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	PS4 No probable solution provided.	Not Applicable as there are no buildings and places of Local Heritage Significance on the site.
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural	PS6 No probable solution	Not Applicable as there are

Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	provided.	no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: <ul style="list-style-type: none"> (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: <ul style="list-style-type: none"> (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft 	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: <ul style="list-style-type: none"> (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife.	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the</p>

<p>navigation systems.</p>	<p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p>	<p>approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>PS1.7</p> <ul style="list-style-type: none"> (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and (ii) Works or uses are not located within the buffer zones for the Bibohra VOR facility that: <ul style="list-style-type: none"> (a) involve any building or works within 300 metre buffer zone of the Bibohra VOR; and (b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibohra VOR: <ul style="list-style-type: none"> (i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or (ii) involve overhead power lines exceeding 5m in height; or (iii) involve metallic structures exceeding 7.5m in height; or (iii) involve trees and open lattice towers exceeding 10m in height; or (iv) involve wooden structures exceeding 13m in height; and (iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar 	
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	facility that involve any building, structures or work above 950 AHD.	
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6.6.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation 18 of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who

		<p>understand how to respond quickly to fire and use equipment available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, 	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by</p>

	<p>swimming pool).</p> <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; 	<p>detrimental impacts of bushfire.</p>
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	<p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de- 	
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	<p>sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind

Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.

g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment,	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow

<p>economic and social impacts.</p> <p>b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated</p>
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		<p>16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have</p>
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		<p>undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses</p>

		<p>and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts upon the landscape.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes or (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values</p>

		and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <ul style="list-style-type: none"> (i) nuisance (ii) risk to human health or wellbeing (iii) ability to sleep or relax. 	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G –

		<p>Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014.</p> <ul style="list-style-type: none"> Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a</p>
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		<p>35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11</p>

		<p>June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is</p>

		<p>considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a</p> <p>Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a</p> <p>Maintenance Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction</p>

		<p>Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are</p>

		controlled and maintained at acceptable levels and carried out at acceptable times.
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and

	<p>restored;</p> <p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p> <p>(v) wind farm infrastructure is removed from the site.</p>	<p>replacing soil over foundations;</p> <ul style="list-style-type: none">• removing all material from site for recycling;• where tracks are of no use to the land owner, the land reinstated;• underground and above ground cabling removed;• the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326 (1) (b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme

as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired and are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (those applicable at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326(1)(c)(ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the Far North Queensland Regional Plan recognises wind farms as legitimate land use and emphasis is placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

7.2 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** includes an assessment considering impact upon State environmental significance, given the precise

wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires wind farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of State significance. The probable solutions and overall outcome both refer to State environmental significance.

The proposed development is considered to appropriately address matters of State environmental significance and therefore complies with the Rural Zone Code in this regard.

However, it is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the 	<p>Prior to the commencement of site / operational / building work</p>

<p>satisfaction of the Council.</p> <ul style="list-style-type: none"> (c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine (d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities (e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines (f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority, (g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and (h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including: (i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria (j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites). <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

Northern Quoll Management	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <p>(a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.</p> <p>(b) A monitoring program of additional utilisation studies prior to construction;</p> <p>(c) requires surveys to be undertaken during breeding seasons to ascertain:</p> <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. <p>(d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);</p> <p>(e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):</p> <p>(ii) Construction Phase Management Procedures:</p> <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.	To be maintained
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7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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Plan/Document number	Plan/Document name	Date																														
PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013																														
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Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014																														
Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <p>(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
Access Tracks and Roads	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> (a) the Civil Aviation Safety Authority; (b) the Department of Defence (RAAF Aeronautical Information Service); (c) Airservices Australia; (d) any aerodrome operator within 15 km of the outside property boundaries of the site; (e) the Aerial Agriculture Association of Australia; (f) any organisation responsible for providing air ambulance services in the area. 	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <ul style="list-style-type: none"> (a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads; (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and 	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of “Technical Note 2 – Traffic Impact Assessment Engineering Response”:</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans	
<p>19. Submit for approval by the Council an environmental management plan.</p> <p>The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):</p> <ul style="list-style-type: none"> • a construction and work site operational management plan • a sediment, erosion and storm water management plan • a hydrocarbon and hazardous substances plan • a bushfire risk management plan and emergency evacuation plan • a threatened species management plan • a weed and pest management plan • a rehabilitation plan • a habitat clearing and management plan • an ecological fire management plan • a cultural heritage management plan • an environmental management plan training program • an environmental management plan reporting program <p>The environmental management plan must also address implementation and periodic review</p> <p>The environmental management plan:</p> <p>(a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;</p> <p>(b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;</p> <p>(c) may be prepared in sections or stages;</p>	<p>Prior to the commencement of site / operational / building work</p>

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
Landscaping	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
Site Security	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <ul style="list-style-type: none"> (a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and (b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans. <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <ul style="list-style-type: none"> (a) The wind farm must comprise of no more than 63 turbines; (b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD; (c) The hub height of any turbine shall not exceed 90 metres; (d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area; (e) The turbines and blades must be constructed from non-reflective materials; (f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations. <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <p>(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
<p>Access Tracks and Roads</p>	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Lighting (including aviation obstacle lighting)</p>	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> (a) the Civil Aviation Safety Authority; (b) the Department of Defence (RAAF Aeronautical Information Service); (c) Airservices Australia; (d) any aerodrome operator within 15 km of the outside property boundaries of the site; (e) the Aerial Agriculture Association of Australia; (f) any organisation responsible for providing air ambulance services in the area. 	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <ul style="list-style-type: none"> (a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads; (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and 	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of "Technical Note 2 – Traffic Impact Assessment Engineering Response":</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans

19. Submit for approval by the Council an environmental management plan.

The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):

- a construction and work site operational management plan
- a sediment, erosion and storm water management plan
- a hydrocarbon and hazardous substances plan
- a bushfire risk management plan and emergency evacuation plan
- a threatened species management plan
- a weed and pest management plan
- a rehabilitation plan
- a habitat clearing and management plan
- an ecological fire management plan
- a cultural heritage management plan
- an environmental management plan training program
- an environmental management plan reporting program

The environmental management plan must also address implementation and periodic review

The environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;
- (c) may be prepared in sections or stages;

Prior to the commencement of site / operational / building work

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
Landscaping	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <ul style="list-style-type: none"> (i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines); (ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity; (iii) a timetable for implementation of all on-site landscaping works; (iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping. <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
Site Security	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

Chris Lee

From: [Refused under section 47(3)(b) of the RTI Act] <[redacted]@cardno.com.au>
Sent: Thursday, 16 October 2014 12:45 PM
To: Jane McInnes
Subject: Mount Emerald Wind Farm
Attachments: HRP14122R002 - FINAL - 16 October 2014 (incl Appendix).pdf; HRP14122R002 - FINAL - 16 October 2014.docx; Conditions Package - FINAL - 13 October 2014.docx

Hi Jane,

Please find attached a final updated version of the report. This report includes correction of a couple of final wording matters in the civil engineering technical response.

Kind regards,

[Refused under section 47(3)(b) of the RTI Act]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

Address Level 11, 40 Creek Street, Brisbane, QLD 4000 Australia

Email [Refused under section 47(3)(b) of the RTI Act.] Web www.cardno.com/cardnohrp

Cardno HRP is relocating. As of Monday the 20th October our new office address will be:

Level 11
515 St Pauls Terrace
Fortitude Valley QLD 4006

Our phone number, fax number and staff email addresses will remain the same.

Cardno operates a quality management system that has been certified to ISO 9001.

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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

October 2014

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Represent.	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological – impacts of wind farm on protected flora and fauna
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray and environmental / contaminated land matters
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical Engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the wind farm was undertaken by Foresight Partners in parallel with this assessment.

Overall, it is considered that the development application complies with the relevant planning instruments set out within the assessment report. On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- technical assessments to inform recommendations;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of, assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommending approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises an assessment of the proposed development against the applicable planning framework. It includes an assessment in terms of planning and technical matters, and incorporates the outcomes of an economic assessment undertaken in parallel by Foresight Partners. It has not addressed any submissions received in respect of the Ministerial Call In.

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme. The planning scheme requires code assessment. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Technical Assessment provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment of Development Application provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes on to state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 **Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)**

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 **Department of Environment and Resource Management – Clearing Vegetation (Concurrence)**

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 *Department of Health*

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

"There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life."

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 *Mareeba Shire Council*

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 *Tablelands Regional Council*

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA and the Mareeba Shire Planning Scheme. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

“(2) The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—

- (a) the State planning regulatory provisions;*
- (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
- (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
- (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
- (e) any applicable codes in the following instruments-*
 - (i) a temporary local planning instrument;*

- (ii) *a preliminary approval to which section 242 applies*
 - (iii) *a planning scheme;*
- (d) *if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.*
- (3) *In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—*
 - (a) *the common material;*
 - (b) *any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;*
 - (c) *any referral agency's response for the application;*
 - (d) *the purposes of any instrument containing an applicable code;*
- (4) *If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).*
- (5) *The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.*
- (6) *Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.*

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) *In assessing the application, the Assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-*
 - (a) *Before the day decision stage for the application started; or*
 - (b) *If the decision stage is stopped-before the day the decision stage is restarted.*
- (2) *However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)*

According to Section 326 of the SPA:

- “(1) *The assessment manager's decision must not conflict with a relevant instrument unless—*
 - (a) *the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*

- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
 - (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Section 423 of the SPA defines that, in this division (Division 2 - Ministerial call in powers), assessment and decision provisions means sections 313, 314, 316, 326 and 329 of the SPA (to the extent each section is relevant to an application that has been called in).

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;
- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;

- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Section 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga Locality is included on page 12 of the TLPI 01/11 (Wind Farms) and the locality consists of the former Mareeba Shire, of which the development application site is part.

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and

will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The purpose of the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact
- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage

- Decommissioning and Rehabilitation

Development that achieves compliance with the overall outcomes and specific outcomes complies with the Wind Farm Code. An assessment against the Wind Farm Code is provided in **Section 6.5**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Section 6.5** below.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is **Impact Assessable** development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. It is stated that wind farm development will have minimal impact on the environment and on amenity (at both a local and

wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

The Overall outcomes for the Wind Farm Code is to achieve the following outcomes-

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1. Development that achieves the overall outcomes and specific outcomes complies with the Wind Farm Code.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect. The TLPI 01/12 has expired and ceases to have effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Extensive public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to later laws and policies which are introduced after the lodgement of a Development Application, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. For this reason no weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The code includes Performance Outcomes and Acceptable Outcomes (where appropriate) in respect of:

- Connectivity;
- Location; and
- Amenity

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, because the timing and content of any final code is not known at the time of the assessment it is not considered appropriate to provide any technical commentary against the draft Wind Farm State Code and draft Wind Farm State Planning Guideline at this stage.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme

and the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes included changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also included changes to the Probable Solutions identified in the Wind Farm Code (PS4, and PS5) and to the Specific Outcomes (S4, S5 and S6). TLPI 01/11 and 01/12 have expired are no longer effective.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, an assessment has been undertaken against Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies (at the time the application was properly made
- the SPP.

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray, and environmental / contaminated land matters;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the Mount Emerald Wind Farm was undertaken by Foresight Partners in parallel with this assessment.

This chapter summarises the outcomes of the technical assessment for each technical service, including the economic review undertaken in parallel by Foresight Partners.

5.2 Landscape Visual Amenity

A landscape visual amenity assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the landscape visual amenity assessment is to determine the visual impact of the proposed wind farm on the local context and views, particularly with regards to areas of regional landscape significance, significant landscape features, and landscape and scenic values as described by the applicable planning framework. The assessment also assesses shadow flicker.

In this regard, of particular relevance to the landscape visual amenity assessment is the material prepared by the applicant that describes and presents the visual impacts of the proposed development. The following material prepared by the applicant adequately describes the proposed development in landscape visual amenity terms.

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length (in kilometres) of the visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons; and
- Shadow flicker assessment.

The material prepared by the applicant adequately allows for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. However, it is noted that none of the planning or visual impact technical material substantially address the question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. This is addressed in this assessment.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of 'regional landscape significance'. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure.

It is also relevant that the Mt Emerald – Walsh Bluff mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Planning Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11 (Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, and sought that they have "*minimal impact on the environment and on amenity (both at a local and wider area scale)*". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code. The Wind Farm Code altered the above TLPI wording to seek that development "*will not have unacceptably adverse impacts in the environment and on existing amenity (at both a local and wider area scale)*...". The Rural Zone Code includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code includes (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and demonstrable impacts associated with wind farms*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

At the time the application was made, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it has subsequently become a requirement under Planning Scheme amendment 01/11 Wind Farms (September 2013) where the Wind Farm Code (Division 23) require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant views' (Specific Outcome S3a). The assessment of wind farm visual impacts on significant landscape features is identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application.

It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

Notwithstanding the lack of a statutory requirement to assess visual impacts on the Mt Emerald - Walsh Bluff mountain range system, and the absence of visual impact concerns in the responses from referral agencies, the landscape significance of Mt Emerald - Walsh Bluff mountain range should have been at least noted in the assessment.

It is apparent from the material prepared by the applicant, and from field inspection, that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, is unavoidably a significant visual impact. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, is not 'minimal impact' as sought by TLPI 01/11. The wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant

views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

However, the term 'minimal impact' is replaced in the Wind Farm Code of the amended Mareeba Shire Planning Scheme (September 2013) with 'unacceptably adverse impacts', and this is given considerable weight in the planning assessment. The following determines whether the impacts of the wind farm are unacceptably adverse.

The Mareeba Shire Planning Scheme does not protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is concluded that the extent and nature of the impacts have been generally well analysed and technically assessed (noting earlier comments about reference or otherwise to significant landscape features). However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment.

It is therefore determined that the likely impacts of the proposed wind farm on visual amenity, although locally significant, are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to the inclusion of appropriate conditions. In terms of those conditions, the visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Recommended visual amenity conditions include (refer to Appendix A for full conditions):

- non-reflective colours and materials are used for turbines and especially blades (as per Specific Outcome S3b of the Wind Farm Code); and
- electrical connections are provided underground in all instances, where practicable (as per Specific Outcome S3c of the Wind Farm Code).

An assessment of shadow flicker has identified that the distance between residences and the proposed wind turbines provides sufficient buffer to reduce potential shadow flicker impacts and the proportion of rural views affected to acceptably low levels. The proposed development may be approved subject to the inclusion of a condition that ensures compliance with shadow flicker requirements is maintained. The recommended shadow flicker condition is:

- the measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling (as per Specific Outcome PS6(b) of the Wind Farm Code).

5.3 Ecological

An ecological assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the ecological assessment is to determine the impact of the proposed wind farm on State and local ecological features, including Matters of State Environmental Significance, and if so, whether appropriate impact mitigation and management measures and offset commitments can reduce the magnitude of ecological impacts.

In this regard, of particular relevance to the ecological assessment is the draft Environmental Impact Statement and the Statement of Commitments, as prepared by the applicant. The

material prepared by the applicant includes relevant ecological surveys and assessments that provide an adequate basis for assessment of the application.

The ecological assessment has identified that the proposal will have adverse ecological impacts. This is recognised by the applicant in the application material, including in the Environmental Impact Statement. The adverse ecological impacts primarily relate to:

- direct loss and degradation of vegetation and fauna habitat resource associated with the construction of the proposed wind farm; and
- fauna mortality, morbidity and habitat degradation/alienation associated with operation of the proposed wind farm.

In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur.

The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. Some impact mitigation and management measures are identified in a 'Statement of Commitments' prepared by the applicant, which include a range of 'environmental management plans'. With regards to that documentation:

- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on native fauna such as, but not limited to, flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed, mitigated or offset pursuant to the range of 'environmental management plans' being appropriately implemented. Therefore, the proposed development is not contrary to any statutory provisions applicable to the ecological assessment. The proposal may be approved subject to the inclusion of appropriate conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Recommended conditions include (refer to Appendix A for full conditions):

- approval and implementation of the 'environmental management plans' identified in the material prepared by the applicant and referenced above;
- where the development involves the clearance of native vegetation and wildlife habitat, detailed Significant Species Management Plans must be prepared; and
- where the development involves the clearance of native vegetation and wildlife habitat, an appropriate Environmental Offset must be secured.

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES), such as the Northern Quoll and Spectacled Flying-Fox. Nevertheless, conditions are identified (refer Chapter 7) relating to the management of these species.

5.4 Agricultural Land and Environment

An agricultural land and environmental assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

Agricultural Land

The purpose of the agricultural land assessment is to determine whether the proposed development has the potential to adversely or positively impact the agricultural land use values of the local area (including as identified in the Economic Growth Module of the State Planning Policy).

Of particular relevance to the agricultural land assessment are the provisions of the Mareeba Shire Planning Scheme and the State Planning Policy. The application material appears to adequately address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;
- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development; and
- a response to the matter of impact to aerial spraying.

It is noted that the applicant suggests that the land is not considered Good Quality Agricultural Land under the Planning Scheme, which is confirmed to be consistent with the Council's planning scheme maps. Further, the State government mapping does not identify the site as Agricultural Land Class A or B, or Strategic Cropping Land. The site is not currently used for cultivation, and only stock grazing is possible.

Matters of spray drift associated with aerial spraying have been assessed and have been determined to be acceptable.

It is concluded that the proposed wind farm is compatible with the rural nature of the site, as identified by the FNQ Regional Plan. Further, having regard to the wind farm footprint and to the broader socioeconomic benefits of the project, this assessment identifies that the proposal is acceptable in terms of the agricultural land values of the site and the local area. The proposal may be approved; no conditions are required to be imposed.

Environmental / Contamination

The purpose of the environmental assessment is to determine whether there is potential for residual unexploded ordnance (UXO) contamination to be uncovered or disturbed by the development, with consequential risk to human health and safety (as per the Contamination Module of the State Planning Policy).

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist a UXO assessment is required to be completed in order to facilitate the development.

The application material states the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of the application material by DEHP indicated a substantial risk existed, and UXO commentary identified the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment by DEHP was issued to a 'slight' possibility of occurrence of UXO. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO matters. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible

to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the Environmental Impact Statement appears to concur with DEHP's recommendation regarding the assessment of UXO related matters.

It is therefore concluded that the UXO issues present on site have been assessed to be able to be managed. The proposal may be approved subject to the inclusion of appropriate 'general advice' attached to the approval that identifies the relevant procedure for the possibility of UXO disturbance.

5.5 Noise

An acoustic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the acoustic assessment is to determine the impact of the proposed wind farm on the local acoustic environment, in particular, on any nearby sensitive receivers.

In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain any statutory text to the probable solution but does include a note that makes reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

It is concluded that that the proposed wind farm will be able to be appropriate in acoustic terms, where particular noise criteria are enforced and complied with. The proposal may be

approved subject to the inclusion of appropriate conditions that enforce particular noise criteria. Recommended conditions include (refer to Appendix A for full conditions):

- ensure the development meets appropriate noise criteria of 35dB(A) in particular circumstances (as discussed above), and 40 dB(A) otherwise; and
- demonstrate compliance and complaints management with regards to the noise criteria specified above.

5.6 Traffic Impact

A traffic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the traffic assessment is to determine whether the traffic likely to be generated by the proposed development during construction and operation is appropriate having regard to the immediate and broader road network.

Of particular relevance to the traffic assessment is the Traffic Report prepared by Jacobs in response to the Information Request, titled "Technical Note 2 – Traffic Impact Assessment Engineering Response" and dated 29 August 2014. That traffic report addressed various traffic matters as follows.

- A clear description of the whole of the potential access routes to the site for oversized vehicles, including a high level identification of constraints along the network.
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Likely staff travel movements to the site, and how these can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Where sufficient measures to restrict staff traffic to 30 vehicles per day are not able to be provided, assessment identifying the worst case traffic impact on the road network.

An assessment of the application material has been undertaken and it is confirmed that the application material has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are likely to be able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council; and
- Requirements for permits and escorts to traverse the detailed routes.

These matters are not able to be fully assessed at the moment as the details of construction schedule and other variables are likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any traffic issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles, when these details are known, will be required to ensure the routes are acceptable, and as such the assessment of the suitability of Hansen Road and Springmount Road for oversized vehicle movements should be included as a condition.

In respect of managing staff vehicles, the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

"The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders."

It is determined that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery, which can be managed). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known.

It is concluded that that the proposed wind farm is able to be appropriately managed in terms of traffic matters, including during construction. The proposal may be approved subject to the inclusion of appropriate conditions relating to traffic management. Recommended conditions include (refer to Appendix A for full conditions):

- preparation and approval of a construction traffic management plan, prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind energy facility, that includes:
 - existing conditions survey of Hansen Road and Springmount Road;
 - designation of all vehicle access points to the site from surrounding roads;
 - designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways;
 - recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements;
 - measures to be taken to manage traffic impacts associated with the ongoing operation of the wind energy facility;
 - a program to rehabilitate existing public roads of Hansen Road and Springmount Road, to its existing condition where required.

5.7 Aeronautical

An aeronautical assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the aeronautical assessment is to determine whether appropriate aeronautical matters have been addressed in the proposed wind farm development.

The application material includes evidence of consultation with the Civil Aviation Safety Authority (CASA). The consultation with CASA recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, and will not affect any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Subsequent to that consultation, turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

It is concluded that the application is appropriate in aeronautical terms, subject to conditions relating to turbine height and further approval from relevant authorities should the wind farm layout be altered. The proposal may be approved subject to the inclusion of those conditions. Recommended conditions include (refer to Appendix A for full conditions):

- limitations on the overall maximum height not exceeding 1179.5m AHD; and
- details of any micro-siting of turbines must be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts.

5.8 Civil and Electrical Engineering

5.8.1 Civil

A civil engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the civil engineering assessment is to determine whether appropriate civil engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is appropriate, in civil engineering terms, and is able to be appropriately developed. Matters considered in the assessment that were determined to be appropriate, in principle, include road alignment of main access road, road grading along the proposed alignment, the ability to manage stormwater runoff, maintenance access to the proposed sites, and Impact footprint in construction areas.

However, the nature of civil engineering matters is that they are largely and often fully assessed at detailed design stage, following the initial land use assessment contemplated by this development application.

Pursuant to the above, the following identifies matters that will need to be further addressed during the detailed design process in response to the relevant development conditions and associated Operational Works applications.

- Vertical grading to site access road. Road grading in specific areas shall be subject to detailed design at Operational Works stage to ensure the heavy low loader vehicles can navigate the roadway without undue constraints. The traffic assessment has identified that the road access is appropriate, in principle.
- Road cross sections. Depending on the side slope of the local topography, further detail is required at Operational Works stage to ensure that the batters developed from the associated road grading do not cause stability and rehabilitation issues on the constructed batters adjacent to the roadway.
- Construction management plan. A construction management plan should be prepared and approved prior to commencement of construction.
- Sediment and erosion control. Sediment and erosion control management plans should be prepared and approved prior to commencement of construction, to ensure

undesirable sediment and erosion issues do not impact on the development site and surrounding areas. This is particularly relevant in the areas where steep road grades and associated cut and fill batters are developed.

- Water quality management. Water quality management details should be prepared and approved prior to commencement of construction, to ensure the quality of stormwater runoff from the site is maintained within acceptable limits.
- Stormwater management. Stormwater management plans should be prepared and approved prior to commencement of construction, to ensure stormwater runoff from the site is controlled and managed with minimal impact on the development site and adjacent properties.
- Decommissioning and rehabilitation of the site. Further details regarding decommissioning and rehabilitation should be conditioned.

It is concluded that the application is appropriate, in principle, in civil engineering terms, subject to further details being provided at Operational Work stage of the civil engineering design. The proposal may be approved subject to the inclusion of conditions relating to the matters identified above (refer to Appendix A for full conditions).

5.8.2 **Electrical**

An electrical engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the electrical engineering assessment is to determine whether appropriate electrical engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is sound, in electrical engineering terms, and can be appropriately developed. However, the nature of some electrical engineering matters is that they are largely developed at detailed design stage, following the initial land use assessment contemplated by this development application.

In this regard, the electrical engineering assessment identified that the material provided in response to the information request did not include all of the information requested, it is considered that these matters can be addressed at detailed design stage pursuant to the relevant Building Works and Operational Works applications, or via conditions.

The electrical assessment identified that Specific Outcome S2(b) of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires the wind farm to be readily connected to existing, nearby high voltage electricity transmission lines without significant environmental, social or amenity impact. The application material does not include or sufficiently present the impacts of the proposed high voltage interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. Powerlink, in their advice agency response, identified that whilst there is no connection agreement in place, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the applicant complying with its obligations under relevant electricity laws. A condition is recommended in terms of connection to the Powerlink network. As such, the viability of interconnection design and grid connection to the Powerlink network can be established through the ongoing engagement with Powerlink pursuant to that condition.

Minimum clearances of turbine structures to Powerlink's assets need to be complied with and should form a condition of approval for the wind farm development. The required clearance of structures to Powerlink's assets was advised in Powerlink's advice agency response. A condition is recommended in terms of clearance between structures and Powerlink assets.

The electrical assessment also considered the proposed wind farm against the National Electricity Rules and Codes, as it applies to wind farms. The connection to Powerlink's

network will need to comply with the National Electricity Rules and Codes, as is standard practice for such connections.

The electrical assessment identified that Specific Outcome S5 of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. The application material adequately addresses this matter and the proposed considered appropriate in this regard.

It is noted in application material that the high voltage reticulation within the development may use overhead lines, and not exclusively underground cables. This is not recommended in the heavily vegetated areas, and presents risk of bush fires from electrical faults, despite management plans being proposed. Instead, exclusive use of underground cables is recommended (except where physically constrained) and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the turbine structures and risk of bush fires has not been assessed in detail, although preliminary commitments to management plans has been identified in the application material. It is recommended that a lightning and earthing system to mitigate against the risk of bushfires caused by direct lightning strikes on turbines be conditioned. In respect of bushfire, a Bushfire Risk Management Plan is also recommended to be conditioned.

It is concluded that the application is appropriate, in principle, in electrical engineering terms, subject to further details being provided as detailed design progresses, at Operational Work and Building Work stage and in response to conditions. The proposal may be approved subject to the inclusion of conditions identified below (refer to Appendix A for full conditions).

- engagement with Powerlink must occur with regards to a connection to Powerlink's transmission line network;
- further technical assessments regarding safe clearance between turbines and Powerlink infrastructure must be prepared and approved;
- electrical high voltage reticulation within the development must be underground (except where physically constrained);
- a suitable lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines must be designed and installed; and
- a Bushfire Risk Management Plan shall be prepared and approved.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the application material, particular that which was prepared in respect of economic matters in response to the Minister's request for additional information. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

"Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in

response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant's discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....".

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and section 6.3 below provides a summary of those matters or things to the extent relevant to the development application.

The following section provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are code assessable section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development:

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</p> <p>(ii) the planning scheme as being appropriately reflected in the planning scheme;</p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified in Section 6.5 below.</p>
<p>Any applicable codes in the following instruments-</p> <p>(i) A structure plan</p> <p>(ii) A master plan</p> <p>(iii) a temporary local planning instrument;</p> <p>(iv) a preliminary approval to which section 242 applies</p> <p>(v) a planning scheme;</p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time The Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and ceased to have effect on 07 October 2012. At the time the development application was properly made this was also in effect. TLPI 01/12 replaced TLPI 01/11 and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm TLPI as the Wind Farm Code, Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager must also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started. The aforementioned amendment to the Planning Scheme came into effect on 30 September 2013, prior to the starting of the decision stage.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ("the Planning Scheme") is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>Whilst there is some minor changes between the wording in the Wind Farm Code in the TLPI 01/12 and the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms, it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms), as the TLPI has expired and ceases to have effect. An assessment against the relevant codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.6.</p> <p>There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.</p>
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in</p>

<p><i>the priority infrastructure plan.</i></p>	<p>the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>
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Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The entire project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site. Policies relating to these areas restrict 'urban development' in these areas. Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development' and does not exclude infrastructure items.</p> <p>However, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June 2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the</p>

	<p>response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5 above.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is</p>
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	<p>considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<i>Policy 2.1 Regional Landscape Values</i>	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p> <p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given <i>'appropriate recognition in land use planning and development assessment'</i>.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in</p>

	<p>these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<p><i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i></p>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. Having regard to land use policy 2.1.1, which recognises the value of the landscape for renewable energy, Section 2.3 also recognises that public utilities and infrastructure should be appropriately managed to protect the natural values of the region.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity. An assessment of the common material comprising the development application has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is an unavoidable conclusion (just from looking at the photos, but also confirmed by site inspection) that the mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga - Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1120 m AHD (approximately 300 m above the surrounding land) and the northern 8 km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900 m AHD and 80 – 130 m in height (well above the tree line), in several linear array arrangements extending over 2 – 3 km, is unavoidably a significant visual impact. The wind turbines per se have a form and character which is not 'natural', and which contrast markedly with that of the mountain. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. However the Mareeba Shire Planning Scheme does not provide much protection to significant landscape features, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind

	<p>turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> The extent and nature of the impacts have been well analysed and technically assessed, but at the end of all this investigation the acceptability (or otherwise) of visual impacts are largely subjective. Also, the landscape values are not sufficiently protected in the Planning Scheme or other Codes to refuse the application on the grounds of visual impacts. Notwithstanding the significance of the mountain range and the scale of visual impacts, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	<p>Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are '<i>recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions</i>'.</p> <p>The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.</p>

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policy

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** above lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	<p>Development:</p> <ul style="list-style-type: none"> (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and (3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts. 	<p>In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>Given the above, the proposed development is considered to satisfactorily address the biodiversity requirements in the SPP and will not result in significant adverse environmental impacts on matters of state environmental significance.</p>
Natural Hazards, Risk and Resilience	<p>For all natural hazards:</p> <p>Development:</p> <ul style="list-style-type: none"> (1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and (2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and (3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and (4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard, and (5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks 	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p>

	associated with the natural hazard, and	<p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 05 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level

of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment against the relevant codes of the Mareeba Shire Planning Scheme is provided below.

6.6.1

Rural Zone Code

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines proposed the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non-compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the</p>

		<p>instrument (definitions, levels of assessment and the Wind Farm Code). Section 5.1 of the Wind farm Code identifies that a development application for a material change of use for a wind farm is code assessable where located in the Arriga locality included in the Rural Zone. Section 6.2 of the Wind Farm code identifies that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the wind Farm Code.</p> <p>Further, an assessment of the development application against the Wind Farm Code (Amendment No 01/11-Wind Farm), of the Mareeba Shire Planning Scheme (the amendment incorporating the TLPI into the Planning Scheme) has been undertaken at Section 6.6.7 below. It is concluded that the development application achieves the overall outcomes and specific outcomes of the Wind Farm Code.</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. Whilst this is the case, pursuant to section 326 of the SPA, the conflict arises because of a conflict between 2 or more aspects of the Mareeba Shire Planning Scheme (Rural Zone Code and Wind Farm Code). The Wind Farm Code contained within Amendment No 01/11 of the Mareeba Shire Planning Scheme incorporates the earlier TLPI's , the intent of both being to facilitate the establishment of new wind farms in appropriate</p>
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		<p>locations.</p> <p>Furthermore as set out in section 6.4 above the FNQRP and land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i> and as such represents sufficient grounds to justify a decision to approve, despite any conflict identified.</p> <p>The Planning scheme has been overtaken by events, namely the TLPI (and its inclusion in the planning scheme) and FNQRP which promote wind farms in appropriate locations and recognise wind farms as legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme and that sufficient grounds exist to justify the decision.</p>
<p>S2 Agricultural activities are protected from incompatible land uses.</p>	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the</p>

		<p>only Tableland based aerial spraying contractor in September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is not considered that the proposed wind farm is an incompatible land use with surrounding agricultural uses.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code of the Mareeba Shire Planning Scheme and found to be acceptable. Refer to Section 6.6.7 below.</p>

	<p>For all Lots</p> <p>PS4.3 Vegetation is retained on land with a slope of 15% or greater.</p>	
For Code Assessable Development		
<p>S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.</p>	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Environmental Management Plan.</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.</p>	<p>Not Applicable – the site is not in the Southedge Potential Tourist Area.</p>
<i>For Mona Reserve as</i>	PS7 Development is carried	Not Applicable – the site is

<p><i>identified on Map Z10 as Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>out in accordance with a Plan of Development and Land Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	<p>not in the Mona Reserve.</p>
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <ul style="list-style-type: none"> (i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and (ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and (iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and (iv) Without impact upon the visual and landscape setting of 	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S5 is not applicable.</p>

the Shire.		
S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.	PS10 No probable solution prescribed.	The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.
4.80 RECONFIGURING A LOT		
Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.		

It is considered that the proposed wind farm development demonstrates satisfactory compliance with the relevant Rural Zone Code specific outcomes and is therefore complies with the Rural Zone Code.

6.6.2 **Division 5 - Car Parking Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to	AS1 The number of car parking spaces provided for	Not Applicable.

accommodate the demand likely to be generated by the use.	the use is in accordance with the Car Parking Schedule.	
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the

	<p>condition for parking; and</p> <p>AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and</p> <p>AS7.3 Disabled car parking spaces are signed posted.</p>	Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	<p>AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or</p> <p>AS8.2 Shade structures are provided over 40% of the car parking spaces.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
Car Parking Numbers		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be</p>

		provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Bicycle Parking</i>		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
<i>Movement and Access</i>		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain</p>

	<p>designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.6.3 Division 17 - Filling and Excavation Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
<p>S1 Visual Amenity</p> <p>Filling and excavation are</p>	<p>AS1 Filling and excavation is no greater than two (2)</p>	<p>It is considered unlikely that significant filling and excavation will occur,</p>

undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	metres in height or depth.	<p>however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project,</p>

	<p>within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>covering discrete construction areas and which will account for the changing surface configuration at various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>

<p>S5 Environment</p> <p>Filling or excavation does not result in a reduction of the water quality of receiving waters.</p>	<p>AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.</p>	<p>Refer to S4 above.</p>
<p>S6 Environment</p> <p>Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.</p>	<p>AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.</p>	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.6.4 **Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code**

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Cultural Heritage Places</p> <p>(a) significant elements of the mining history of Mareeba Shire are conserved; and</p> <p>(b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and</p> <p>(c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.</p>	<p>PS1 No probable solution provided.</p>	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby</p>

		<p>consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern</p>

<p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p>edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	PS4 No probable solution provided.	Not Applicable as there are no buildings and places of Local Heritage Significance on the site.
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural	PS6 No probable solution	Not Applicable as there are

Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	provided.	no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.6.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife.	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the

<p>navigation systems.</p>	<p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p>	<p>approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>PS1.7</p> <p>(i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Bibbohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Bibbohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibbohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar</p>	
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	facility that involve any building, structures or work above 950 AHD.	
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6.6.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m²:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation¹⁸ of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who

		<p>understand how to respond quickly to fire and use equipment available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, 	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by</p>

	<p>swimming pool).</p> <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; 	<p>detrimental impacts of bushfire.</p>
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	<p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de- 	
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	<p>sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.6.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind

Farm Code also includes changes to the Probable Solutions (PS4 and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code.

TLPI 01/11 and 01/12 have expired and are no longer effective. As such it is considered appropriate to place considerable weight on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). An assessment of the development application against the Code is set out below.

Development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code. The proposed development is considered to comply with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the Following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.
e) Where located in areas state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.

g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment,	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow

<p>economic and social impacts.</p> <p>b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated</p>
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		<p>16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have</p>
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		<p>undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <ul style="list-style-type: none"> a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes. b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts. c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable. 	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity. An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses</p>

		<p>and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts upon the landscape.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>a) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>b) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth.</p> <p>The specific outcome identifies that wind farms do not have significant adverse impacts on ecological values and processes or (not 'and' but 'or') on the sustainability of fauna populations in areas of state environmental significance. The identified probable solution and overall outcomes refer specifically to areas of state environmental significance.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse impacts on the sustainability of fauna populations in areas of state environmental significance.</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values</p>

		and processes. Given the above, it is considered that the proposed wind farms will not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <ul style="list-style-type: none"> (i) nuisance (ii) risk to human health or wellbeing (iii) ability to sleep or relax. 	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G –

		<p>Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014.</p> <ul style="list-style-type: none"> Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a</p>
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		<p>35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11</p>

		<p>June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>In support of the development application an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff and dated 28 July 2011 was submitted. This report undertook initial investigation however identifies that further assessment is required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is</p>

		<p>considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will have no adverse effect on pre existing television or radio reception or transmission.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a</p> <p>Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a</p> <p>Maintenance Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction</p>

		<p>Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>It is considered reasonable to secure the submission, agreement and implementation of the above plan by a condition of the development approval.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are</p>

		controlled and maintained at acceptable levels and carried out at acceptable times.
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and

	<p>restored;</p> <p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p> <p>(v) wind farm infrastructure is removed from the site.</p>	<p>replacing soil over foundations;</p> <ul style="list-style-type: none">• removing all material from site for recycling;• where tracks are of no use to the land owner, the land reinstated;• underground and above ground cabling removed;• the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326 (1) (b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to code assessment. An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the instrument, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the overall outcomes, specific outcomes and probable solutions incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme

as compared to the provisions contained within the TLPI 01/12- Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11). These changes includes changes to the wording of the overall outcomes in the Wind Farm Code as set out in section 4.5 and 4.6.3 of this assessment report. The amendment to the Mareeba Shire Planning Scheme Wind Farm Code also includes changes to the Probable Solutions (PS4, and PS5) and the Specific Outcomes (S4, S5 and S6) identified in the Wind Farm Code. TLPI 01/11 and 01/12 have expired and are no longer in effect.

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. An assessment has been undertaken against on Division 23 - Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) and the identified relevant codes.

Having regard to the above, the application has been assessed against the Mareeba Planning Scheme, with substantial weight given to the Wind Farm Code of the Planning Scheme as incorporated prior to the decision stage commencing.

In accordance with Section 313 of the SPA the proposed wind farm development application has also been assessed against:

- the State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031; and
- the State planning policies (those applicable at the time the application was properly made and as replaced by the SPP);

It has been identified at Section 6.6.1 that the proposed wind farm does not comply with the S1 of the Rural Zone Code in respect of development being of a consistent scale with existing buildings and structures in the vicinity. In accordance with Section 326 of the SPA the assessment managers decision must not conflict with a relevant instrument, unless one (or more) of the circumstances set out above apply.

Despite the identified conflict in the Planning scheme between the Wind Farm Code and the Rural Zone Code, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme, pursuant to section 326(1)(c)(ii). The Planning scheme has been overtaken by events, namely the TLPI which is now included within the Mareeba Shire Planning Scheme.

In any event there are considered to be sufficient grounds to justify the decision given the Far North Queensland Regional Plan recognises wind farms as legitimate land use and emphasis is placed on promoting renewable energy.

As set out in section 6 (Formal assessment) the wind farm development application is considered, subject to appropriate conditions, to:

- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP;
- be consistent with the Specific Outcomes of the Wind Farm Code, Filling and Excavation, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport Overlay Code of the Mareeba Shire Planning Scheme (Amendment No 01/11-Wind Farms).

7.2 Ecological Issues

An assessment has been undertaken of the development application against the relevant codes identified for assessment of code assessable development applications. The assessment against the relevant provisions of the Wind Farm Code at **Section 6.7.7** includes an assessment considering impact upon State environmental significance, given the precise

wording contained within the overall outcomes and S4 of the specific outcomes. Specifically the wording in S4 requires wind farms not have a significant adverse impacts on ecological values or on the sustainability of fauna populations in areas of State significance. The probable solutions and overall outcome both refer to State environmental significance.

The proposed development is considered to appropriately address matters of State environmental significance and therefore complies with the Rural Zone Code in this regard.

However, it is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the 	<p>Prior to the commencement of site / operational / building work</p>

<p>satisfaction of the Council.</p> <ul style="list-style-type: none"> (c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine (d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities (e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines (f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority, (g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and (h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including: (i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria (j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites). <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

Northern Quoll Management	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <p>(a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.</p> <p>(b) A monitoring program of additional utilisation studies prior to construction;</p> <p>(c) requires surveys to be undertaken during breeding seasons to ascertain:</p> <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. <p>(d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);</p> <p>(e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):</p> <p>(ii) Construction Phase Management Procedures:</p> <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.	To be maintained
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7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

From: [Ursula O'Donnell](#)
To: [Steve Adams](#)
Cc: [Jane McInnes](#)
Subject: Fw: Mt Emerald wind farm conditions (SP0549)
Date: Friday, 17 October 2014 12:34:09 PM

Hi Steve,

FYI - savery & assoc will be supplying additional amendments to the noise management conditions of Mt Emerald wind farm. Once I receive this, I'll forward to you & jane for review/consideration.

As for Refused under last question, I've forwarded to Steve C for further consideration. Please let me know if there are any departures from what has been previously discussed regarding monitoring.

Thanks,
Ursula

Sent using OWA for iPhone

From: Refused under section 47(3)(b) of the savery.com.au>
Sent: Friday, 17 October 2014 12:21:40 PM
To: Ursula O'Donnell
Cc: Refused under
Subject: RE: Mt Emerald wind farm conditions (SP0549)

Hi Ursula,

From reviewing the proposed conditions, I have a few suggestions which I am putting into the document.

I am suggesting removing the 8dBA above the background part of condition 4, as I believe it overly complicates/confuses the matter without significant benefit. As long as it is all prefaced with qualifiers that these are essentially transitional conditions until the SDAP assessment and ERA conditions are put into place we avoid setting a precedent. As long as we retain the 35dBA for during the night period I believe that we are protecting the community amenity.

My other suggested changes relate to

- the defining of "noise affected facades" which may cause confusion. As long as it's well defined I don't think it will be a problem. This is also relevant to condition 5 (the low frequency noise assessment).
- Adding in a requirement for checking of the noise model for effects of topography. The proponent has used a 0.5 ground effect in their noise modelling, which has been shown to underpredict noise levels under certain circumstances, as described in the draft guideline. Adding a requirement for this check in the conditions may take the form of either spelling out what we require or referring to the UK good practice guide.

On a related issue, the information provided is not sufficient to determine compliance with the dBC requirements. However, I don't anticipate that the proponent will have any trouble complying as they have already shown that they can comply with the Danish low frequency requirements. The dBC levels used can be found in:

- the Draft NSW Wind Farm Guideline (2011);
- Broner, N. 2010. *A Simple Criterion for Low Frequency Noise Emission Assessment*. J. Low

Frequency Noise, Vibration and Active Control. 29(1).

We are still keen to see that a condition requiring compliance monitoring is included, with the results submitted to the local authority. Is there any way for this to happen? I would expect a significant negative reaction from the community if there is no assessment required after they complete the wind farm.

Happy to discuss via teleconference when you get the chance.

Best regards,

Refused under section 47(3)(b) of the RTI Act



ABN: 62 079 417 379

Acoustic
Vibration
Environmental
Engineers

Refused under section 47(3)(b) of the RTI Act.

Suite 4 The Gap Village, 1000 Waterworks Road
PO Box 265 The Gap QLD 4061

Refused under section 47(3)(b) of the RTI Act. www.savery.com.au

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From: Ursula O'Donnell [mailto:Ursula.O'Donnell@dsdip.qld.gov.au]

Sent: Friday, 17 October 2014 11:11 AM

To: Matthew Terlich (mterlich@savery.com.au)

Cc: Steve Adams

Subject: Fw: Mt Emerald wind farm conditions

Importance: High

Hi Matt,

Just touching base regarding my email from yesterday. Have you identified any issues that may need to be resolved prior to us providing comments to the call-ins team?

I am out of the office today & Monday, so once you have the results of your review, please let me know and I'll organise a teleconference with yourself, Steve Adams and I.

Thanks again,
Ursula.

Sent using OWA for iPhone

From: Ursula O'Donnell

Sent: Thursday, 16 October 2014 4:54:47 PM

To: Refused under section 47(3)(b) of the RTI Act. mterlich@savery.com.au

Cc: Refused under section 47(3)(b) of the RTI Act. mterlich@savery.com.au

Subject: FW: Mt Emerald wind farm conditions

Hi Refused

As discussed earlier today, we have completed a SARA review of the original Mt Emerald conditions, and have reached a point we are happy with the noise conditions.

Could you please review conditions 4-6 from a technical perspective and ensure I have used the appropriate acoustic terminology, as well as whether the restrictions would work.

With regards to condition 5, could you please confirm what the source for the 65dB and 60 dB (C weighted) low frequency emission requirements? We removed the tonality penalty that was originally applied in the initial conditions, and propose to add the low frequency SDAP provisions as a condition. I would also like your opinion as to whether or not this would be a feasible requirement for the development that has been proposed?

I will give you a call tomorrow to discuss.

Cheers,
Ursula.

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7659
ursula.odonnell@dsdip.qld.gov.au

From: Steve Adams
Sent: Thursday, 16 October 2014 4:40 PM
To: Graeme Bolton; Ursula O'Donnell
Subject: Mt Emerald wind farm conditions

Well I've worked my magic. (The first version was invisible!)

Originally 41 conditions, now 14 after slicing and dicing, compression and smoke & mirrors.

I've put the Chief Executive down as receiving all reports. The question is whether we want to approve those reports or have them send them merely for info and compliance purposes. I have highlighted the conditions where we have to make the choice.

A further question for the Traffic Management Plan is do we want the applicant to just consult with the affected Council's before sending the TMP, or also get the Council's endorsement for the TMP before submitting the TMP.

Have fun reviewing

Steve Adams
Manager (Development Assessment Advisory Team)
State Assessment and Referral Agency (SARA) Team
Development Assessment Division
Planning and Property Group
Department of State Development, Infrastructure and Planning
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www.dsdip.qld.gov.au

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Great state. Great opportunity.

Steve Adams

Manager (Development Assessment Advisory Team)
State Assessment and Referral Agency (SARA) Team
Development Assessment Division
Planning and Property Group

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Great state. Great opportunity.



This email is free from viruses and malware because [avast! Antivirus](#) protection is active.

Chris Lee

From: Ursula O'Donnell <Ursula.O'Donnell@dilgp.qld.gov.au>
Sent: Monday, 20 October 2014 4:19 PM
To: Steve Adams; Jane McInnes
Subject: Fw: Mt Emerald wind Farm
Attachments: Mt Emerald conditions V2 - Savery.doc

Follow Up Flag: Follow up
Flag Status: Completed

FYI - do we need to catch up tomorrow to discuss all things mt emerald?

Sent using OWA for iPhone

From: [Refused under section 47(3)] <[Refused under section 47(3)]@savery.com.au>
Sent: Monday, 20 October 2014 1:39:33 PM
To: Ursula O'Donnell
Cc: Matthew Terlich
Subject: Mt Emerald wind Farm

Hi Ursula

Please find attached the revised conditions prepared by [Refused under section 47(3)] with some later additions from me.

I think that another way to get around the "measurement" issue is to state the operating performance requirements in condition 4 (see mauve additions).

The value of having these included is that the proponent is aware that these are performance requirements right from the outset.

At the acoustic report stage, the proponent will simply state that demonstration will be provided by means of measurement when the wind farm is operational, and that a report will be prepared and forwarded to the relevant stakeholder, or be available for inspection if required.

Irrespective, in the event of complaints the performance requirements to be applied during a measurement assessment are stated in the approval conditions.

This is a much preferable position to be in in the case of noise complaints, because now the investigating acoustician (employed by the proponent) will have a conditional performance requirement against which to test.

[Refused under section 47(3)(b) of the RTI Act] has not been part of this recent addition to his response.

Best Regards,

[Refused under section 47(3)(b) of the RTI Act]

Managing Director



Vdhu|# #Dwrfbhw\$w|Dwg#
D frxwlf#bg# lewlrq# r qvxoq#w#

ABN: 62 079 417 379

Acoustic

[Refused under section 47(3)(b) of the RTI Act.]

CONDITIONS – Mt Emerald Wind Farm

Condition		Timing																								
General / Planning Requirements																										
1.	<p>Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29/08/2014</td></tr> </tbody> </table>	Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014	While site / operational / building work is occurring and then to be maintained
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PR100246/R72893	Preliminary Environmental Management Plan	November 2013																								
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014																								
Location and Design																										
2.	<p>Submit to the chief executive administering the Planning Act, [for approval] a revised Turbine Location and Development Footprint Plan identifying the final position of:</p>	As specified in the condition																								

	<ul style="list-style-type: none"> • all proposed turbines; and • the operations and maintenance depots <p>The revised plan must be submitted prior to seeking approval for site, building or operational works and the submission of the revised noise assessment report, shadow flicker assessment report and environmental management plan required by conditions (6), (7) and (13) of this approval,</p> <p><i>Note: Micro-siting of turbines, prior to the submission of the above mentioned reports, is permitted.</i></p> <p><i>Micro-siting means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans Mount Emerald Wind Farm Turbine Location and Development Footprint PR100246-170 Issue 1 and PR100246-170 Issue A, both dated 18-11-2013.</i></p>	
3.	<p>(a) The wind farm must meet be designed and constructed in accordance with the following:</p> <ol style="list-style-type: none"> The maximum number of turbines must not exceed 63; All turbines are to be located in accordance with the [approved] revised Turbine Location and Development Footprint Plan required by condition 2 of this approval; The operations and maintenance depot is to be located in accordance with the [approved] revised Turbine Location and Development Footprint Plan required by condition 2 of this approval; The overall maximum height of any turbine (measured to the tip of the rotor blade at their highest point above ground level) must not exceed 1179.5 metres AHD; The hub height of any turbine must not exceed 90 metres above ground level; All cabling must be provided underground, except 	<p>(a) Prior to the commencement of use and then to be maintained</p> <p>(b) Prior to the commencement of use</p>

	<p>where the approved Environmental Management Plan recommends an alternative method in environmentally sensitive locations.</p> <p>(b) Submit certification to the chief executive from an RPEQ that the turbines as constructed comply with the design specifications indicated in part (a) of this condition.</p>	
Acoustic Amenity		
4.	<p>The wind farm development must be designed and operated to ensure that:</p> <p>(a) The outdoor night-time (10pm to 6am) equivalent noise level ($L_{Aeq, night}$) at existing sensitive land uses, does not exceed <u>the higher of:</u></p> <p>(i) 35dB(A); or</p> <p>(ii) the background noise ($L_{A90, 10 \text{ minutes}}$) by more than 5dB(A);</p> <p>and</p> <p>(b) The outdoor day-time (6am to 10pm) equivalent noise level ($L_{Aeq, day}$) at existing sensitive land uses, does not exceed <u>the higher of:</u></p> <p>(i) 40dB(A) ($L_{A90, 10 \text{ minutes}}$); or</p> <p>(ii) the background noise ($L_{A90, 10 \text{ minutes}}$) by more than 5dB(A);</p> <p>or</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB ($L_{A90, 10 \text{ min}}$) applies.</p> <p>The equivalent noise levels ($L_{Aeq, night}$ and $L_{Aeq, day}$) are to be assessed one metre from all noise affected facades of existing sensitive land uses <u>for all integer hub height wind speeds from cut-in to rated power of the wind</u></p>	<p>Prior to the commencement of use and then to be maintained</p>

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	<p><u>turbine generator, with wind speeds extrapolated to hub height.</u></p> <p><u>(c) Wind turbine noise does not exhibit tonal characteristics, when assessed in accordance with ISO 1996-2:2007, or equivalent method;:</u></p> <p><u>(d) Wind turbine noise does not exhibit enhanced amplitude modulation characteristics, when assessed in accordance with NZ6808, Section B3.2, Interim test method, or similar method;</u></p> <p><u>(e) Wind turbine noise does not exhibit clearly perceptible impulsive characteristics; and</u></p> <p><u>(f) Wind turbine noise does not exceed 85 dBG, when assessed inside a habitable room of a dwelling of an existing sensitive land use.</u></p>	
5.	<p>The wind farm development must be designed and operated to ensure that the low frequency noise level does not exceed:</p> <p>(a) 60dB(C) for the outdoor night-time (10pm to 6am) C-Weighted equivalent noise level ($L_{Ceq, night-10min}$); and</p> <p>(b) 65dB(C) for the outdoor day-time (6am to 10pm) C-Weighted equivalent noise level ($L_{Ceq, nightday-10min}$).</p> <p>The C-Weighted noise levels (L_{Aeq}, $L_{Ceq, day}$ and $L_{Ceq, night}$) are to be assessed one metre from all noise affected façades of existing adjoining sensitive land uses.</p>	<p>Prior to the commencement of use and then to be maintained</p>
6.	<p>(a) Submit to the chief executive <u>[for approval]</u> a revised noise assessment report, certified by a suitably qualified acoustic engineer, demonstrating that the proposed wind farm will comply with the noise levels specified in conditions <u>5-4</u> and <u>6-5</u> of this approval. The report is to:</p> <p><u>i. Model the acoustic impacts of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</u></p> <p><u>Noise modelling conducted using ISO 9613-2:1996 is</u></p>	<p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) Prior to commencement of use and then to be maintained</p>

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Commented [JS1]: Suggest that these items be included in Condition 4. The purpose of including these is to simply state that the operations shall not include these characteristics. The applicant can respond by stating that the assessment will be demonstrated by measurement at commissioning and this would be a satisfactory response. The benefit of having these items listed is that if a complaint is raised, then these items can be considered as part of the noise investigation regarding the complaint. If these items are not included then investigator has no reference against which to assess compliance.

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appropriate. If concave topography is present between a wind turbine location and a sensitive land use receptor location, a correction of +3 dB should be added to the calculated overall A-weighted noise level for propagation "across a valley", i.e. a concave ground profile, or where the ground falls away significantly, between the turbine and the receiver location.

The recommended criterion for determining if the ground topography is concave is:

i.
$$h_m \geq 1.5 \times \frac{|h_s - h_r|}{2}$$

where h_m is the mean height above the ground of the direct line of sight from the receiver to the source (as defined in ISO 9613-2, Figure 3), and h_s and h_r are the heights above local ground level of the source and receiver respectively.

- ii. Identify, if any, design specifications or operational restrictions that may be necessary to ensure compliance with the noise levels specified in condition ~~5-4~~ and ~~65~~, such as turbine types or limitations on hours of operation of specific turbines.

- (b) The wind farm is to be constructed and operated in accordance with **[the approved]** revised noise assessment report, in particular any design specifications or operational restrictions identified in part (a) of this condition.

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Visual Amenity

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| 7. | <p>(a) Submit to the chief executive [for approval] a revised shadow flicker assessment report certified by a suitably qualified and experienced person demonstrating that the shadow flicker from the turbines will not exceed 10 hours per annum at any dwelling existing at [insert date of approval].</p> <p>The report is to model the shadow flicker of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of</p> | <p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) Prior to commencement of use and then to be maintained</p> |
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	<p>this approval.</p> <p>(b) The wind farm is to be constructed and operated in accordance with [the approved] revised shadow flicker assessment report, in particular any design specifications or operational restrictions required to ensure that shadow flicker from the constructed turbines does not exceed 10 hours per annum.</p>	
8.	<p>The turbines and blades must have a low reflectivity finish.</p>	<p>Prior to the commencement of use and to be maintained</p>
9.	<p>External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p> <p>(b) aviation obstacle lighting where required by the Civil Aviation and Safety Authority;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Any external lighting, excluding aviation obstacle lights, is to comply with Australian Standard AS 4282-1993 <i>Control of the obtrusive effects of outdoor lighting</i>.</p>	<p>Prior to commencement of use, and then to be maintained</p>
10.	<p>(a) Submit to the chief executive an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>(b) The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and maintenance depots and other associated buildings (excluding the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(c) Carry out and maintain the development in accordance</p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) Prior to the commencement of use and to be maintained at all times</p> <p>(c) Prior to the commencement of use</p>

	<p>with the submitted on-site landscaping plan prepared in accordance with part (a) of this condition,</p> <p>(d) Submit certification to the chief executive from a suitably qualified landscape architect that the works have been carried out in accordance with part (a) of this condition.</p>	
Television and Radio Reception		
11.	<p>(a) Undertake an assessment of the television and radio reception strength in the area within 5 km of any proposed turbine and in which dwellings are located as at [insert date of approval] prior to the construction of the wind farm.</p> <p>The pre-construction assessment must be undertaken by a television and radio monitoring specialist, and include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by a television and radio monitoring specialist.</p> <p>(b) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction assessment of the television and radio reception strength must be carried out at or in close proximity to the dwelling by a television and radio monitoring specialist.</p> <p>(c) If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality.</p> <p>(d) Provide to the chief executive, on request, the results of the pre-construction assessment and any post-construction assessment carried out in response to a complaint and evidence that the appropriate mitigation measures have been undertaken to address television and radio reception strength where required.</p>	<p>(a) Prior to commencement of site / operational / building work.</p> <p>(b) Within one (1) month of receiving a complaint</p> <p>(c) Within two (2) months of the post-construction survey</p> <p>(d) Within (2) months of the post-construction survey</p>

Traffic Management		
12.	<p>(a) Submit to the chief executive [for approval], a Construction Traffic Management Plan (CTMP) prepared by an RPEQ and in consultation with [and endorsed by] the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The CTMP must relate to the roads proposed to be used in transporting material, personnel and equipment related to the construction and decommissioning of the wind farm. The CTMP must include:</p> <ul style="list-style-type: none"> (i) an existing conditions survey of Hansen Road, Springmount Road and Kippen Drive including details of the suitability, design, condition and construction standard of the relevant public roads; (ii) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts; (iii) the designation of appropriate pre-construction, construction/decommissioning and transport vehicle routes to and from the site; (iv) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road; (v) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include: <ul style="list-style-type: none"> (a) detailed engineering plans showing the required works; 	<ul style="list-style-type: none"> (a) Prior to the commencement of site / operational / building work (b) In accordance with the timeframes specified in the CTMP (c) Within three (3) months of the completion of construction

	<p>(b) the timing of when the works are to be undertaken;</p> <p>(c) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic;</p> <p>(vi) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads,</p> <p>This may include, as recommended in the "Technical Note 2 – Traffic Impact Assessment Engineering Response" prepared by Jacobs dated 29/08/14:</p> <p>a) providing a 30 seat shuttle bus service for construction workers arriving and departing the project site, servicing the key townships where the construction workers live;</p> <p>b) providing minimal or restricted on-site parking to discourage workers arriving to and departing the site via private vehicles</p> <p>(vii) a program to rehabilitate Hansen Road, Springmount Road and Kippen Drive to the pre-construction condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>(b) Carry out the development in accordance with the [approved] CTMP.</p> <p>(c) Submit to the chief executive certification from an RPEQ that the development has been carried out in accordance with the [approved] CTMP.</p>	
Environmental Management		

13.	<p>(a) Submit to the chief executive [for approval] an Environmental Management Plan (EMP). The EMP must:</p> <ol style="list-style-type: none"> be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within Appendix A of the RPS Development Application Material Change of Use Report dated March 2012; be based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval; include the following components, as further detailed in Attachment 1: <ul style="list-style-type: none"> • construction and work site operational management plan • sediment, erosion and storm water management plan • hydrocarbon and hazardous substances plan • bushfire risk management plan and emergency evacuation plan • threatened species management plan • weed and pest management plan • rehabilitation plan • habitat clearing and management plan • ecological fire management plan • cultural heritage management plan • environmental management plan training program • environmental management plan reporting program • implementation plan 	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) During site / operational /building work and to be maintained</p>
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	<ul style="list-style-type: none"> decommissioning and rehabilitation plan <p>(b) The development must be carried out in accordance with the [approved] EMP.</p>	
Complaints Management		
14.	<p>(a) Prepare and maintain a Complaints Management Plan/Register (CMPR). The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) a register outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be communicated to the complainant; e. the nature of the complaint, such as noise, television reception interference; f. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special characteristics; g. the processes of investigation to resolve the complaint. <p>(b) All complaints must be managed in accordance with the approved CMPR.</p> <p>(c) Provide to the chief executive, on request, a copy of the CMPR, in particular the processes of investigation to resolve the complaints.</p>	<p>(a) Prior to the commencement of use</p> <p>(b) - (c) During site / operational /building work and then to be maintained</p>

GENERAL ADVICE

- (a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*
- (b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical Safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*
- (c) *In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.*
- Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.*
- (d) *Any works will be required to comply with the easement terms and conditions as per easement Dealing 701758510 and 713030213*
- (e) *Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.*
- (f) *Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.*
- (g) *The site has slight residual risk of unexploded ordnance (UXO). In the event of identification of an unexplored ordnance (UXO), the Department of Defence recommend the following procedure:*
- *Do not touch or disturb the object;*
 - *Take action, where appropriate, to prevent it being disturbed by another person;*
 - *Note its approximate dimensions and general appearance;*
 - *Note the route to its location; and*
 - *Advise the Police as soon as possible*
- (h) *Copies of the final development plans, must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:*
- *the Civil Aviation Safety Authority;*
 - *the Department of Defence (RAAF Aeronautical Information Service);*
 - *Airservices Australia;*
 - *any aerodrome operator within 15 km of the outside property boundaries of the site;*
 - *the Aerial Agriculture Association of Australia;*
 - *any organisation responsible for providing air ambulance services in the area.*

Attachment 1 – Components of the Environmental Management Plan

Construction and Work Site Operational Management Plan

The environmental management plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- d) procedures for managing noise emissions from construction-related activities;
- e) appropriate sanitary facilities to be provided for construction and maintenance staff;
- f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- h) measures for dust mitigation, control and monitoring dust gauges;
- i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

The environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- a) identification of all construction and operational processes that could potentially lead to water contamination;
- b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- d) procedures for waste water discharge management;
- e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;
- f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.

Bushfire risk management plan and emergency evacuation plan

The bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for firefighting purposes, including minimum capacities, appropriate connections and signage;

<p>(b) procedures for vegetation management, fuel control and the provision of firefighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>
<p>Threatened species management plan</p> <p>The threatened species management plan must include:</p> <p>(a) measures to identify the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>
<p>Weed and pest management plan</p> <p>The weed and pest management plan must include:</p> <p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>
<p>Rehabilitation plan</p> <p>The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>
<p>Habitat clearing and management plan</p> <p>The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>
<p>Ecological fire management plan</p> <p>The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>
<p>Cultural heritage management plan</p> <p>The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>

Environmental management plan training program

The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.

Environmental management plan reporting program

The environmental management plan must include a program for reporting environmental incidents, including:

- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;
- (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation timetable

The environmental management plan must include a timetable for implementation of all programs and works referred to in sections above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.

Decommissioning and Rehabilitation Plan

The decommissioning and rehabilitation plan must address the actions to be undertaken where any or all turbines have permanently ceased to generate electricity. The plan must include a program for:

- (a) remove of above ground non-operational equipment;
- (b) removal and clean up any residual contamination;
- (c) rehabilitation/revegetation of storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbines, if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm;
- (d) notification of the relevant authorities of the turbines ceasing operation. Such notification should not be given no later than two months after the turbine(s) cease operation.

From: [Ursula O'Donnell](#)
To: [Jane McInnes](#)
Cc: [Mark Saunders](#); [Graeme Bolton](#)
Subject: FW: Mt Emerald
Date: Wednesday, 22 October 2014 4:15:51 PM
Attachments: [Mt Emerald conditions V3.doc](#)

Hi Jane,

As per our debrief this afternoon, attached is the final SARA review of the Mt Emerald wind farm call-in conditions.

Cheers,
Ursula.

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7659
ursula.odonnell@dsdip.qld.gov.au

From: Steve Adams
Sent: Tuesday, 21 October 2014 6:29 PM
To: Graeme Bolton; Ursula O'Donnell
Subject: Mt Emerald

Folks,

Attached is the latest version of the wind farm conditions taking into account the comments from the acoustic consultants and our chat this afternoon.

I've adjusted the timing for the revised turbine location plan. Made the adjustments to the acoustic conditions, eliminating the Savery stuff we didn't agree with. I've fleshed out the existing furry critter management plan requirement of the environmental management plan with the new threatened furry critter condition from Cardno, Finally I've removed the approval from the chief executive requirement from all the conditions.

Cheers

Steve Adams
Manager (Development Assessment Advisory Team)
State Assessment and Referral Agency (SARA) Team
Development Assessment Division
Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government

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Great state. Great opportunity.

CONDITIONS – Mt Emerald Wind Farm

Condition		Timing																								
General / Planning Requirements																										
1.	<p>Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29/08/2014</td></tr> </tbody> </table>	Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18-11-2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014	While site / operational / building work is occurring and then to be maintained
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Location and Design																										
2.	<p>Submit to the chief executive administering the Planning Act, a revised Turbine Location and Development Footprint Plan identifying the final position of:</p>	Prior to seeking approval for any site, operational or building work																								

	<ul style="list-style-type: none"> • all proposed turbines; and • the operations and maintenance depots <p><i>Note: Micro-siting of turbines, prior to the submission of the above mentioned reports, is permitted.</i></p> <p><i>Micro-siting means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans Mount Emerald Wind Farm Turbine Location and Development Footprint PR100246-170 Issue 1 and PR100246-170 Issue A, both dated 18-11-2013.</i></p>	
3.	<p>(a) The wind farm must meet be designed and constructed in accordance with the following:</p> <ol style="list-style-type: none"> The maximum number of turbines must not exceed 63; All turbines are to be located in accordance with the revised Turbine Location and Development Footprint Plan required by condition 2 of this approval; The operations and maintenance depot is to be located in accordance with the revised Turbine Location and Development Footprint Plan required by condition 2 of this approval; The overall maximum height of any turbine (measured to the tip of the rotor blade at their highest point above ground level) must not exceed 1179.5 metres AHD; The hub height of any turbine must not exceed 90 metres above ground level; All cabling must be provided underground, except where the approved Environmental Management Plan recommends an alternative method in environmentally sensitive locations. <p>(b) Submit certification to the chief executive from an RPEQ that the turbines as constructed comply with the design specifications indicated in part (a) of this condition.</p>	<p>(a) Prior to the commencement of use and then to be maintained</p> <p>(b) Prior to the commencement of use</p>

Acoustic Amenity		
4.	<p>The wind farm development must be designed and operated to ensure that:</p> <p>(a) The outdoor night-time (10pm to 6am) equivalent noise level ($L_{Aeq, night}$) at existing sensitive land uses, does not exceed the higher of:</p> <p>(i) 35dB(A); or</p> <p>(ii) the background noise ($L_{A90, 10 \text{ minutes}}$) by more than 5dB(A);</p> <p>and</p> <p>(b) The outdoor day-time (6am to 10pm) equivalent noise level ($L_{Aeq, day}$) at existing sensitive land uses, does not exceed the higher of:</p> <p>(i) 40dB(A) ($L_{A90, 10 \text{ minutes}}$); or</p> <p>(ii) the background noise ($L_{A90, 10 \text{ minutes}}$) by more than 5dB(A);</p> <p>The equivalent noise levels ($L_{Aeq, night}$ and $L_{Aeq, day}$) are to be assessed one metre from all noise affected facades of existing sensitive land uses for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator,.</p>	<p>Prior to the commencement of use and then to be maintained</p>
5.	<p>The wind farm development must be designed and operated to ensure that that the low frequency noise level does not exceed:</p> <p>(a) 60dB(C) for the outdoor night-time (10pm to 6am) C-Weighted equivalent noise level ($L_{Ceq, night}$); and</p> <p>(b) 65dB(C) for the outdoor day-time (6am to 10pm) C-Weighted equivalent noise level ($L_{Ceq, day}$).</p> <p>The C-Weighted noise levels ($L_{Ceq, day}$ and $L_{Ceq, night}$) are to be assessed one metre from all noise affected façades of existing adjoining sensitive land uses.</p>	<p>Prior to the commencement of use and then to be maintained</p>

6.	<p>(a) Submit to the chief executive a revised noise assessment report, certified by a suitably qualified acoustic engineer, demonstrating that the proposed wind farm will comply with the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Model the acoustic impacts of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>The noise modelling should take into account the varied topography between the turbine locations and sensitive land use receptors and any impacts that may have on predicted noise levels.</p> <p>ii. Identify, if any, design specifications or operational restrictions that may be necessary to ensure compliance with the noise levels specified in condition 4 and 5, such as turbine types or limitations on hours of operation of specific turbines.</p> <p>(b) The wind farm is to be constructed and operated in accordance with revised noise assessment report, in particular any design specifications or operational restrictions identified in part (a) of this condition.</p>	<p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) Prior to commencement of use and then to be maintained</p>
Visual Amenity		
7.	<p>(a) Submit to the chief executive a revised shadow flicker assessment report certified by a suitably qualified and experienced person demonstrating that the shadow flicker from the turbines will not exceed 10 hours per annum at any dwelling existing at [insert date of approval].</p> <p>The report is to model the shadow flicker of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>(b) The wind farm is to be constructed and operated in accordance with revised shadow flicker assessment report, in particular any design specifications or</p>	<p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) Prior to commencement of use and then to be maintained</p>

	operational restrictions required to ensure that shadow flicker from the constructed turbines does not exceed 10 hours per annum.	
8.	The turbines and blades must have a low reflectivity finish.	Prior to the commencement of use and to be maintained
9.	<p>External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p> <p>(b) aviation obstacle lighting where required by the Civil Aviation and Safety Authority;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Any external lighting, excluding aviation obstacle lights, is to comply with Australian Standard <i>AS 4282-1993 Control of the obtrusive effects of outdoor lighting</i>.</p>	Prior to commencement of use, and then to be maintained
10.	<p>(a) Submit to the chief executive an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>(b) The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and maintenance depots and other associated buildings (excluding the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(c) Carry out and maintain the development in accordance with the submitted on-site landscaping plan prepared in accordance with part (a) of this condition,</p> <p>(d) Submit certification to the chief executive from a suitably qualified landscape architect that the works have been carried out in accordance with part (a) of this condition.</p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) Prior to the commencement of use and to be maintained at all times</p> <p>(c) Prior to the commencement of use</p>

Television and Radio Reception		
11.	<p>(a) Undertake an assessment of the television and radio reception strength in the area within 5 km of any proposed turbine and in which dwellings are located as at [insert date of approval] prior to the construction of the wind farm.</p> <p>The pre-construction assessment must be undertaken by a television and radio monitoring specialist, and include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by a television and radio monitoring specialist.</p> <p>(b) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction assessment of the television and radio reception strength must be carried out at or in close proximity to the dwelling by a television and radio monitoring specialist.</p> <p>(c) If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality.</p> <p>(d) Provide to the chief executive, on request, the results of the pre-construction assessment and any post-construction assessment carried out in response to a complaint and evidence that the appropriate mitigation measures have been undertaken to address television and radio reception strength where required.</p>	<p>(a) Prior to commencement of site / operational / building work.</p> <p>(b) Within one (1) month of receiving a complaint</p> <p>(c) Within two (2) months of the post-construction survey</p> <p>(d) Within (2) months of the post-construction survey</p>
Traffic Management		
12.	<p>(a) Submit to the chief executive a Construction Traffic Management Plan (CTMP) prepared by an RPEQ and in consultation with the Department of Transport and Main</p>	<p>(a) Prior to the commencement of site / operational /</p>

	<p>Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The CTMP must relate to the roads proposed to be used in transporting material, personnel and equipment related to the construction and decommissioning of the wind farm. The CTMP must include:</p> <ul style="list-style-type: none"> (i) an existing conditions survey of Hansen Road, Springmount Road and Kippen Drive including details of the suitability, design, condition and construction standard of the relevant public roads; (ii) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts; (iii) the designation of appropriate pre-construction, construction/decommissioning and transport vehicle routes to and from the site; (iv) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road; (v) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include: <ul style="list-style-type: none"> (a) detailed engineering plans showing the required works; (b) the timing of when the works are to be undertaken; (c) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of 	<p>building work</p> <p>(b) In accordance with the timeframes specified in the CTMP</p> <p>(c) Within three (3) months of the completion of construction</p>
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	<p>construction traffic;</p> <p>(vi) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads,</p> <p>This may include, as recommended in the “Technical Note 2 – Traffic Impact Assessment Engineering Response” prepared by Jacobs dated 29/08/14:</p> <p>a) providing a 30 seat shuttle bus service for construction workers arriving and departing the project site, servicing the key townships where the construction workers live;</p> <p>b) providing minimal or restricted on-site parking to discourage workers arriving to and departing the site via private vehicles</p> <p>(vii) a program to rehabilitate Hansen Road, Springmount Road and Kippen Drive to the pre-construction condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>(b) Carry out the development in accordance with the CTMP.</p> <p>(c) Submit to the chief executive certification from an RPEQ that the development has been carried out in accordance with the CTMP.</p>	
Environmental Management		
13.	<p>(a) Submit to the chief executive an Environmental Management Plan (EMP). The EMP must:</p> <p>i. be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within Appendix A of the</p>	<p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) During site / operational</p>

	<p>RPS Development Application Material Change of Use Report dated March 2012;</p> <p>ii. be based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval;</p> <p>iii. include the following components, as further detailed in Attachment 1:</p> <ul style="list-style-type: none"> • construction and work site operational management plan • sediment, erosion and storm water management plan • hydrocarbon and hazardous substances plan • bushfire risk management plan and emergency evacuation plan • significant species management plan • weed and pest management plan • rehabilitation plan • habitat clearing and management plan • ecological fire management plan • cultural heritage management plan • environmental management plan training program • environmental management plan reporting program • implementation plan • decommissioning and rehabilitation plan <p>(b) The development must be carried out in accordance with the EMP.</p>	/building work and to be maintained
Complaints Management		
14.	(a) Prepare and maintain a Complaints Management Plan/Register (CMPR). The plan must include, but is not	(a) Prior to the commencement of

	<p>limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) a register outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be communicated to the complainant; e. the nature of the complaint, such as noise, television reception interference; f. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special characteristics; g. the processes of investigation to resolve the complaint. <p>(b) All complaints must be managed in accordance with the approved CMRP.</p> <p>(c) Provide to the chief executive and Council, on request, a copy of the CMRP, in particular the processes of investigation to resolve the complaints.</p>	<p>use</p> <p>(b) - (c) During site / operational /building work and then to be maintained</p>
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GENERAL ADVICE

- (a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical Safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

(c) *In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.*

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(d) *Any works will be required to comply with the easement terms and conditions as per easement Dealing 701758510 and 713030213*

(e) *Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.*

(f) *Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.*

(g) *The site has slight residual risk of unexploded ordnance (UXO). In the event of identification of an unexploded ordnance (UXO), the Department of Defence recommend the following procedure:*

- Do not touch or disturb the object;*
- Take action, where appropriate, to prevent it being disturbed by another person;*
- Note its approximate dimensions and general appearance;*
- Note the route to its location; and*
- Advise the Police as soon as possible*

(h) *Copies of the final development plans, must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:*

- the Civil Aviation Safety Authority;*
- the Department of Defence (RAAF Aeronautical Information Service);*
- Airservices Australia;*
- any aerodrome operator within 15 km of the outside property boundaries of the site;*
- the Aerial Agriculture Association of Australia;*
- any organisation responsible for providing air ambulance services in the area.*

Attachment 1 – Components of the Environmental Management Plan

Construction and Work Site Operational Management Plan

The environmental management plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- d) procedures for managing noise emissions from construction-related activities;
- e) appropriate sanitary facilities to be provided for construction and maintenance staff;
- f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- h) measures for dust mitigation, control and monitoring dust gauges;
- i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

The environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- a) identification of all construction and operational processes that could potentially lead to water contamination;
- b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- d) procedures for waste water discharge management;
- e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;
- f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.

Bushfire risk management plan and emergency evacuation plan

The bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for firefighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of firefighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.

Significant Species Management Plans must:

- (a) include plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:
 - i. are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or
 - ii. are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and
 - iii. are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999*.
- (b) set out key impact management strategies including:
 - i. further baseline programs;
 - ii. management targets;
 - iii. design, construction and operational impact avoidance and mitigation measures and protocols;
 - iv. quantitative performance indicators;
 - v. monitoring and reporting regimes;
 - vi. corrective actions;
 - vii. timeframes for identified actions; and
 - viii. applicant and stakeholder responsibilities.

Weed and pest management plan

The weed and pest management plan must include:

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>
<p>Rehabilitation plan</p> <p>The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>
<p>Habitat clearing and management plan</p> <p>The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>
<p>Ecological fire management plan</p> <p>The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>
<p>Cultural heritage management plan</p> <p>The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>
<p>Environmental management plan training program</p> <p>The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>
<p>Environmental management plan reporting program</p> <p>The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.</p>
<p>Implementation timetable</p> <p>The environmental management plan must include a timetable for implementation of all programs and works referred to in sections above. Thereafter the development shall be</p>

carried out in accordance with the approved environmental management plans.

Decommissioning and Rehabilitation Plan

The decommissioning and rehabilitation plan must address the actions to be undertaken where any or all turbines have permanently ceased to generate electricity. The plan must include a program for:

- (a) remove of above ground non-operational equipment;
- (b) removal and clean up any residual contamination;
- (c) rehabilitation/revegetation of storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbines, if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm;
- (d) notification of the relevant authorities of the turbines ceasing operation. Such notification should not be given no later than two months after the turbine(s) cease operation.

From: [Ursula O'Donnell](#)
To: [Jane McInnes](#)
Subject: FW: Mt Emerald wind farm conditions (SP0549)
Date: Wednesday, 29 October 2014 3:22:13 PM

Jane,

I believe the below is the source reference for the low-frequency noise criterion. It relates to an earlier email enquiry of mine to Matthew on 16 October (below).

Cheers,
Ursula

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7659
ursula.odonnell@dsdip.qld.gov.au

From: [Refused under section 47(3)(b) of the RTI] [savery.com.au](#)
Sent: Friday, 17 October 2014 12:22 PM
To: Ursula O'Donnell
Cc: [Refused under]
Subject: RE: Mt Emerald wind farm conditions (SP0549)

Hi Ursula,

From reviewing the proposed conditions, I have a few suggestions which I am putting into the document.

I am suggesting removing the 8dBA above the background part of condition 4, as I believe it overly complicates/confuses the matter without significant benefit. As long as it is all prefaced with qualifiers that these are essentially transitional conditions until the SDAP assessment and ERA conditions are put into place we avoid setting a precedent. As long as we retain the 35dBA for during the night period I believe that we are protecting the community amenity.

My other suggested changes relate to

- the defining of "noise affected facades" which may cause confusion. As long as it's well defined I don't think it will be a problem. This is also relevant to condition 5 (the low frequency noise assessment).
- Adding in a requirement for checking of the noise model for effects of topography. The proponent has used a 0.5 ground effect in their noise modelling, which has been shown to underpredict noise levels under certain circumstances, as described in the draft guideline. Adding a requirement for this check in the conditions may take the form of either spelling out what we require or referring to the UK good practice guide.

On a related issue, the information provided is not sufficient to determine compliance with the dBC requirements. However, I don't anticipate that the proponent will have any trouble complying as they have already shown that they can comply with the Danish low frequency requirements. The dBC levels used can be found in:

- the Draft NSW Wind Farm Guideline (2011);
- Broner, N. 2010. *A Simple Criterion for Low Frequency Noise Emission Assessment*. J. Low Frequency Noise, Vibration and Active Control. 29(1).

We are still keen to see that a condition requiring compliance monitoring is included, with the

results submitted to the local authority. Is there any way for this to happen? I would expect a significant negative reaction from the community if there is no assessment required after they complete the wind farm.

Happy to discuss via teleconference when you get the chance.

Best regards,

Refused under section 47(3)(b) of the RTI Act



ABN: 62 079 417 379

Acoustic
Vibration
Environmental
Engineers

Refused under section 47(3)(b) of the RTI Act.

Suite 4 The Gap Village, 1000 Waterworks Road
PO Box 265 The Gap QLD 4061

Refused under section 47(3)(b) of the RTI Act. www.savery.com.au

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From: Ursula O'Donnell [mailto:Ursula.O'Donnell@dsdip.qld.gov.au]

Sent: Friday, 17 October 2014 11:11 AM

To: Refused under section 47(3)(b) of the RTI Act. [savery.com.au](http://www.savery.com.au)

Cc: Steve Adams

Subject: Fw: Mt Emerald wind farm conditions

Importance: High

Hi Matt,

Just touching base regarding my email from yesterday. Have you identified any issues that may need to be resolved prior to us providing comments to the call-ins team?

I am out of the office today & Monday, so once you have the results of your review, please let me know and I'll organise a teleconference with yourself, Steve Adams and I.

Thanks again,
Ursula.

Sent using OWA for iPhone

From: Ursula O'Donnell

Sent: Thursday, 16 October 2014 4:54:47 PM

To: Refused under section 47(3)(b) of the RTI Act. savery.com.au

Cc: Refused under section 47(3)(b) of the RTI Act. savery.com.au

Subject: FW: Mt Emerald wind farm conditions

Hi Refused

As discussed earlier today, we have completed a SARA review of the original Mt Emerald conditions, and have reached a point we are happy with the noise conditions.

Could you please review conditions 4-6 from a technical perspective and ensure I have used the appropriate acoustic terminology, as well as whether the restrictions would work.

With regards to condition 5, could you please confirm what the source for the 65dB and 60 dB (C weighted) low frequency emission requirements? We removed the tonality penalty that was originally applied in the initial conditions, and propose to add the low frequency SDAP provisions as a condition. I would also like your opinion as to whether or not this would be a feasible requirement for the development that has been proposed?

I will give you a call tomorrow to discuss.

Cheers,
Ursula.

Ursula O'Donnell | Principal Planner
State Assessment and Referral Agency (SARA)
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7659
ursula.odonnell@dsdip.qld.gov.au

From: Steve Adams
Sent: Thursday, 16 October 2014 4:40 PM
To: Graeme Bolton; Ursula O'Donnell
Subject: Mt Emerald wind farm conditions

Well I've worked my magic. (The first version was invisible!)

Originally 41 conditions, now 14 after slicing and dicing, compression and smoke & mirrors.

I've put the Chief Executive down as receiving all reports. The question is whether we want to approve those reports or have them send them merely for info and compliance purposes. I have highlighted the conditions where we have to make the choice.

A further question for the Traffic Management Plan is do we want the applicant to just consult with the affected Council's before sending the TMP, or also get the Council's endorsement for the TMP before submitting the TMP.

Have fun reviewing

Steve Adams
Manager (Development Assessment Advisory Team)
State Assessment and Referral Agency (SARA) Team
Development Assessment Division
Planning and Property Group
Department of State Development, Infrastructure and Planning
Queensland Government

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www.dsdip.qld.gov.au

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Great state. Great opportunity.

Steve Adams

Manager (Development Assessment Advisory Team)
State Assessment and Referral Agency (SARA) Team
Development Assessment Division
Planning and Property Group

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Great state. Great opportunity.



This email is free from viruses and malware because [avast! Antivirus](#) protection is active.

Chris Lee

From: Jane McInnes <Jane.McInnes@dsdip.qld.gov.au>
Sent: Tuesday, 4 November 2014 4:38 PM
To: Refused under s cardno.com.au
Subject: Further advice - Mount Emerald Wind Farm
Attachments: Attachment 1 - Assessment Report by Cardno (4 11 14).docx

Hi Refuse

I have received legal advice on the Assessment Report for the Mount Emerald Wind Farm development application as attached.

Refused under section 47(3)(a) of the RTI Act. Exempt information under schedule 3, item 7 of the RTI Act (Legal professional privilege).

Could you please give me a call to discuss whether you will be able to amend your report by COB Thursday, 6 November 2014? Please disregard some of the comments as indicated.

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au



Great State. Great Opportunity. And a plan for the future.
Please consider the environment before printing this email

Chris Lee

From: [Refused under section 47(3)(b) of the RTI Act] cardno.com.au>
Sent: Monday, 10 November 2014 9:52 AM
To: Jane McInnes
Cc: Steve Reynolds
Subject: RE: Further advice - Mount Emerald Wind Farm
Attachments: HRP14122.R01.005 Assessment Report - Final.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Jane,

Please find attached an updated version of the Mt Emerald Wind Farm Assessment Report. This version incorporates a range of amendments in response to the comments arising from DSDIP's legal review.

I will call to discuss later today to talk you through some of the changes, but in summary the report addresses all of the key items identified, being the assessment of the TLPI, the matter of sufficient grounds, and updates to the landscape and ecology sections.

Kind regards,

[Refused under section 47(3)(b) of the RTI Act]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

Address Level 11 Green Square North Tower, 515 St Pauls Terrace, Fortitude Valley, QLD 4006 Australia

Postal Locked Bag 4006, Fortitude Valley 4006

Email [Refused under section 47(3)(b) of the RTI Act] **Web** www.cardno.com/cardnohrp

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From: Jane McInnes [<mailto:Jane.McInnes@dsdip.qld.gov.au>]

Sent: Tuesday, 4 November 2014 4:38 PM

To: [Refused under section 47(3)(b) of the RTI Act]

Subject: Further advice - Mount Emerald Wind Farm

Hi [Refused under section 47(3)(b) of the RTI Act]

I have received legal advice on the Assessment Report for the Mount Emerald Wind Farm development application as attached.

The main concern with the report is that the assessment should have been undertaken against the TLPI 01/11 with weight given to the Amendment No 01/11-Wind Farms where appropriate. I understand that this is not going to change the outcome, however from a legal point of view we need to make sure that the assessment is undertaken against the correct instrument. There is also some concerns with the visual impact assessment and ecological assessment.

Could you please give me a call to discuss whether you will be able to amend your report by COB Thursday, 6 November 2014? Please disregard some of the comments as indicated.

Kind regards

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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

November 2014

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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LIST OF ATTACHMENTS

Attachment A – Recommended Conditions

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Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Represent.	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological – impacts of wind farm on protected flora and fauna
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray and environmental / contaminated land matters
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical Engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the wind farm was undertaken by Foresight Partners in parallel with this assessment.

Overall, the development application complies with the relevant planning instruments set out within the assessment report, with two occasions where a potential conflict may arise with the applicable codes. There are sufficient grounds to justify the decision notwithstanding those potential conflicts.

On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- technical assessments to inform recommendations;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of, assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommending approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises an assessment of the proposed development against the applicable planning framework. It includes an assessment in terms of planning and technical matters, and incorporates the outcomes of an economic assessment undertaken in parallel by Foresight Partners. It has not addressed any submissions received in respect of the Ministerial Call In.

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme (version 1/2007, in effect at the time of lodgement) and the Temporary Local Planning Instrument 01/001 (Wind Farms). The Planning Scheme and TLPI prescribe Code Assessment for the proposed development. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Technical Assessment provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment of Development Application provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes onto state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)*

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referrable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 **Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)**

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 Department of Health

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

“There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life.”

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 Mareeba Shire Council

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 Tablelands Regional Council

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA, the Mareeba Shire Planning Scheme and other relevant planning instruments as discussed in this Chapter. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- “(2) *The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) the State planning regulatory provisions;*
 - (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) any applicable codes in the following instruments-*

- (i) a temporary local planning instrument;
 - (ii) a preliminary approval to which section 242 applies
 - (iii) a planning scheme;
- (f) if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.
- (3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—
 - (a) the common material;
 - (b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
 - (c) any referral agency's response for the application;
 - (d) the purposes of any instrument containing an applicable code;
- (4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).
- (5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.
- (6) Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) In assessing the application, the assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-
 - (a) before the day decision stage for the application started; or
 - (b) if the decision stage is stopped-before the day the decision stage is restarted.
- (2) However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any infrastructure provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—
 - (a) the conflict is necessary to ensure the decision complies with a State

- planning regulatory provision; or*
- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
- (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
- (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This is SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17), and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. Section 4.76 of the Rural Zone Code states that development that is consistent with the specific outcomes in s4.78 to s4.80 complies with the Rural Zone Code. Section 4.77 states that the overall outcomes are the purpose of the Code.

The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;

- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;
- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Chapter 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI 01/11, a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga locality is included on page 12 of the TLPI 01/11 (Wind Farms) – the site is a part of the Arriga locality .

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. The intent states that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

Section 6.2 of the Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the following outcomes (the overall outcomes):

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact

- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage
- Decommissioning and Rehabilitation

An assessment against the Wind Farm Code of the TLPI 01/11 is provided in **Chapter 6**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and the State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The requirements must be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Chapter 6**.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is Impact Assessable development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. The intent states that wind farm development will not have unacceptably adverse impacts on the environment and on amenity (at both a local and wider area scale), and will have social, environmental and economic benefits to the community at both local and regional level.

Section 6.2 of the Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the following outcomes (the overall outcomes):

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1 of the Wind Farm Code. An assessment against the relevant provisions is made in **Chapter 6**.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to instruments, codes, laws and policies that came into effect after the application was, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. No weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, the draft Wind Farm State Code has not been given any weight and therefore there has been no assessment of the development application against the draft Wind Farm State Code.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made and has also been assessed.

The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the TLPI, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the Wind Farm Code of the TLPI 01/12 – Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11).

Section 317 of the SPA states that the assessment manager may give weight it is satisfied is appropriate to a later planning instrument, code, law or policy. As such, this report undertakes an assessment against the planning framework in place at the time of lodgement of the development application (as per s313 of the SPA) and has given weight to later planning instruments, codes, laws or policies, most significantly, the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). Weight has been given to the Wind Farm Code of the amended Mareeba Planning Scheme, as it represents more recent planning through for wind farm development in Mareeba Shire.

In summary, in accordance with Section 313 of the SPA the proposed wind farm development application has been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies;
- the Mareeba Shire Planning Scheme (incorporating Amendment No 1 of 2007); and
- Temporary Local Planning Instrument 01/11 (Wind Farms).

In accordance with Section 317 of the SPA the assessment of the proposed wind farm development application has also given weight to:

- the State Planning Policy; and
- the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray, and environmental / contaminated land matters;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the Mount Emerald Wind Farm was undertaken by Foresight Partners in parallel with this assessment.

This chapter summarises the outcomes of the technical assessment for each technical service, including the economic review undertaken in parallel by Foresight Partners.

5.2 Landscape Visual Amenity

A landscape visual amenity assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the landscape visual amenity assessment is to determine the visual impact of the proposed wind farm on the local context and views, particularly with regards to areas of regional landscape significance, significant landscape features, and landscape and scenic values as described by the applicable planning framework. The assessment also assesses shadow flicker.

In this regard, of particular relevance to the landscape visual amenity assessment is the material prepared by the applicant that describes and presents the visual impacts of the proposed development. The following material prepared by the applicant adequately describes the proposed development in landscape visual amenity terms.

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length (in kilometres) of the visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons; and
- Shadow flicker assessment.

The material prepared by the applicant adequately allows for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. However, it is noted that none of the planning or visual impact technical material substantially address the

question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. This is addressed in this assessment.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of 'regional landscape significance'. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure.

It is also relevant that the Mt Emerald – Walsh Bluff mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Planning Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11 (Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, and the intent of the Wind Farm Code of TLPI 01/11 sought that they have "*minimal impact on the environment and on amenity (both at a local and wider area scale)*". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code of the Planning Scheme. The intent of the Wind Farm Code in the amended planning scheme altered the above TLPI wording to seek that development "*will not have unacceptably adverse impacts in the environment and on existing amenity (at both a local and wider area scale)...*". However, it is the overall outcomes and specific outcomes which determine compliance with the Code (and it follows, with the intent of the Code).

The Rural Zone Code includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code in the TLPI 01/11 includes overall outcome (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

The purpose of the Wind Farm Code in the Planning Scheme (incorporating Amendment 01/11 – Wind Farms) includes overall outcome (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and demonstrable impacts associated with wind farms*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*" For the purpose of landscape visual amenity assessment, the relevant overall outcomes are essentially consistent between the two Codes.

At the time the application was made, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it is a requirement under the TLPI 01/11 and Planning Scheme amendment 01/11 Wind Farms (September 2013) where the Wind Farm Codes require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant views' (Specific Outcome S3a). The assessment of wind farm visual impacts on significant landscape features is identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application.

It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

It is apparent from the material prepared by the applicant, and from field inspection, that the Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. Therefore, whilst not 'natural' and representing a change to the landscape, the impact is nonetheless acceptable.

The term 'minimal impact' is replaced in the Wind Farm Code of the amended Mareeba Shire Planning Scheme (September 2013) with 'unacceptably adverse impacts', and the amendment is given weight in the planning assessment. Further, it is compliance with the overall outcomes and specific outcomes which demonstrate compliance with the Code (and it follows, with the intent of the Code).

The Mareeba Shire Planning Scheme does not specifically protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites.

It is concluded that the extent and nature of the impacts have been generally well analysed and technically assessed, although the local importance of the mountain range as a significant landscape feature was not addressed. However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment. In this regard, the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the planning expectations for wind farms and their siting requirements, and as such the proposed wind farm will not result in unacceptable visual impacts on view scapes.

It is therefore determined that the likely impacts of the proposed wind farm on visual amenity, although locally significant, are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to the inclusion of appropriate conditions. In terms of those conditions, the visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Recommended visual amenity conditions include (refer to Appendix A for full conditions):

- non-reflective colours and materials are used for turbines and especially blades (as per Specific Outcome S3b of the Wind Farm Code); and
- electrical connections are provided underground in all instances, where practicable (as per Specific Outcome S3c of the Wind Farm Code).

An assessment of shadow flicker has identified that the distance between residences and the proposed wind turbines provides sufficient buffer to reduce potential shadow flicker impacts and the proportion of rural views affected to acceptably low levels. The proposed development may be approved subject to the inclusion of a condition that ensures compliance with shadow flicker requirements is maintained. The recommended shadow flicker condition is:

- the measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling (as per Specific Outcome PS6(b) of the Wind Farm Code).

5.3 Ecological

An ecological assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the ecological assessment is to determine the impact of the proposed wind farm on State and local ecological features, including Matters of State Environmental Significance, and if so, whether appropriate impact mitigation and management measures and offset commitments can reduce the magnitude of ecological impacts.

Cardno note that the applicable planning framework refers to the terms 'areas of significant ecological value' (overall outcome e) of the Wind Farm Code in TLPI 01/11) or 'areas of state environmental significance' (probable solution S4 of the Wind Farm Code in Mareeba Planning Scheme incorporating Amendment 1/11 – Wind Farms). These terms are not defined by any applicable planning instrument and, as such, the proposed wind farm is not located within such areas. In any case, 'Matters of State Environmental Significance' is and 'Areas of Ecological Significance' (as per the FNQRP) are assessed.

Matters of State Environmental Significance (MSES) that are potentially applicable to the site include the following natural values and areas:

- protected areas (including all classes of protected area except coordinated conservation areas) under the Nature Conservation Act 1992 - not applicable, the site does not contain or adjoin any protected areas;
- marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 - not applicable, the site does not contain or adjoin any marine protected areas);
- areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008 - not applicable, the site does not encompass or adjoin and declared fish habitat areas;
- threatened wildlife under the Nature Conservation Act 1992 and special least concern animal under the Nature Conservation (Wildlife) Regulation 2006 - **applicable**, site surveys confirmed the presence of several threatened wildlife species including *Homoranthus porter*, *Grevillea glossadenia* and *Hipposideros diadema* and several other threatened wildlife species that were not detected during field surveys are considered likely to inhabit the site;
- regulated vegetation under the Vegetation Management Act 1999 – **applicable**, the site contains areas of regulated vegetation with one or more of the following attributes:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems

- Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems
- Category R areas on the regulated vegetation management map
- areas of essential habitat on the essential habitat map for wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the Nature Conservation Act 1992
- regional ecosystems that intersect with watercourses identified on the vegetation management watercourse map
- regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map
- high preservation areas of wild river areas under the Wild Rivers Act 2005 - not applicable, the site is not in a declared area;
- wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environmental Protection Regulation 2008 - not applicable, the site does not encompass or adjoin any such wetlands;
- wetlands and watercourses in high ecological value waters as defined in the Environmental Protection (Water) Policy 2009, schedule 2 - not applicable; and
- legally secured offset areas - not applicable, the site does not encompass or adjoin any legally secured offset areas.

Areas of Ecological Significance identified by the FNQRP that are potentially applicable to the site include:

- Protected areas – not applicable, the site is not in a protected area;
- World heritage areas – not applicable the site is not in a world heritage area;
- Wetlands – not applicable, the development activity will not occur in a protected wetland;
- Terrestrial area –
 - habitat of rare or endangered species including essential habitat of the Southern cassowary and mahogany glider – **applicable**, the site contains habitat for threatened wildlife species including some mapped areas of essential habitat for the Southern Cassowary;
 - habitat of rare or endangered species including regional ecosystems with a Vegetation Management Status of 'endangered' or 'of concern' and 'non woody' regional ecosystems – **applicable**, the site contains regional ecosystems identified as being 'of concern';
 - Significant coastal dune systems – not applicable, the site is not in a significant coastal dune system;
 - Einasleigh Uplands bioregion – **applicable**, the site is located on the eastern edge of the Einasleigh Uplands bioregion.

Of particular relevance to the ecological assessment is the draft Environmental Impact Statement and the Statement of Commitments, as prepared by the applicant. The material prepared by the applicant includes relevant ecological surveys and assessments that provide an adequate basis for assessment of the application.

The ecological assessment has identified that the proposal will have adverse ecological impacts, including adverse impacts to those MSES, as defined by the State Planning Policy, and Areas of Ecological Significance, as defined in the FNQRP. This is recognised by the

applicant in the application material, including in the Environmental Impact Statement. The adverse ecological impacts primarily relate to:

- direct loss and degradation of vegetation and fauna habitat resource associated with the construction of the proposed wind farm; and
- fauna mortality, morbidity and habitat degradation/alienation associated with operation of the proposed wind farm.

In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur.

The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. The impact mitigation and management measures are identified in a 'Statement of Commitments' prepared by the applicant, which include a range of 'environmental management plans'. The environmental management plans include:

- a construction and work site operational management plan;
- a sediment, erosion and storm water management plan;
- a hydrocarbon and hazardous substances plan;
- a bushfire risk management plan and emergency evacuation plan;
- a threatened species management plan;
- a weed and pest management plan;
- a rehabilitation plan;
- a habitat clearing and management plan;
- an ecological fire management plan;
- a cultural heritage management plan;
- an environmental management plan training program; and
- an environmental management plan reporting program.

With regards to that documentation:

- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on native fauna such as birds, flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed, mitigated or offset pursuant to the range of 'environmental management plans' being appropriately implemented. Therefore, the proposed development is not contrary to any statutory provisions applicable to the ecological assessment. The proposal may be approved subject to the inclusion of appropriate conditions that are designed to ensure

that the proposed impact mitigation and offset commitments are implemented in an effective manner. Recommended conditions include (refer to Appendix A for full conditions):

- approval and implementation of the 'environmental management plans' identified in the material prepared by the applicant and referenced above;
- where the development involves the clearance of native vegetation and wildlife habitat, detailed Significant Species Management Plans must be prepared; and
- where the development involves the clearance of native vegetation and wildlife habitat, an appropriate Environmental Offset must be secured.

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES), such as the Northern Quoll and Spectacled Flying-Fox. Nevertheless, conditions are identified (refer **Chapter 7**) relating to the management of these species.

5.4 Agricultural Land and Environment

An agricultural land and environmental assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

Agricultural Land

The purpose of the agricultural land assessment is to determine whether the proposed development has the potential to adversely or positively impact the agricultural land use values of the local area (including as identified in the Economic Growth Module of the State Planning Policy).

Of particular relevance to the agricultural land assessment are the provisions of the Mareeba Shire Planning Scheme and the State Planning Policy. The application material appears to adequately address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;
- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development; and
- a response to the matter of impact to aerial spraying.

It is noted that the applicant suggests that the land is not considered Good Quality Agricultural Land under the Planning Scheme, which is confirmed to be consistent with the Council's planning scheme maps. Further, the State government mapping does not identify the site as Agricultural Land Class A or B, or Strategic Cropping Land. The site is not currently used for cultivation, and only stock grazing is possible.

Matters of spray drift associated with aerial spraying have been assessed and have been determined to be acceptable.

It is concluded that the proposed wind farm is compatible with the rural nature of the site, as identified by the FNQ Regional Plan. Further, having regard to the wind farm footprint and to the broader socioeconomic benefits of the project, this assessment identifies that the proposal is acceptable in terms of the agricultural land values of the site and the local area. The proposal may be approved; no conditions are required to be imposed.

Environmental / Contamination

The purpose of the environmental assessment is to determine whether there is potential for residual unexploded ordnance (UXO) contamination to be uncovered or disturbed by the

development, with consequential risk to human health and safety (as per the Contamination Module of the State Planning Policy).

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist a UXO assessment is required to be completed in order to facilitate the development.

The application material states the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of the application material by DEHP indicated a substantial risk existed, and UXO commentary identified the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment by DEHP was issued to a 'slight' possibility of occurrence of UXO. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO matters. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the Environmental Impact Statement appears to concur with DEHP's recommendation regarding the assessment of UXO related matters.

It is therefore concluded that the UXO issues present on site have been assessed to be able to be managed. The proposal may be approved subject to the inclusion of appropriate 'general advice' attached to the approval that identifies the relevant procedure for the possibility of UXO disturbance.

5.5 Noise

An acoustic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the acoustic assessment is to determine the impact of the proposed wind farm on the local acoustic environment, in particular, on any nearby sensitive receivers.

In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain any statutory text to the probable solution but does include a note that makes reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

It is concluded that that the proposed wind farm will be able to be appropriate in acoustic terms, where particular noise criteria are enforced and complied with. The proposal may be approved subject to the inclusion of appropriate conditions that enforce particular noise criteria. Recommended conditions include (refer to Appendix A for full conditions):

- ensure the development meets appropriate noise criteria of 35dB(A) in particular circumstances (as discussed above), and 40 dB(A) otherwise; and
- demonstrate compliance and complaints management with regards to the noise criteria specified above.

5.6 Traffic Impact

A traffic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the traffic assessment is to determine whether the traffic likely to be generated by the proposed development during construction and operation is appropriate having regard to the immediate and broader road network.

Of particular relevance to the traffic assessment is the Traffic Report prepared by Jacobs in response to the Information Request, titled “Technical Note 2 – Traffic Impact Assessment Engineering Response” and dated 29 August 2014. That traffic report addressed various traffic matters as follows.

- A clear description of the whole of the potential access routes to the site for oversized vehicles, including a high level identification of constraints along the network.
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Likely staff travel movements to the site, and how these can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Where sufficient measures to restrict staff traffic to 30 vehicles per day are not able to be provided, assessment identifying the worst case traffic impact on the road network.

An assessment of the application material has been undertaken and it is confirmed that the application material has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council; and
- Requirements for permits and escorts to traverse the detailed routes.

These matters are not able to be fully assessed at the moment as the details of construction schedule and other variables are likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any traffic issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles, when these details are known, will be required to ensure the routes are acceptable, and as such the assessment of the suitability of Hansen Road and Springmount Road for oversized vehicle movements should be included as a condition.

In respect of managing staff vehicles, the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders.”

It is determined that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery, which can be managed). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known.

It is concluded that that the proposed wind farm is able to be appropriately managed in terms of traffic matters, including during construction. The proposal may be approved subject to the inclusion of appropriate conditions relating to traffic management. Recommended conditions include (refer to Appendix A for full conditions):

- preparation and approval of a construction traffic management plan, prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind energy facility, that includes:
 - existing conditions survey of Hansen Road and Springmount Road;
 - designation of all vehicle access points to the site from surrounding roads;
 - designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways;

- recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements;
- measures to be taken to manage traffic impacts associated with the ongoing operation of the wind energy facility;
- a program to rehabilitate existing public roads of Hansen Road and Springmount Road, to its existing condition where required.

5.7 Aeronautical

An aeronautical assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the aeronautical assessment is to determine whether appropriate aeronautical matters have been addressed in the proposed wind farm development.

The application material includes evidence of consultation with the Civil Aviation Safety Authority (CASA). The consultation with CASA recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, and will not affect any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Subsequent to that consultation, turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

It is concluded that the application is appropriate in aeronautical terms, subject to conditions relating to turbine height and further approval from relevant authorities should the wind farm layout be altered. The proposal may be approved subject to the inclusion of those conditions. Recommended conditions include (refer to Appendix A for full conditions):

- limitations on the overall maximum height not exceeding 1179.5m AHD; and
- details of any micro-siting of turbines must be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts.

5.8 Civil and Electrical Engineering

5.8.1 Civil

A civil engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the civil engineering assessment is to determine whether appropriate civil engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is appropriate, in civil engineering terms, and is able to be appropriately developed. Matters considered in the assessment that were determined to be appropriate, in principle, include road alignment of main access road, road grading along the proposed alignment, the ability to manage stormwater runoff, maintenance access to the proposed sites, and Impact footprint in construction areas.

However, the nature of civil engineering matters is that they are largely and often fully assessed at detailed design stage, following the initial land use assessment contemplated by this development application.

Pursuant to the above, the following identifies matters that will need to be further addressed during the detailed design process in response to the relevant development conditions and associated Operational Works applications.

- Vertical grading to site access road. Road grading in specific areas shall be subject to detailed design at Operational Works stage to ensure the heavy low loader vehicles can navigate the roadway without undue constraints. The traffic assessment has identified that the road access is appropriate, in principle.
- Road cross sections. Depending on the side slope of the local topography, further detail is required at Operational Works stage to ensure that the batters developed from the associated road grading do not cause stability and rehabilitation issues on the constructed batters adjacent to the roadway.
- Construction management plan. A construction management plan should be prepared and approved prior to commencement of construction.
- Sediment and erosion control. Sediment and erosion control management plans should be prepared and approved prior to commencement of construction, to ensure undesirable sediment and erosion issues do not impact on the development site and surrounding areas. This is particularly relevant in the areas where steep road grades and associated cut and fill batters are developed.
- Water quality management. Water quality management details should be prepared and approved prior to commencement of construction, to ensure the quality of stormwater runoff from the site is maintained within acceptable limits.
- Stormwater management. Stormwater management plans should be prepared and approved prior to commencement of construction, to ensure stormwater runoff from the site is controlled and managed with minimal impact on the development site and adjacent properties.
- Decommissioning and rehabilitation of the site. Further details regarding decommissioning and rehabilitation should be conditioned.

It is concluded that the application is appropriate, in principle, in civil engineering terms, subject to further details being provided at Operational Work stage of the civil engineering design. The proposal may be approved subject to the inclusion of conditions relating to the matters identified above (refer to Appendix A for full conditions).

5.8.2 **Electrical**

An electrical engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the electrical engineering assessment is to determine whether appropriate electrical engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is sound, in electrical engineering terms, and can be appropriately developed. However, the nature of some electrical engineering matters is that they are largely developed at detailed design stage, following the initial land use assessment contemplated by this development application.

In this regard, the electrical engineering assessment identified that the material provided in response to the information request did not include all of the information requested, it is considered that these matters can be addressed at detailed design stage pursuant to the relevant Building Works and Operational Works applications, or via conditions.

The electrical assessment identified that Specific Outcome S2(b) of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires the wind farm to be readily connected to existing, nearby high voltage electricity transmission lines without significant environmental, social or amenity impact. The application material does not include or

sufficiently present the impacts of the proposed high voltage interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. Powerlink, in their advice agency response, identified that whilst there is no connection agreement in place, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the applicant complying with its obligations under relevant electricity laws. A condition is recommended in terms of connection to the Powerlink network. As such, the viability of interconnection design and grid connection to the Powerlink network can be established through the ongoing engagement with Powerlink pursuant to that condition.

Minimum clearances of turbine structures to Powerlink's assets need to be complied with and should form a condition of approval for the wind farm development. The required clearance of structures to Powerlink's assets was advised in Powerlink's advice agency response. A condition is recommended in terms of clearance between structures and Powerlink assets.

The electrical assessment also considered the proposed wind farm against the National Electricity Rules and Codes, as it applies to wind farms. The connection to Powerlink's network will need to comply with the National Electricity Rules and Codes, as is standard practice for such connections.

The electrical assessment identified that Specific Outcome S5 of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. The application material adequately addresses this matter and the proposed considered appropriate in this regard.

It is noted in application material that the high voltage reticulation within the development may use overhead lines, and not exclusively underground cables. This is not recommended in the heavily vegetated areas, and presents risk of bush fires from electrical faults, despite management plans being proposed. Instead, exclusive use of underground cables is recommended (except where physically constrained) and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the turbine structures and risk of bush fires has not been assessed in detail, although preliminary commitments to management plans has been identified in the application material. It is recommended that a lightning and earthing system to mitigate against the risk of bushfires caused by direct lightning strikes on turbines be conditioned. In respect of bushfire, a Bushfire Risk Management Plan is also recommended to be conditioned.

It is concluded that the application is appropriate, in principle, in electrical engineering terms, subject to further details being provided as detailed design progresses, at Operational Work and Building Work stage and in response to conditions. The proposal may be approved subject to the inclusion of conditions identified below (refer to Appendix A for full conditions).

- engagement with Powerlink must occur with regards to a connection to Powerlink's transmission line network;
- further technical assessments regarding safe clearance between turbines and Powerlink infrastructure must be prepared and approved;
- electrical high voltage reticulation within the development must be underground (except where physically constrained);
- a suitable lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines must be designed and installed; and
- a Bushfire Risk Management Plan shall be prepared and approved.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the application material, particular that which was prepared in respect of economic matters in response to the Minister's request for additional information. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

"Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant's discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....".

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and **section 6.3** below provides a summary of those matters or things comprising the assessment criteria, to the extent relevant to the development application.

This chapter provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code Assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are Code Assessable, section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development.

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p><i>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</i></p> <p><i>(ii) the planning scheme as being appropriately reflected in the planning scheme;</i></p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified and assessed in Section 6.5 below.</p>
<p><i>Any applicable codes in the following instruments-</i></p> <p><i>(i) A structure plan</i></p> <p><i>(ii) A master plan</i></p> <p><i>(iii) a temporary local planning instrument;</i></p> <p><i>(iv) a preliminary approval to which section 242 applies</i></p> <p><i>(v) a planning scheme;</i></p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and so was also in effect at the time the application was properly made. TLPI 01/12 replaced TLPI 01/11 (when TLPI 01/11 ceased to have effect on 07 October 2012) and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the TLPI as the Wind Farm Code (TLPI), Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Each of the codes applicable at the time the development application was properly made (including the TLPI 01/11 Code and the Planning Scheme Codes) have been assessed in this Chapter.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager may also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ('the Planning Scheme') is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>There are some changes between the wording in the Wind Farm Code in the TLPI 01/11 (in effect at the time of lodgement) and the Wind Farm Code contained in the Planning Scheme Amendment 1/11 – Wind Farms (in effect at the commencement of the decision stage). To the extent there are differences, it is considered appropriate to place weight on the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms as it is more recent and current than the TLPI (which has expired).</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>An assessment against the applicable codes of TLPI 01/11 is contained at section 6.6 of this report.</p> <p>An assessment against the applicable codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms is contained at Section 6.7.</p>
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	There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>

Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site.</p> <p>Policies relating to biodiversity conservation and areas of ecological significance (including land use policy 1.1.1) seek that urban development be located outside of areas of high ecological significance.</p> <p>Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development'. The term 'urban development' neither explicitly excludes infrastructure items, nor includes renewable power generation in the range of uses stated in the definition. The expectation is that wind farms will be located in rural areas and would not be considered 'urban development'.</p> <p>Further, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June</p>

	<p>2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>The proposed wind farm is not considered urban development and in any case the development can be constructed with adverse impacts being avoided or mitigated (subject to conditions in Appendix A).</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
<i>Policy 1.3 Air and Acoustic Environment Protection</i>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the</p>

	<p>applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<i>Policy 2.1 Regional Landscape Values</i>	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p>

	<p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given <i>'appropriate recognition in land use planning and development assessment'</i>.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. A particular landscape feature that is valued in the region is its hill slopes.</p> <p>Section 2.3 recognises that public utilities and infrastructure may located on hill slopes but should be designed and located to minimize the impacts on scenic amenity. Land use policy 2.3.1 states that the visual amenity of the region's landscapes and seascapes is protected and enhanced by assessing proposed developments on landscapes that are vulnerable to visual impact due to their prominence, topography or degree of naturalness. Regard must also be given to land use policy 2.1.1, which recognises the value of landscapes for renewable energy resource areas.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity.</p>

	<p>An assessment of the of the landscape visual amenity matters relating to the proposal has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is apparent from the material prepared by the applicant, and from field inspection, that the Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed. • There is not any specific protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. Therefore, whilst not 'natural' and representing a change to the landscape, the impact is nonetheless acceptable. • It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast, and the acceptability of visual impacts are largely subjective • It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites. • Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development
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	is not contrary to the FNQRP related to visual amenity.
<i>Policy 5.4 Primary Industries</i>	Land Use Policy 5.4.2 states that threats to primary production from incompatible development are identified and managed through land use planning and where appropriate, by developer- established buffers. The assessment in section 5.4 of this report identifies that the proposed wind farm is compatible with the rural nature of the site, and that the proposal is acceptable in terms of the agricultural land values of the site and the local area.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are ' <i>recognised as a acceptable land uses and supported for their contribution to reducing greenhouse emissions</i> '. The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.

It is considered that the proposed wind farm development demonstrates compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policies

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** of this report lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme or are otherwise not relevant to the assessment of this development. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	Development: (1) enhances matters of state environmental significance where possible, and	In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The

	<p>(2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and</p> <p>(3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts.</p>	<p>development application material has been assessed by an ecologist. Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>As per the conclusions in section 5.3, the proposed development satisfies the relevant assessment requirements as:</p> <ul style="list-style-type: none"> • potential adverse environmental impacts on matters of state environmental significance are identified; and • measures are identified by the applicant and will be conditioned that manage the potential adverse environmental impacts on matters of state environmental significance through protection or mitigation; and • via the provision of a program of environmental offsets, the impacted matters of state environmental significance will be enhanced.
Natural Hazards, Risk and Resilience	<p>For all natural hazards: Development:</p> <p>(1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and</p> <p>(2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and</p> <p>(3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and</p> <p>(4) avoids risks to public safety and the environment from the location of hazardous</p>	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently, other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal</p>

	<p>materials and the release of these materials as a result of a natural hazard, and</p> <p>(5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard, and</p>	<p>equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation. These are recommended as conditions in Appendix A.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument 01/11 (Wind Farms) was in effect when the application was lodged and taken to be properly made. As such, an assessment is made against the relevant provisions of the TLPI 01/11 below.

TLPI 01/12 replaced TLPI 01/11 when it expired on 7 October 2012. TLPI 01/12 contained provisions consistent with TLPI 01/11 and so the assessment below also represents an assessment against TLPI 01/12.

As discussed in **section 6.3** of this report, an assessment must be made against TLPI 01/11 as it was in effect at the time the application was properly made. However, since that time and prior to the commencement of the decision stage, TLPI 01/11 and subsequently TLPI 01/12 expired, and Planning Scheme Amendment 1/11 took effect. The Planning Scheme Amendment, which includes a Wind Farm Code with some changes to the TLPI Wind Farm Code reflecting more recent planning thought, has been given weight in this assessment.

Section 6.2 of the Wind Farm Code of TLPI 01/11 states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code (and it follows, with the intent of the Code).

Overall Outcomes

The purpose of the Wind Farm Code is to achieve the following outcomes.

Overall Outcome	Response
a) Wind farms are located, design and operated to address and minimise potential impacts on environmental, economic and social values.	<p>The proposed development is located, designed and operated to address and minimise potential impacts on environmental, economic and social values.</p> <p>Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.</p> <p>To the extent that overall outcome a) changes between the TLPI and the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment, which also seeks that wind farms are located to take advantage of viable wind resources.</p>
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.	<p>The proposed wind farm and associated infrastructure takes account of and is appropriately sensitive to existing development, environmental matters, and landscape and scenic values. These matters are addressed in detail in Chapter 5.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p> <p>The changes to overall outcome b) between the TLPI and the Planning Scheme Amendment are minor.</p>
c) Wind farm assessment utilises and takes comprehensive account of recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.	<p>The proposed wind farm has referred to scientific knowledge and standards. The potential impacts of the wind farm have been considered in this assessment.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p> <p>To the extent that overall outcome c) changes between the TLPI and the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment, which seeks that assessment considers both positive and negative impacts.</p>
d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.	<p>The proposed wind farm and associated infrastructure is compatible with the vacant rural nature of the site. Future preferred settlement patterns anticipate limited change to the surrounding rural landscape. The assessment identifies that the wind farm can be managed to ensure compatibility with surrounding uses and dwellings.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind</p>

	<p>Farm Code below.</p> <p>The changes to overall outcome d) between the TLPI and the Planning Scheme Amendment are minor.</p>
<p>e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.</p>	<p>The proposed wind farm is not located within areas of significant ecological value, as this is not a term defined by any applicable statutory planning instrument. An assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) are addressed in section 6.4.</p> <p>The proposed development is not expected to adversely impact on ecological processes or the sustainability of fauna populations, as potential for impacts will be managed and monitored (including by way of imposition of reasonable and relevant conditions).</p> <p>The overall outcome must be considered in the context of the broader Wind Farm Code – it is expected that any wind farm will have some impact on ecological processes or fauna populations, due to its very nature and change to the area, and that this should be minimised in terms of the wind farm use. In this context, the proposed development will not have an adverse impact having regard to the expected operation of wind farms and that the TLPI 01/11 which identified the Arriga locality as a location with a planning expectation for wind farms (by virtue of a reduced level of assessment and associated mapping).</p> <p>Further, S4 of the Wind Farm Code provides more precise detail as to the assessment of ecological matters, and the proposed development complies with the applicable Probable Solution. As such, it follows that compliance with the corresponding Overall Outcome can be satisfied.</p> <p>Overall outcome e) changes between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it seeks that “where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations”. The proposal complies with the amended overall outcome.</p> <p>As such, it is considered that the proposed wind farm complies with overall outcome e), but to the extent that there may be a conflict, the development is supported by sufficient grounds, that include:</p> <ul style="list-style-type: none"> the TLPI is out of date due to its age and

	<p>the changing circumstances reflected by the more up to date provisions of the Planning Scheme Amendment and the new terminology and assessment provisions of the Matters of State Environmental Significance and SPP;</p> <ul style="list-style-type: none"> • there is an expectation for wind farms in landscape / rural areas by the FNQRP and in the Arriga locality by the TLPI; and • other sufficient grounds as presented in chapter 7 of this report. <p>Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.</p>
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	<p>The proposed wind farm will manage amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions within acceptable limits, or can manage these matters subject to implementation of relevant conditions (refer to Appendix A).</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	<p>The road network intended to be used for transportation of infrastructure and equipment are of a suitable standard, and will be conditioned to be suitably maintained.</p> <p>Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.</p>
h) The operation of the wind farm is controlled by site-specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	<p>The operation of the wind farm will be controlled by site-specific management plans, as per recommended condition (Appendix A).</p> <p>Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.</p>
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	<p>The wind farm is able to be connected to the existing high-voltage electricity transmission line.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
j) Wind farms are located within an economically viable wind resource.	<p>The applicant has provided information that advises that the proposed wind farm is located within an economically viable wind resource.</p> <p>To the extent that overall outcome e) changes between the TLPI and the Planning Scheme Amendment, in that it is removed from the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment.</p>
k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its	<p>It is a recommended condition of approval that site rehabilitation be carried out at the end of the operational life of the proposed</p>

pre-development state.	wind farm. Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.
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Specific Outcomes and Probable Solutions

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1, as reproduced and assessed below.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability <ul style="list-style-type: none"> a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment, economic and social impacts. b) Wind farms are readily connected to existing, nearby high voltage electricity transmission lines without significant environment, social or amenity impacts. c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural 	PS2 No probable solution provided.	<p>a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is concluded that sufficient account of impacts have been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is</p>

<p>development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with an economically viable wind resource.</p>		<p>proposed within access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farm's impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Refer to Chapter 5 for an assessment summary. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated</p>
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		<p>infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict. Shadow flicker and other amenity matters have been assessed and are considered not to cause unacceptable conflict with nearby residents.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro-siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is</p>
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		considered that the proposed wind farm complies with the identified location and site suitability criteria.
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity.</p> <p>An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>The conclusions in that summary include the following.</p> <ul style="list-style-type: none"> • The Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 –

		<p>130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. Therefore, whilst not 'natural' and representing a change to the landscape, the impact is nonetheless acceptable.</p> <ul style="list-style-type: none">• It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. There is an expectation for wind farms in landscape / rural areas by the FNQRP and particularly in the Arriga locality by the TLPI – and it is expected that the wind
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		<p>farms would be in elevated locations. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none"> • It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites. • In this regard the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the expected siting requirements for wind farms, and the proposed wind farm will not result in unacceptable visual impacts on view scapes. <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction</p>
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		<p>Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal. These matters are recommended to be imposed by conditions.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts.</p>
<p>S4 Ecological Impact</p> <p>Wind farms avoid unacceptable impacts on the ecology and sustainability of flora or fauna populations.</p>	<p>PS4</p> <p>a) Wind farms avoid areas of High Ecological Significance as identified in the Far North Queensland Regional Plan 2009-2031 and determined by Department of Environment and Resource Management.</p> <p>b) Where avoidance is not possible, impacts are minimised.</p>	<p>The probable solution seeks that wind farms avoid Areas of High Ecological Significance as identified in the FNQRP, or where avoidance is not possible, impacts are minimised. The Areas of High Ecological Significance are:</p> <ul style="list-style-type: none"> • Protected areas – the site is not in a protected area; • World heritage areas – the site is not in a world heritage area; • Wetlands – the development activity is not in a protected wetland; • Protected areas – not applicable, the site is not in a protected area; • World heritage areas – not applicable, the site is not in a world heritage area; • Wetlands – not applicable, the development activity will not occur in a protected wetland; • Terrestrial area – <ul style="list-style-type: none"> ○ habitat of rare or endangered species including essential habitat of the Southern cassowary and mahogany glider – the site contains habitat for threatened wildlife species including some mapped areas of essential habitat for the

		<p>Southern Cassowary;</p> <ul style="list-style-type: none"> ○ habitat of rare or endangered species including regional ecosystems with a Vegetation Management Status of 'endangered' or 'of concern' and 'non woody' regional ecosystems – the site contains regional ecosystems identified as being 'of concern'; ○ Significant coastal dune systems – the site is not in a significant coastal dune system; and ○ Einasleigh Uplands bioregion – the site is located on the eastern edge of the Einasleigh Uplands bioregion. <p>Compliance with the probable solution satisfies the specific outcome as impacts are minimised through various measures to be implemented, in those occasions where avoidance is not possible. Notwithstanding, compliance with the specific outcome is also achieved as the development avoids unacceptable impacts on the ecology and sustainability of flora or fauna populations, as any potential impacts will be managed and monitored (including through imposition of conditions in Appendix A).</p> <p>The assessment of the ecological material is further set out in Section 5.3 of this report.</p> <p>The specific outcome and probable solutions change</p>
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		between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it refers to areas of state environmental significance, rather than more ambiguous terms, and reinforces that the TLPI is out of date.
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with Queensland Government recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p> <p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>	PS5 No probable solution provided.	<p>The specific outcome and probable solutions change between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it refers more broadly to recognised standards (rather than just Queensland Government standards, of which there are limited), and provides an editor's note that refers to the Environmental Protection (Noise) Policy 2008 and the New Zealand standard NZA6808:2010.</p> <p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). An Information Request response was submitted by the applicant on 10 September 2014.</p> <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p>

		<p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered</p>
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		<p>appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p> <p>The proposal satisfies the Specific Outcome as it is (or can be via conditions) located, designed, constructed and operated in accordance with Queensland Government recognised standards with respect to noise emissions (of which there are limited), and noise emissions resulting from the wind farm are not expected to (including through management via conditions) result in unacceptable levels of nuisance, risk to human health or wellbeing, or ability to sleep or relax.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located in accordance with national and/or State government recognised standards with respect to shadow flicker.</p> <p>b) Shadow flicker from wind turbines that potentially impact on an urban and rural development does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) Modelled blade shadow flicker impacts do not exceed 30 hours per annum and 30 min/day at existing urban or rural developments.</p> <p>b) Measured blade shadow flicker does not exceed 10 hours per annum at existing urban and rural developments.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was</p>

		<p>requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre-existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>The applicant submitted an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff dated 28 July 2011. This report undertook initial investigation that concluded the electromagnetic interference is within reasonable levels, however it identifies that further assessment will be required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known. This is recommended to be managed by way of conditions.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding</p>

		residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post-construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely to be subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic</p>

		<p>Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4m.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than 1 month.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at</p>

		acceptable levels and carried out at acceptable times.
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled and maintained.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and replacing soil over foundations;

	<p>(iii) the sustainable ecological functioning of the site is maintained or improved;</p> <p>(iv) any agricultural function is restored;</p> <p>(v) wind farm infrastructure is removed from the site.</p>	<ul style="list-style-type: none"> removing all material from site for recycling; where tracks are of no use to the land owner, the land reinstated; underground and above ground cabling removed; the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>
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The proposed wind farm development demonstrates compliance with the overall outcomes and specific outcomes of the Wind Farm Code of the TLPI 01/11, and therefore complies with the Wind Farm Code.

To the extent that conflict may be considered to exist (overall outcome e), the development is supported by sufficient grounds as presented in **Chapter 7** of this report.

6.7 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 05 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay codes identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment is provided below against the relevant codes of the Mareeba Shire Planning Scheme, including those in effect when the application was properly made (and which

continued to have effect throughout the application process) and those which subsequently came into effect. .

6.7.1 **Rural Zone Code**

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least 25 metres from any Railway corridor land.</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non-compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the instrument (definitions, levels of assessment and the Wind Farm Code). The Wind Farm Code anticipates that wind farms will locate in rural</p>

		<p>areas, and it is implicit that wind farms will have height to enable access to viable wind resources (i.e. taller than houses and rural structures).</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. The potential conflict arises because the Rural Zone Code was drafted prior to the Wind Farm Code(s), and does not anticipate the height of wind farm turbines expected by the Wind Farm Code(s).</p> <p>The potential conflict is appropriate because:</p> <ul style="list-style-type: none">• pursuant to s326(c)(ii) of the SPA, the potential conflict arises because of a conflict between two or more aspects of the Planning Scheme, being the Rural Zone Code and the Wind Farm Code (which has been given weight and reflects the earlier TLPI), in that the Wind Farm Code anticipates wind farms in rural areas with considerable turbine height; and• pursuant to section 326(b), there are sufficient grounds to justify the decision, including that land use policy 6.3.1 of the FNQRP (which is not reflected in the planning scheme and is a higher order planning instrument) encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a</i>
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		<p><i>legitimate land use and supported for their contribution to reducing greenhouse emissions’.</i> Additional grounds are included in Chapter 7.</p> <p>The Rural Zone Code of the Planning scheme is out of date, as the TLPI (and the subsequent inclusion of the Wind Farm Code in the planning scheme) and FNQRP promote wind farms in appropriate locations and recognise wind farms as a legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme when read as a whole and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant’s response to the Tablelands Regional Council’s information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> • The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and

		<p>around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas.</p> <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is considered that the proposed wind farm is not incompatible with surrounding agricultural uses and is not expected to impact ongoing agricultural activities.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code and found to be acceptable.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For all Lots</p> <p>PS4.3 Vegetation is retained on land with a slope of 15% or greater.</p>	<p>The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code and found to be acceptable.</p>
For Code Assessable Development		

<p>S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.</p>	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Environmental Management Plan (imposed as a condition in Appendix A).</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long term; and (iii) Do not pose a risk to human health or the amenity of the locality; and (iv) Provided equitably. 	<p>PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.</p>	<p>Not Applicable – the site is not in the Southedge Potential Tourist Area.</p>
<p><i>For Mona Reserve as identified on Map Z10 as Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse 	<p>PS7 Development is carried out in accordance with a Plan of Development and Land Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	<p>Not Applicable – the site is not in the Mona Reserve.</p>

<p>environmental impacts in the short and long term; and</p> <p>(iii) Do not pose a risk to human health or the amenity of the locality; and</p> <p>(iv) Provided equitably.</p>		
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <p>(i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and</p> <p>(ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the site; and</p> <p>(iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and</p> <p>(iv) Without impact upon the visual and landscape setting of the Shire.</p>	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S9 is not applicable.</p>
<p>S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural land Quality maps S2 to S5, unless there is an overriding need</p>	<p>PS10 No probable solution prescribed.</p>	<p>The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality</p>

and no alternative sites.		mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.	PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.	Not Applicable.
For Code Assessable Development		
S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.	PS2 No probable solution prescribed.	Not Applicable.
4.80 RECONFIGURING A LOT		
Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.		

The proposed wind farm development demonstrates compliance with the majority of the specific outcomes of the Rural Zone Code.

To the extent that conflict may be considered to exist (specific outcome S1), the conflict arises because of a conflict between two or more aspects of any one relevant instrument (s326(c)(ii) of the SPA), and the development is supported by sufficient grounds (s326(b)) as presented in **Chapter 7** of this report.

6.7.2 **Division 5 - Car Parking Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use.	AS1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	Not Applicable.
S2 Car parking spaces are to	AS2 A car parking space	Not Applicable.

be of adequate size for their intended purpose.	provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.	Not Applicable.
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable condition for parking; and AS7.2 Visitor car parking	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.

	spaces are accessible and available for parking at all times; and AS7.3 Disabled car parking spaces are signed posted.	
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or AS8.2 Shade structures are provided over 40% of the car parking spaces.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Car Parking Numbers</i>		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>Assumptions in respect of traffic generation and the maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be provided at the site to accommodate the demand likely to be generated by the proposed wind farm</p>

		development.
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Bicycle Parking</i>		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
<i>Movement and Access</i>		
S13 Access is safe, functional, convenient and located in accordance with the Road Hierarchy Map R3.	<p>AS13.1 Lots with two or more street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be designed and constructed in accordance with the Planning Scheme Policy - 4</p>	<p>A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by</p>

	Development Manual.4	<p>Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.7.3 Division 17 - Filling and Excavation Code

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	AS1 Filling and excavation is no greater than two (2) metres in height or depth.	It is considered unlikely that significant filling and excavation will occur, however it is inevitable that the proposed development will result in some change to the visual amenity of the

		<p>area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
<p>S2 Pest Management</p> <p>Filling and excavation does not result in the spread of declared plants.</p>	<p>AS2 No declared plants¹⁵ are spread during any filling or excavation activities.</p>	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared plants.</p>
<i>For Code Assessable only</i>		
<p>S3 Stability</p> <p>Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.</p>	<p>AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and</p> <p>AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and</p> <p>AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either:</p> <p>(i) A retaining wall entirely within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water</p>	<p>The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared.</p> <p>The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project, covering discrete construction areas and which will account for the changing surface configuration at</p>

	<p>is deflected from the adjoining land; or</p> <p>(ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.</p>	<p>various stages of construction.</p> <p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.</p>
<p>S4 Flooding and Drainage</p> <p>Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or surrounding land or road reserves.</p>	<p>AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and</p> <p>AS4.2 Filling and excavation does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>
<p>S5 Environment</p> <p>Filling or excavation does not result in a reduction of the water quality of receiving</p>	<p>AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the</p>	<p>Refer to S4 above.</p>

waters.	Planning Scheme Maps.	
S6 Environment Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.	AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.7.4 **Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code**

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
S1 Cultural Heritage Places (a) significant elements of the mining history of Mareeba Shire are conserved; and (b) buildings, structures and operational works which demonstrate significant historical periods in the development of the Shire are conserved; and (c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.	PS1 No probable solution provided.	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p> <p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that</p>

		<p>consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area, including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p> <p>(a) There are no significant adverse effects on identified wetlands and identified</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the</p>

<p>waterways in terms of:</p> <ul style="list-style-type: none"> (i) habitat; or (ii) water quality; or (iii) landscape quality. <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <ul style="list-style-type: none"> (i) water quality, and (ii) fauna habitat corridor, and (iii) the retention of undisturbed vegetation , or (iv) revegetation of appropriate areas with local endemic species. 		<p><i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p> <p>(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.</p>	<p>PS4 No probable solution provided.</p>	<p>Not Applicable as there are no buildings and places of Local Heritage Significance on the site.</p>
<p>S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features</p> <p>Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.</p>	<p>PS5 No probable solution provided.</p>	<p>Not applicable as there are no buildings and structures of historic significance on the site.</p>
<p>S6 Retention of Natural Heritage Features and Cultural Heritage Features</p> <p>Buildings or structures within</p>	<p>PS6 No probable solution provided.</p>	<p>Not Applicable as there are no buildings or structures to be retained.</p>

a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.		
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.7.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds or bats; or (iii) Air turbulence; or (iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and (b) Development is located and designed to protect the function of aviation facilities from: (i) Physical obstructions; or (ii) Electrical or electromagnetic interference with aircraft navigation systems.	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving keeping, handling or acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground, drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife. PS1.5 (i) Uses involving food processing or	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA. Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links. Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.

	<p>abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome as delineated on Planning Scheme Map A1. PS1.7 (i) Works or uses are not located within the</p> <p>500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>PS1.7</p> <p>(i) Works or uses are not located within the</p>	<p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Bibbohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Bibbohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibbohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar facility that involve any building, structures or work above 950 AHD.</p>	
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6.7.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting purposes. 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m2:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation 18 of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. <p>(b) on lots less than or equal to 2,500m2, maximise setbacks from hazardous vegetation.</p>	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> a well designed and constructed road network throughout the site. Personnel on site who understand how to respond quickly to fire and use equipment

		<p>available on site.</p> <ul style="list-style-type: none"> • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than 50m², each lot has:</p> <ul style="list-style-type: none"> • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> • an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, swimming pool). <p>For Code Assessment only:</p>	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p> <ul style="list-style-type: none"> • Bushfire Risk Management Plan • Ecological Fire Management Plan • Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

	<p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> • a minimum cleared width of 20 metres; and • a constructed road width and weather standard complying with local government standards. <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; <p>AND</p> <ul style="list-style-type: none"> • have a formed width 	
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	<p>and gradient, and erosion control devices to local government standards;</p> <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de-sacs, except where a perimeter road isolates the development from 	
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	<p>hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads.</p> <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>

6.7.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There are some changes between the wording of the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code in the TLPI 01/11 (in effect at the time of lodgement) and the Wind Farm Code contained in the Planning Scheme Amendment 1/11 – Wind Farms (in effect at the commencement of the decision stage). To the extent there are differences, it is considered appropriate to place weight on the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms as it represents more recent and current thinking than the TLPI (which has expired).

Section 6.2 of the Wind Farm Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code (and it follows, with the intent of the Code).

Overall Outcomes

The purpose of the Wind Farm Code is to achieve the following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	<p>Wind farms are to be located in areas with a viable wind resource, usually in an elevated located, and the position, design and operation is consequent to that location.</p> <p>Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource.</p> <p>The proposed development is positioned, designed and operated to address and mitigate potential significant adverse impacts on environmental, economic and social values.</p> <p>Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.</p>
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.	<p>The proposed wind farm and associated infrastructure takes account of and is appropriately sensitive to existing development, preferred settlement patterns (expected to be rural for the foreseeable future), environmental matters, and landscape and scenic values. These matters are addressed in detail in Chapter 5.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	<p>The proposed wind farm has referred applicable standards in guiding design and operation, and such standards are contemplated by this assessment. The potential positive and negative impacts of the wind farm have been considered and balanced in this assessment.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p>
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	<p>The proposed wind farm and associated infrastructure is can managed to mitigate adverse impacts on existing and future surrounding uses and development.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p>
e) Where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and	<p>The proposed wind farm is not located within areas of state environmental significance, as this is not a term defined by any applicable statutory planning instrument. An assessment</p>

processes or on the sustainability of fauna populations.	of 'Matters of State Environmental Significance' is addressed in Chapter 5 , and 'Areas of Ecological Significance' (as per the FNQRP) are addressed in section 6.4 . Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	The proposed wind farm will manage amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions within acceptable limits, or can manage these matters subject to implementation of relevant conditions (refer to Appendix A). Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	The road network intended to be used for transportation of infrastructure and equipment are of a suitable standard, and will be conditioned to be suitably maintained. Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	The operation of the wind farm will be controlled by site-specific management plans, as per recommended conditions (Appendix A). Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	The wind farm is able to be connected to the existing high-voltage electricity transmission line. Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	It is a recommended condition of approval that site rehabilitation be carried out at the end of the operational life of the proposed wind farm (refer Appendix A). Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

Specific Outcomes and Probable Solutions

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over

		<p>time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
<p>S2 Location and Site Suitability</p> <ul style="list-style-type: none"> a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment, economic and social impacts. b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts. c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values. d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict. e) Wind farms do not adversely impact on aircraft or airport operations. f) Wind farms are located in areas with a 	<p>PS2 No probable solution provided.</p>	<p>a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) potential impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying</p>

<p>viable wind resource.</p>		<p>with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Refer to Chapter 5 for an assessment summary. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict with nearby residents.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from</p>
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		<p>Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August</p>

<p>impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and <i>desirable</i>.</p>		<p>2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity.</p> <p>An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>The conclusions in that summary include the following.</p> <ul style="list-style-type: none"> • The Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment
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		<p>acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. Therefore, whilst not 'natural' and representing a change to the landscape, the impact is nonetheless acceptable.</p> <ul style="list-style-type: none">• It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. There is an expectation for wind farms in landscape / rural areas by the FNQRP and particularly in the Arriga locality by the TLPI – and it is expected that the wind farms would be in elevated locations. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.• It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of
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		<p>the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites.</p> <ul style="list-style-type: none">• In this regard the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the expected siting requirements for wind farms, and the proposed wind farm will not result in unacceptable visual impacts on view scapes. <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal. These matters are recommended to be imposed by conditions.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts.</p>
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<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>c) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>d) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>Probable solution S4 seeks that wind farms should not be located in areas of state environmental significance. Specific outcome S4 also refers to area of state environmental significance in terms of seeking that that wind farms do not have significant adverse impacts.</p> <p>The proposed wind farm is not located within areas of state environmental significance, as this is not a term defined by any applicable statutory planning instrument. As such, compliance with P4 and S4 is achieved.</p> <p>In any case, an assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) is addressed in section 6.4.</p> <p>In terms of Matters of State Environmental Significance, an ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified as Matters of Environmental Significance in the RPS report. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth is applicable.</p> <p>The assessment of the ecological material is set out in Section 5.3 of this report and it is concluded that the development is not expected to have significant adverse impacts on ecological values and processes or the sustainability of fauna populations, as a result of</p>
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		<p>management and mitigation measures proposed to be implemented (and as imposed via recommended conditions)..</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values and processes.</p>
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p> <p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff

		<ul style="list-style-type: none"> • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a</p>
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		<p>35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p> <p>The proposal satisfies the Specific Outcome as it is (or can be via conditions) located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions, and noise emissions resulting from the wind farm are not expected to (including through management via conditions) result in unacceptable levels of nuisance, risk to human health or wellbeing, or ability to sleep or relax.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer</p>

annoyance.	does not exceed 10 hours per annum.	<p>representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	PS7 No probable solution provided.	<p>The applicant submitted an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff dated 28 July 2011. This report undertook initial investigation that concluded the electromagnetic interference is within reasonable levels, however it identifies that further assessment will be required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known. This is recommended to be managed</p>

		<p>by way of conditions.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a</p> <p>Construction Management Plan.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic</p>

rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.	PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.	<p>Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan

	<p>excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<ul style="list-style-type: none"> Stormwater management Plan <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management</p>

		<p>Plan.</p> <p>Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.</p>
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; (iii) the sustainable ecological functioning of the site is maintained or improved; (iv) any agricultural function is restored; (v) wind farm infrastructure is removed from the site. 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and replacing soil over foundations; • removing all material from site for recycling; • where tracks are of no use to the land owner, the land reinstated; • underground and above ground cabling removed; • the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>

The proposed wind farm development demonstrates compliance with the overall outcomes and specific outcomes of the Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms), and therefore complies with the Wind Farm Code.

The Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms) represents a shift in planning thought from the Wind Farm Code in TLPI 01/11, and is therefore given weight in this assessment, to the extent of any differences to the Wind Farm Code of the TLPI 01/11. It is therefore particularly relevant that the proposed wind farm development complies with the Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms).

7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

Section 324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326(1)(b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to Code Assessment.

An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI identifies that the relevant assessment criteria for development is the Wind Farm Code included in the TLPI, the Rural Zone Code, Filling and Excavation Code, and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport and Aviation Facilities Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions of the Wind Farm Code contained within the TLPI 01/12 – Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11).

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, this report undertakes an assessment against the planning framework in place at the time the application was properly made (as per s313 of the SPA) and has given weight to later planning instruments, codes, laws or policies, including the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

In accordance with section 313 of the SPA, an assessment has been undertaken against the following matters or things in effect at the time the development application was properly made on 30 March 2012, including:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies;
- the Mareeba Shire Planning Scheme (incorporating Amendment No 1 of 2007); and
- Temporary Local Planning Instrument 01/2011 (Wind Farms).

In accordance with Section 317 of the SPA the assessment of the proposed wind farm development application has also given weight to the following planning instruments, codes, laws or policies that came into effect after the application was made:

- the State Planning Policy; and
- the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

The assessment against the above planning instruments, codes, laws and policies, to the extent relevant for the application requiring Code Assessment (refer **Chapter 6**), identifies that the proposed wind farm is considered, subject to appropriate conditions, to:

- comply with the applicable State regulatory provisions;
- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP, which took effect subsequent to the application being properly made;
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Wind Farm Code of the TLPI 01/11, noting potential conflicts below;
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Rural Zone Code, Filling and Excavation Code, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport and Aviation Facilities Overlay Code of the Mareeba Shire Planning as in effect at the time the application was properly made (Planning Scheme incorporating Amendment No 1 of 2007) and in effect at the time the decision stage commenced (Planning Scheme Incorporating Amendment 1/11 – Wind Farms), noting potential conflicts below; and
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Wind Farm Code of the Mareeba Planning Scheme (Incorporating Amendment 1/11 – Wind Farms), which took effect subsequent to the application being properly made.

There are two occasions where a potential conflict may arise with the applicable codes. These are Overall Outcome e) of the Wind Farm Code in TLPI 01/11 and Specific Outcome S1 of the Rural Zone Code. To the extent that there is a conflict with these provisions, the development is supported by sufficient grounds stated below. No other potential conflicts have been identified, but to the extent that any may exist, the following sufficient grounds apply equally.

In terms of the non-compliance with Specific Outcome S1 of the Rural Zone Code, pursuant to s326(c)(ii) of the SPA, the potential conflict arises because of a conflict between two or more aspects of the Planning Scheme, being the Rural Zone Code and the Wind Farm Code (which has been given weight and reflects the earlier TLPI), in that the Wind Farm Code anticipates wind farms in rural areas with considerable turbine height notwithstanding the height provisions stated in Specific Outcome S1 of the Rural Zone Code. In respect of this conflict, the Wind Farm Code would best achieve the purpose of the Planning Scheme when read as a whole, pursuant to section 326(1)(c)(ii).

Sufficient grounds for the proposed development are as follows.

- The TLPI 01/11 is out of date due to the shift in planning thought evidenced by an amendment to the planning scheme (Amendment 01/11 – Wind Farms), which recognises the importance of wind farms and supports their development. The changes to terminology in the Wind Farm Codes between the TLPI 01/11 and Planning Scheme Amendment 01/11 – Wind Farms enable a more appropriate assessment of wind farms.
- The TLPI 01/11 is out of date due to its changing circumstances, in terms of ecological matters and terminology, in particular that 'Matters of State Environmental Significance' pursuant to the State Planning Policy represent the basis for current environmental assessment.
- The Far North Queensland Regional Plan recognises wind farms as a legitimate land use, including in rural areas, and emphasis is placed on promoting renewable energy. The Far North Queensland Regional Plan is not appropriately reflected in the Mareeba Planning Scheme and is a higher-order planning instrument.
- The proposed wind farm development involves significant and robust economic state interests, as identified by Foresight Partners.
- The proposed wind farm development is expected to contribute to renewable power generation, with resultant economic, ecological and social benefits.

7.2 Ecological Issues

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC Act assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES).

It is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management

<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. <p>(c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine</p> <p>(d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities</p> <p>(e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines</p> <p>(f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority,</p>	<p>Prior to the commencement of site / operational / building work</p>
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<p>(g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and</p> <p>(h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including:</p> <p>(i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria</p> <p>(j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites).</p> <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>
<p>Northern Quoll Management</p>	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <p>(a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.</p> <p>(b) A monitoring program of additional utilisation studies prior to construction;</p> <p>(c) requires surveys to be undertaken during breeding seasons to ascertain:</p> <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are 	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

<p>warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council.</p> <p>(d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);</p> <p>(e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):</p> <p>(ii) Construction Phase Management Procedures:</p> <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	
<p>4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <p>(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
Access Tracks and Roads	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> (a) the Civil Aviation Safety Authority; (b) the Department of Defence (RAAF Aeronautical Information Service); (c) Airservices Australia; (d) any aerodrome operator within 15 km of the outside property boundaries of the site; (e) the Aerial Agriculture Association of Australia; (f) any organisation responsible for providing air ambulance services in the area. 	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <ul style="list-style-type: none"> (a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads; (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and 	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of “Technical Note 2 – Traffic Impact Assessment Engineering Response”:</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans	
<p>19. Submit for approval by the Council an environmental management plan.</p> <p>The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):</p> <ul style="list-style-type: none"> • a construction and work site operational management plan • a sediment, erosion and storm water management plan • a hydrocarbon and hazardous substances plan • a bushfire risk management plan and emergency evacuation plan • a threatened species management plan • a weed and pest management plan • a rehabilitation plan • a habitat clearing and management plan • an ecological fire management plan • a cultural heritage management plan • an environmental management plan training program • an environmental management plan reporting program <p>The environmental management plan must also address implementation and periodic review</p> <p>The environmental management plan:</p> <p>(a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;</p> <p>(b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;</p> <p>(c) may be prepared in sections or stages;</p>	<p>Prior to the commencement of site / operational / building work</p>

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
Landscaping	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
Site Security	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

Chris Lee

From: [Refused under section 47(3)(b) of the RTI Act] <[redacted]@cardno.com.au>
Sent: Monday, 10 November 2014 3:11 PM
To: Jane McInnes
Subject: RE: Further advice - Mount Emerald Wind Farm
Attachments: HRP14122.R01.005 Assessment Report (Final following Legal Review) - Tracked Changes.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Jane,

I will make the amendments as per your email and as discussed, upon confirmation from you this afternoon of any final legal comments.

Please find attached for your information, the tracked changes version of this morning's document.

Kind regards,

[Refused under section 47(3)(b) of the RTI Act]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

Address Level 11 Green Square North Tower, 515 St Pauls Terrace, Fortitude Valley, QLD 4006 Australia

Postal Locked Bag 4006, Fortitude Valley 4006

Email [Refused under section 47(3)(b) of the RTI Act] Web www.cardno.com/cardnohrp

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From: Jane McInnes [mailto:Jane.McInnes@dsdip.qld.gov.au]
Sent: Monday, 10 November 2014 2:44 PM
To: [Refused under section 47(3)(b) of the RTI Act]
Subject: RE: Further advice - Mount Emerald Wind Farm

Hi [Refused under section 47(3)(b) of the RTI Act]

Thank you for your email.

As per our conversation, could you please remove reference to the draft wind farm code in the Landscape Visual Amenity section and the sentence which follows -

The assessment of wind farm visual impacts on significant landscape features is identified under the draft State Wind Farm Code and Guidelines, however this has not been given any weight in the assessment of this application. It is also noted that no referral agencies mentioned visual impact, nor did Mareeba Shire or Tablelands Regional Councils, and the Ministerial call-in dated 11 June 2014 was for several reasons including environmental, but did not mention visual impacts.

Also, I note the additional 'potential' impact which has been identified with relation to overall outcome e) of the wind farm code in TLPI 01/11. I don't believe this was included in previous additions of the assessment report. Further, the justification for the potential conflict on page 57 is inconsistent. The first two paragraphs seem to address the overall outcome sufficiently and the following paragraphs contradict this. It is not clear why this is a potential impact? Could you please remove this and update the conclusion accordingly?

I am still waiting to hear back from legal however don't believe there will be any big issues.

Please give me a call if you would like to discuss the above.

Kind regards

From: [Refused under section 47(3)(b) of the RTI] [cardno.com.au]
Sent: Monday, 10 November 2014 9:52 AM
To: Jane McInnes
Cc: Steve Reynolds
Subject: RE: Further advice - Mount Emerald Wind Farm

Dear Jane,

Please find attached an updated version of the Mt Emerald Wind Farm Assessment Report. This version incorporates a range of amendments in response to the comments arising from DSDIP's legal review.

I will call to discuss later today to talk you through some of the changes, but in summary the report addresses all of the key items identified, being the assessment of the TLPI, the matter of sufficient grounds, and updates to the landscape and ecology sections.

Kind regards,

[Refused under section 47(3)(b) of the RTI Act.]

SENIOR PLANNER
CARDNO HRP



[Refused under section 47(3)(b) of the RTI Act.]

Address Level 11 Green Square North Tower, 515 St Pauls Terrace, Fortitude Valley, QLD 4006 Australia

Postal Locked Bag 4006, Fortitude Valley 4006

Email [Refused under section 47(3)(b) of the RTI Act.] **Web** www.cardno.com/cardnohrp

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From: Jane McInnes [<mailto:Jane.McInnes@dsdip.qld.gov.au>]

Sent: Tuesday, 4 November 2014 4:38 PM

To: [Refused under s

Subject: Further advice - Mount Emerald Wind Farm

Hi [Refus

I have received legal advice on the Assessment Report for the Mount Emerald Wind Farm development application as attached.

The main concern with the report is that the assessment should have been undertaken against the TLPI 01/11 with weight given to the Amendment No 01/11-Wind Farms where appropriate. I understand that this is not going to change the outcome, however from a legal point of view we need to make sure that the assessment is undertaken against the correct instrument. There is also some concerns with the visual impact assessment and ecological assessment.

Could you please give me a call to discuss whether you will be able to amend your report by COB Thursday, 6 November 2014? Please disregard some of the comments as indicated.

Kind regards

Jane McInnes
Senior Planner
Department of State Development, Infrastructure and Planning
tel +61 7 3452 7690
post PO Box 15009 City East Qld 4002
visit Level 5, 63 George Street, Brisbane
email jane.mcinnnes@dsdip.qld.gov.au
www.dsdip.qld.gov.au



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Chris Lee

From: Refused under section 47(3)(b) of the RTI Act.
Sent: Monday, 10 November 2014 6:46 PM
To: Jane McInnes
Cc: Steve Reynolds
Subject: Mt Emerald Wind Farm
Attachments: HRP14122.R01.005 Assessment Report - Final 141110.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jane,

Further to your comments today, please find attached a final version of the Assessment Report for the Mount Emerald Wind Farm.

This version responds to each of the comments and to our discussion of earlier this afternoon.

Please note that the document control version is retained at version 005.

Kind regards,

Refused under section

SENIOR PLANNER
CARDNO HRP



Refused under section 47(3)(b) of the RTI Act.

Address Level 11 Green Square North Tower, 515 St Pauls Terrace, Fortitude Valley, QLD 4006 Australia

Postal Locked Bag 4006, Fortitude Valley 4006

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Assessment Report

Mt. Emerald Wind Farm, Kippin
Drive, Arriga

Lot 7 on SP235244, part of Lot 905 on CP896501 and
Easements A, C and E within Lots 1, 2 and 3 on
SP231871

HRP14122



Assessment of Mount Emerald Wind Farm
Development Application for a Ministerial Call In –
Part B: Assessment

Prepared for
State of Queensland Government (acting through) the
Department of State Development, Infrastructure and
Planning (DSDIP)

November 2014

Document Information

Prepared for Department of State Development, Infrastructure and Planning (DSDIP)

Project Name Mt. Emerald Wind Farm, Kippin Drive, Arriga

File Reference HRP14122R001.005 Part B Report

Job Reference HRP14122

Date November 2014

Document Control

Version	Date	Author	Author	Reviewer	Reviewer
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Prepared for:
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Prepared by: Cardno HRP

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This report is based on our opinion of the town planning issues that arise from the statutory provisions relating to this site. Comments and conclusions in or construed from this report relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law. This report is provided on the basis that our standard Terms and Conditions apply. For a copy, please contact us or visit <http://www.hrppc.com.au/TermsConditions>. Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno HRP is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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LIST OF ATTACHMENTS

Attachment A – Recommended Conditions

LIST OF TABLES

Table 1 – Summary and Response to Section 313 (2) of the SPA

Table 2 – Assessment against Rural Zone Code

Table 3 – Assessment against Division 23 Wind Farm Code of the Mareeba Shire Planning Scheme.

1 Executive Summary

1.1 Site Details

Site Details	
Address	Mt. Emerald Wind Farm, Kippin Drive, Arriga
RPD	Lot 7 on SP235244, Part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Planning Scheme	Mareeba Shire Planning Scheme 2004
Area Classification	Rural Zone

1.2 Application Details

Application Details	
Development Type	Development Permit for Material Change of Use
Level of Assessment	Code assessable
Proposal Summary	Wind Farm (Maximum of 63 Turbines) and associated infrastructure
Defined Land Use	Wind Farm
Referral – Concurrence	Department of Environment and Resource Management – Contaminated Land Matters Department of Environment and Resource Management – Clearing Vegetation
Referral – Advice	Department of Environment and Resource Management – Wetland Management Powerlink Queensland – Electricity Easement
Applicant	Mt Emerald Wind Farm Pty Ltd
Applicant's Represent.	RPS Australia East Pty Ltd
Council Reference	MCU/11/0024
HRP Reference	HRP14122

1.3 Assessment and Recommendation

Cardno HRP has undertaken an assessment of the proposed development in accordance with the assessment process and decision rules set out within the *Sustainable Planning Act 2009* (the 'SPA'), supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views
- Ecological – impacts of wind farm on protected flora and fauna
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray and environmental / contaminated land matters
- Noise – noise impacts of wind farm on residential and other sensitive land uses
- Aeronautical – impacts of turbines on plane movements and airfields
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access
- Civil and Electrical Engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the wind farm was undertaken by Foresight Partners in parallel with this assessment.

Overall, the development application complies with the relevant planning instruments set out within the assessment report, with two occasions where a potential conflict may arise with the applicable codes. There are sufficient grounds to justify the decision notwithstanding those potential conflicts.

On this basis, it is recommended that the Minister may approve the development, subject to conditions as described in **Attachment A**.

2 Introduction

Cardno HRP has been instructed by the Queensland State Government (acting through) the Department of State Development, Infrastructure and Planning (DSDIP) to provide a holistic assessment of the Mount Emerald Wind Farm development application on behalf of the Minister. The assessment has been undertaken in two parts.

Part A comprised a review of all the application material and the relevant planning framework documents in order to assess and advise as to whether sufficient information was available to determine the development application.

Part B is the subject of this report and comprises the detailed assessment of the application from a planning and technical perspective, against the relevant planning policy framework.

The scope of work for Part B included the following:

- detailed assessment of the common material and relevant framework, consequent to the detailed review undertaken in Part A, and consistent with the relevant assessment and decision rules of the SPA; and
- technical assessments to inform recommendations;
- provision of summary report and overall recommendation to the State in relation to the application, having regard to the relevant sections of SPA which govern the making of, assessment, and decisions on applications pursuant to the Ministerial Call In, and
 - if recommending approval, the reasons for approval and relevant conditions; or
 - if recommending refusal, the reasons for refusal.

This assessment report is in respect of Part B only and sets out our assessment of those matters relevant to the assessment of the application.

Please note that this assessment only comprises an assessment of the proposed development against the applicable planning framework. It includes an assessment in terms of planning and technical matters, and incorporates the outcomes of an economic assessment undertaken in parallel by Foresight Partners. It has not addressed any submissions received in respect of the Ministerial Call In.

Section 3 –Background of this report outlines relevant background information including the site, application details and relevant Integrated Development Assessment System (IDAS) process.

Section 4 – Statutory Planning Framework sets out the relevant parts of the town planning framework relevant to development assessment of the application. The proposal is assessable development under the Mareeba Shire Planning Scheme (version 1/2007, in effect at the time of lodgement) and the Temporary Local Planning Instrument 01/001 (Wind Farms). The Planning Scheme and TLPI prescribe Code Assessment for the proposed development. Section 313 of the *Sustainable Planning Act 2009* (the SPA) prescribes the requirements for code assessment.

Section 5 – Technical Assessment provides a summary of the technical assessments undertaken by the relevant technical experts to inform recommendations.

Section 6 – Formal Assessment of Development Application provides a comprehensive assessment of the wind farm application against the statutory planning framework.

Section 7 – Conclusion and Recommendations provides a summary of the assessment and makes a recommendation for the determination of the development application.

3 Background

3.1 Introduction

The following section of this report provides an overview of the proposed development and development assessment process in order to provide relevant context.

3.2 Site Details

The site the subject of the proposed Mt Emerald Wind Farm is located at Kippin Drive, Arriga, approximately 25 kilometres south of Mareeba. The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and easements A, C and E within Lots 1, 2 and 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

3.3 Proposed Development

The proposed development the subject of this assessment is for a wind farm, comprising a maximum of 63 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation. The details of the application include:

- maximum of 63 turbine sites, each to occupy a 'footprint' of approximately 40m x 40m, with the ultimate location subject to "micro-siting";
- access to each turbine site via a series of roads/tracks with a disturbed width of approximately 10m, with underground cabling connecting each turbine to the substation to be within this disturbed area (wherever practical);
- turbine hub height of between 80-90m, with rotor diameters of approximately 100m;
- maximum overall height of the turbines (to the tip of the rotor blade when vertical) is 1,179.5m AHD;
- substation to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid; and
- operations and maintenance depot to be established on site (including include control equipment, maintenance stores, work area and amenity facilities).

The application seeks a Development Permit for Material Change of Use for a Wind Farm.

3.3.1 Proposal Evolution through Development Application Process

Mt Emerald Wind Farm Pty Ltd c/- RPS Australia East lodged a development application to Tablelands Regional Council on 15 August 2011 for a Development Permit for Material Change of Use for a Wind Farm. The proposed wind farm comprises wind turbines and ancillary infrastructure including access, transformers, depots, cabling and a substation.

A maximum of 75 turbine sites were originally identified on a preliminary basis and it was stated that they would occupy small 'footprints' of approximately 40m x 40m.

Access to each turbine site is to be provided by a series of roads/tracks with a disturbed width of approximately 10m. It is identified that this disturbed area will also include (wherever practical) the underground cabling which is needed to connect each turbine to the on-site substation. The substation is to be located centrally within the site and will serve as a point to collect all underground feeder cables and link to the existing electricity grid.

An operations and maintenance depot is also to be established on site, and will include control equipment, maintenance stores, work area and amenity facilities. The final location has not been identified at this stage and it is suggested by the applicant that the proposed location, setback, height and floor area limitations will be negotiated and form conditions of any future development approval.

The original application identified that the final location of turbines will be subject to micro-siting including consideration of a number of onsite factors, for example consideration of wind flow, terrain, equipment access, geological conditions as well as environmental and visual impact. To accommodate these potential variances, the applicant has allowed for a variance of up to 100m horizontally from the current indicated position of individual turbines.

Access to the site is proposed from Springmount Road, across Lot 905 on CP896501, along Kippin Drive before entering Lot 7 (via easements A & C in Lots 1 & 3 on SP231871 respectively). The existing access tracks, which are generally located within Easements A, C & E in Lots 1, 2 & 3 on SP231871 and Easement D within Lot 7 on SP235244, currently provide access to the existing transmission line and monitoring masts on site and will be followed wherever practical to provide site access. Additional internal access tracks of 10m width will be constructed to provide individual access to each turbine.

The following table provides a summary of the Mount Emerald Wind Farm proposal as originally properly made:

Development Aspect	Development Detail
Number of Turbines	Up to 75 (subject to micro-siting)
Wind Turbine Size	Blade length of up to 50m Hub Height of between 80m-90m
Energy Output	Approximately 500,000 megawatt hours
Site Boundary Setbacks	Adequate setbacks to be established for each turbine to ensure that no part of turbine overhangs adjacent property
Connection to the Distribution Network	Each turbine will be connected to the proposed on-site substation via a network of underground and above ground cables. The on-site substation will then be connected via overhead transmission lines to the existing 275 kV Chalumbin to Woree Powerlink electrical network, which traverses the site.

Contained within the response to the information request issued by Tablelands Regional Council and dated April 2014, it is stated that consistent with the commercial market for wind turbines in Australia and internationally, larger 3 MW class wind turbines are now the most common being installed. It is stated by the applicant that these turbines have rotor diameters above 100m and as such require additional spacing between turbines, thus reducing the overall number of turbines on site. The applicant goes onto state that while the overall tip height of turbines would increase by 5m to 10m the reduction in number and increased spacing is thought to reduce the visual aspect of the wind farm. The use of larger turbines reduced the preferred layout to a total of 70 wind turbines.

Following detailed environmental investigations the wind turbine layout design has been further modified to a currently preferred total of **63 turbines**. This is the final proposed layout reflected in the response to the Minister's information request.

These further reductions were in respect to:

- WTG 1 and 2 – removed to reduce fauna impacts due to avian species' utilisation of the Walsh Bluff area – 500m buffer zone allowed around Walsh Bluff;
- WTG 62 – residential impacts (noise, visual) to neighbouring residences; and
- WTG 40, 41, 42 and 43 – reduction of impacts to montane heathland zone greater than 900m as in Wet Tropics bioregion.

Adjustments to the layout of the wind farm have been made to accommodate outcomes of technical assessments of noise, visual amenity, flora and fauna and construction related matters.

It is stated by the applicant that the project is intended to supply approximately 650,000 megawatt hours which should supply sufficient renewable energy to power the equivalent annual needs of approximately 75,000 north Queensland homes over a 20 year period.

3.4 Integrated Development Assessment System (IDAS)

We understand the following statutory processes have been undertaken following lodgement.

- Tablelands Regional Council advised the Applicant on 26 August 2011 that the application was determined to be 'not properly made'.
- The Applicant provided material on 15 March 2012 to enable the application to be considered as 'properly made'.
- Tablelands Regional Council issued an Acknowledgement Notice followed by an Amended Acknowledgement Notice (the amended notice dated 30 March 2012).
- Referral to Concurrence and Advice Agencies identified in Acknowledgement Notice.
- Tablelands Regional Council issued an Information Request dated April 2012 and the response period was formally extended until 28 April 2014.
- Referral Responses received (refer to section 3.6 below).
 - Department of Environment and Resource Management (contaminated land matters) – response dated 21 June 2012.
 - Department of Environment and Resource Management (vegetation clearing matters) – response dated 9 April 2014.
 - Department of Environment and Resource Management (wetland management matters) – response dated 4 October 2012.
 - Powerlink (electricity easement matters) – response dated 25 May 2012.
- A response to the Information Request (dated 28 April 2014) was submitted to Mareeba Shire Council¹.
- On 10 April 2014 the Deputy Premier, Minister for State Development, Infrastructure and Planning advised parties that consideration was being given to exercising powers under section 424 of the SPA.
- On 11 June 2014 formal notice of the call in was given to affected parties.
- On 11 June 2014 an Information Request under Section 276 of SPA was issued by the Minister (through DSDIP).
- On 10 September 2014 a response to the Information Request was submitted to the Minister (through DSDIP).

3.5 Proposed Ministerial Call In

On 10 April 2014 the Minister for State Development and Infrastructure and Planning ('The Minister') wrote to affected parties advising of consideration being given to call in powers pursuant to section 424 of the SPA.

Pursuant to section 425 of the SPA, on the 11 June 2014 the Minister advised affected parties of his decision to exercise the ministerial call in powers to assess and decide the above development application. The Minister advised affected parties, after considering all written representations that the application would be called in.

¹ Since the Information Request was issued by Tablelands Regional Council, the Mareeba Shire Council was de-amalgamated from the Tablelands Regional Council and the site is within the new boundaries of Mareeba Shire Council.

The reasons for the call in are as follows:

“State interest

Under section 424 of SPA, I may call in a development application only if the development involves a state interest.

A state interest is defined in schedule 3 of the SPA as:

- a) An interest that the Minister considers affects an economic or environmental interest of the state or a part of the State, including sustainable development; or*
- b) An interest that the Minister considers affects the interests of ensuring there is an efficient, effective and accountable planning and development system.*

A regional plan is taken to be a state interest under section 35 of the SPA.

I consider the Mount Emerald Wind Farm development involves the following state interests, namely economic and environmental interests, to the State.

Economic

- Mount Emerald Wind Farm PTY Ltd seeks to establish up to 75 wind turbines which will have capacity to generate 225MW of electricity, or 500,000MW hours of renewable energy annually. The proposal's capital costs, which the applicant indicates will be in the order of \$382.36 million, will generate direct and indirect economic benefits to the local, regional, and national economies.*
- Approximately \$70.56 million of this is likely to be spent in the Far north Queensland region and will directly employ 200 workers over a two year construction period, as well as indirectly support additional jobs in the region and elsewhere over this period. On-going operation and maintenance of the wind farm will employ 15 workers locally over the project's initial 25 year life span.*
- The project is consistent with the Far North Queensland Regional Plan 2009-2031 energy objective and land use policies for electricity generation through viable renewable energy sources. It also represents a very significant increase in Queensland's wind energy electricity generation, which presently consists of 12MW of installed capacity, and furthers the State's contribution towards meeting the national goal of 20 per cent renewable energy electricity generation by 2020.*
- The wind farm project will contribute to Far North Queensland's energy security in an area susceptible to periodic power supply disruptions due to cyclone and storm damage to transmission lines.*

Environmental

- The Mount Emerald Wind Farm has the potential to have significant environmental impact. On 24 January 2012, the development was declared a controlled action under the Environmental Protection and Biodiversity Conservation Act 1999 as it has the potential to have significant impact on a number of matters of national environmental significance including quolls and plant species. The Minister for the Environment determined that the proposed activity be assessed by an EIS which is currently being undertaken by the applicant.*
- The Clean Energy Regulator is a government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. The Renewable Energy Target (RET) is an initiative administered by the Clean Energy Regulator that provides financial incentives for investment in both large scale and small scale renewable energy projects. The Australian Government, under the RET, has committed to ensuring 20 per cent of Australia's electricity supply will come from renewable sources by 2020. The government is currently undertaking a review of the RET, to be completed by mid-2014, to ensure it is operating efficiently and effectively.*
- The Queensland Government's Environmental Protection (Noise) Policy 2008 outlines provisions for protecting the quality of acoustic environments that are conducive to human health and wellbeing by establishing noise level goals for various operations such as wind*

farms. It is noted that the National Health and Medical Research Council (NHMRC), Australia's peak public health body, is currently conducting an independent review determine whether there is an association between exposure to wind farms and human health effects. The NHMRC recommends that relevant authorities take a precautionary approach to development applications relating to wind farms.

I have decided to call in the development application for the following reasons:

- The development application involves state interests, namely economic and environmental interests to the state.
- Council has made it clear in their correspondence dated 28 January 2014 and 14 February 2014 that they do not have the fiscal capacity or technical expertise to assess and determine the development application.
- The Chief Executive of SPA will become the assessment manager for wind farm development applications in the future. The Department of State Development, Infrastructure and Planning have developed the Draft Wind Farm State Code and Draft Wind Farm State Code Planning Guideline for integration into the State Development Assessment Provisions which was released for public consultation from 22 April 2014-13 May 2014. It is anticipated that the Draft Wind Farm State Code will commence in mid-2014."

3.6 Referral Agency and Advice Agency Responses

3.6.1 Summary of Original Referral Agency Responses

The following sets out a summary of the formal responses to the application received from the applicable referral agencies during the original assessment by the local government. Please note that the Department names are expressed below as per the original referral agency responses, and that some Department names have since changed.

3.6.1.1 *Department of Environment and Heritage Protection – Contaminated Land Matters (Concurrence)*

The Department of Environment and Heritage Protection (DEHP) provided their Concurrence Agency Response on 21 June 2012. The response identified that a number of concurrence agency conditions shall be attached to any approval as follows:

- Investigation and remediation of the portion of the site identified as having 'substantial' potential for unexploded ordnances (UXO);
- Any person employed or working on site, prior to the satisfaction of the above condition, shall be informed in writing;
- Following the action in the first condition the applicant is to submit a report to EHP to satisfy itself and confirm its agreement in writing to Tablelands Regional Council;
- The applicant is to advise the owner and any occupier of the above responsibilities.

3.6.1.2 *Department of Environment and Resource Management – Clearing Vegetation (Concurrence)*

An Information request was originally issued on 30 April 2012 in respect of vegetation clearing matters by the Department of Environment and Resource Management (DERM). On 9 April 2014 the Department of Natural Resources and Mines (under which jurisdiction for vegetation clearing fell) wrote to Tablelands Regional Council informing that due to changes made to the *Sustainable Planning Regulation 2009* (Schedule 24, Item 2) the clearing that was being assessed by DERM was now exempt. The Council and applicant were advised to proceed with the assessment of the application in the absence of the requested information pursuant to section 278 of the Act. The Council and applicant were further advised that DERM would not provide a response and therefore in accordance with section 286 of the Act, the application must be decided as if the department had no concurrence agency requirements.

3.6.1.3 Department of Environment and Heritage Protection– Wetland Management (Advice)

The Department of Environment and Heritage Protection (DEHP) provided its Advice Agency response on 04 October 2012.

The response advised that the assessment manager is to consider the requirement for a buffer area between any proposed works and the referrable wetland (Granite Creek running along the eastern edge of the wind farm project area is mapped as a Wetland). Outside buffer areas, a minimum of 200m buffer to a wetland is recommended.

The response also advised that the assessment manager should consider a Stormwater Management Plan to demonstrate how stormwater, sediment and other run off from the site (associated with the construction and operational phases of development) will be effectively managed to prevent adverse impacts on wetland values.

3.6.1.4 Powerlink Queensland – Electricity Easement (Advice)

Powerlink provided its Advice Agency response on 25 May 2012. The response recommended that the application be approved in principle subject to conditions in respect of compliance with easement dealings, connection to the network, general requirements in respect of works in proximity to a Powerlink Infrastructure and other safe working requirements.

3.6.2 Summary of Advice Agency Responses (following Ministerial Call In)

Pursuant to section 427(4), until the Minister gives the decision notice on the application, any agency that was a concurrence agency is taken to be an advice agency.

The Deputy Premier wrote to the Department of Environment Heritage Protection (DEHP), the Department of Natural Resources and Mines (DNRM) and Powerlink requesting that they provide an updated response or confirm that their response remains unchanged. The following sets out a summary of the formal responses from each agency.

3.6.2.1 Department of Natural Resources and Mines (formerly Department of Environment and Resource Management) – Clearing Vegetation (Concurrence)

On 07 May 2014 the Department of Natural Resources and Mines (DNRM) provided an advice agency response relating to clearing vegetation matters. The response confirmed that DNRM has no objections to the Deputy Premier calling in the assessment of the Mount Emerald Wind Farm, and that the original response had not changed, to the effect that the following advice was provided.

On 17 April 2012 DNRM received a referral under the Integrated Development Assessment System (IDAS). An Information request was originally issued on 01 May 2012 in respect of vegetation clearing matters. The information request period was extended on two occasions in 2013, during the second extension reforms to the vegetation management framework were implemented. The amendments included the insertion of an additional exemption within the Sustainable Planning Regulation 2009 for clearing vegetation for community infrastructure mentioned in Schedule 2. This includes works under the Electricity Act 1994.

The DNRM determined that the proposed development met this definition and could be considered exempt from requiring a development approval under the community infrastructure exemption if a new development application was lodged under the contemporary framework. On 02 April 2014, this position was confirmed with the Department of State Development, Infrastructure and Planning.

There are no allowances under the SPA to withdraw the referral without withdrawing the entire application. There are also no allowances for referral agencies to consider changes which have occurred after the referral period. In order to ensure the applicant received the full benefit of the new exemption, It is stated that the department took the position to allow the concurrence agency assessment period to lapse resulting in a deemed approval.

As the proposed vegetation clearing is advised as being exempt no further requirements in respect of vegetation clearing have been considered.

3.6.2.2 **Department of Environment and Heritage Protection (Formerly Department of Environment and Resource Management) – Contaminated Land (Concurrence) & Wetland Management (Advice)**

On 30 June 2014 the Department of Environment and Heritage Protection (DEHP) provided an advice agency response relating to the former DERM concurrence agency (contaminated land) and advice agency (wetland management) responses to the former Tablelands regional Council, in 2012. The advice agency response is summarised as follows:

Contaminated land:

The Department of Environment and Heritage Protection (EHP) confirmed in its letter dated 30 June 2014 that it has reviewed DERM's 2012 concurrence agency response for contaminated land which provided the following information:

- *The original assessment is recognised to be triggered for Area Management Advice (AMA) – Unexploded Ordnance (UXO) – under Schedule 7, table 3, item 11 of the Sustainable Planning Regulation 2009.*
- *Significant portions of the site (the subject lot/s) are areas within which the Department of Defence (Defence) has assessed either a 'substantial' or 'slight' potential for residual UXO exists.*
- *Defence advises that development of land use rezoning proposals for land within the 'substantial' UXO areas should only proceed following the conduct of further UXO investigation activities and any necessary clearance. Defence maintains a list of commercial UXO investigation and remedial search contractors that it accredits to carry out this work.*
- *Defence also recommends that the owners or occupiers of UXO-affected land and workers and contractors employed on such land need to be aware of the procedure if an object suspected of being UXO is found.*
- *EHP has no record of the site being further investigated or remediated and it is considered that there remains the possibility of UXO being found on it.*

The DERM concurrence agency response also included a suite of conditions in relation to the assessment and remediation of UXO on the land.

Upon review it is now confirmed that the land in question is now categorised as having 'slight' residual UXO risk. It is advised that the Department of Defence (Defence) recommends that all land usage and development within land areas of 'slight' residual UXO potential should continue without any need for further UXO investigation. In addition, Defence recommends the following procedures be followed if an object suspected of being UXO is found in the area:

- *Do not touch or disturb the object.*
- *Take action, where appropriate, to prevent it being disturbed by another person.*
- *Note its approximate dimensions and general appearance.*
- *Note the route to its location.*
- *Advise the Police as soon as possible.*

Based on the UXO risk categorisation of the land being 'slight', DEHP now does not recommend conditions proposing investigation of the land for UXO. However, it is advised that consideration be given to adopting Defence's recommended procedure when conditioning the development, should approval for the project proceed.

DEHP recommended that the above advice be included as 'General Advice' in the approval package.

Wetland management:

In relation to wetland management, DEHP confirmed in the advice agency response that the 'wetland trigger' has since been removed from the *Sustainable Planning Regulation 2009*. As such DEHP advised that they would not be providing an advice response on this issue. Whilst

no longer a trigger matters pertaining to sediment, erosion and storm water management are recommended to be addressed as part of an Environmental Management Plan and secured by a condition.

3.6.3 Third Party Advice

3.6.3.1 Department of Health

The Deputy Premier also wrote to the Department of Health (DH) requesting third party advice regarding the potential health impacts of the wind turbines on the surrounding community including mitigation measures. On the 9 July 2014 the Department of Health (DH) in its response identified that the national Health and Medical Research Council (NHMRC) note in its *Draft Information Paper: Evidence on Wind Farms and Human Health* released in February 2014 that:

“There is no reliable or consistent evidence that wind farms directly cause adverse health effects in humans. However, the NHMRC acknowledges that there is consistent (however poor) evidence that proximity to wind farms is associated with annoyance and, less consistently, with sleep disturbance and poorer quality of life.”

It is advised that it would therefore be appropriate that the impact of noise in particular low frequency noise at sensitive receivers be considered during the assessment of the development application.

It is advised further that NHMRC has identified that further research is needed to explore the relationships between noise at varying distances from wind farms and indirect health-related effects. A targeted call for research is anticipated to be announced by NHMRC once they have considered all submissions to the draft information paper.

3.6.3.2 Mareeba Shire Council

On the 19 June 2014 Mareeba Shire Council advised that at its Ordinary Meeting held on 18 June 2014 Council considered what conditions it would like imposed should the Minister be minded to approve the development application. Council request that consideration be given to a condition requiring the following:

1. That the developer be required to identify a transport route for the wind farm construction traffic.
2. That a pre and post construction condition assessment be carried out on the identified transport route.
3. Should the post construction condition assessment determine that the condition of the identified transport has deteriorated as a result wind farm construction, the developer be required to undertake remediation road works to return the identified transport route to the pre construction condition.
4. Any works to Council controlled roads conditioned as part of a development approval be carried out in accordance with the requirements of the *FNQROC Development Manual*.

3.6.3.3 Tablelands Regional Council

On the 24 July 2014 Tablelands Regional Council (TRC) advised that following the decision to call in the development application, Council further considered the potential financial implications for TRC controlled roads at their meeting of 17 July 2014, where they resolved as follows:

1. That in relation to the Mount Emerald Wind Farm development proposal, Council draw the Hon Jeff Seeney MP Deputy Premier & Minister for State Development, Infrastructure and Planning's attention to the road damage implications of this development for Council roads, particularly in the context of Moyne Shire Council's experience with the Macarthur wind farm.

2. And that Council request that the Minister include conditions of approval in any development approval for the Mount Emerald Wind Farm requiring:
 - a) That (in the case of Tablelands Regional Council controlled roads) any construction traffic be limited to Hansen Road;
 - b) A road condition audit prior to commencement of any construction;
 - c) Lodgement of a cash bond as security for any damage to TRC roads during construction;
 - d) That the developer enters into an agreement with Tablelands Regional Council about restitution prior to commencement of construction.

4 Statutory Town Planning Framework

4.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their applicability to the assessment of the proposed development.

This chapter initially sets out the relevant legislative provisions, and the State and local instruments in force and applicable at the time the application was made. This section goes on to identify the State and local instruments that have taken effect since lodgement and as such may be given weight in the determination of the development application.

4.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers the IDAS for integrating State and local government assessment and approval processes for development. Relevant aspects of the SPA and stages in the IDAS process including referral and information stages are addressed below.

4.2.1 Code Assessment

The planning framework relevant to assessment of the development application at the time of lodgement comprises the SPA, the Mareeba Shire Planning Scheme and other relevant planning instruments as discussed in this Chapter. The Mareeba Shire Planning Scheme is a “planning scheme” as defined by the SPA at section 79.

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application was made to the assessment manager (originally Tablelands Regional Council, subsequently Mareeba Shire Council and now the Minister) to acquire the necessary development permit.

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

- “(2) *The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
- (a) the State planning regulatory provisions;*
 - (b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;*
 - (c) any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;*
 - (d) State planning policies, to the extent the policies are not identified in—*
 - (i) any relevant regional plan as being appropriately reflected in the regional plan; or*
 - (ii) the planning scheme as being appropriately reflected in the planning scheme;*
 - (e) any applicable codes in the following instruments-*

- (i) a temporary local planning instrument;
 - (ii) a preliminary approval to which section 242 applies
 - (iii) a planning scheme;
- (f) if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.
- (3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—
 - (a) the common material;
 - (b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;
 - (c) any referral agency's response for the application;
 - (d) the purposes of any instrument containing an applicable code;
- (4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2) (c) or (e).
- (5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.
- (6) Subsection (2) (a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.

The common material under the SPA (Schedule 3) means all the material about the application the assessment manager has received in the first 3 stages of IDAS including:

- any concurrence agency requirements, advice agency recommendations and contents of submissions that have been accepted by the assessment manager; and
- any advice or comment about the application received under section 256 of the SPA; and
- if a development approval for the development has not lapsed-the approval; and
- any infrastructure agreement applicable to the land the subject of the application.

Section 317 states that an assessment manager may give weight to later planning instrument, code, law or policy:

- (1) In assessing the application, the assessment manager may give weight it is satisfied is appropriate to a planning instrument, code, law or policy that came into effect after the application was made, but-
 - (a) before the day decision stage for the application started; or
 - (b) if the decision stage is stopped-before the day the decision stage is restarted.
- (2) However, for a development application (superseded planning scheme), subsection (1) does not apply to an existing local planning instrument, other than any infrastructure provisions or planning scheme policy applied in relation to the assessment of the application under section 315 (1)(c) and (d)

According to Section 326 of the SPA:

- “(1) The assessment manager's decision must not conflict with a relevant instrument unless—
 - (a) the conflict is necessary to ensure the decision complies with a State

- planning regulatory provision; or*
- (b) *there are sufficient grounds to justify the decision, despite the conflict; or*
- (c) *the conflict arises because of a conflict between—*
- (i) *2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
- (ii) *2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

4.2.2 **Referral**

Section 254 of the SPA states that:

“A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation.”

Section 13 of the *Sustainable Planning Regulation 2009* (“SPR”) explains that:

“For sections 250(a), 251(a) and 254(1) of the Act —

- (a) *schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
- (b) *schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2.”*

The Department of Environment and Resource Management (DERM) was triggered as a concurrence agency in respect of contaminated land and vegetation clearing and as an advice agency in respect of wetland management areas. Powerlink Queensland was triggered as an advice agency in respect of the electricity easement. Referral actions were undertaken and a summary of the responses received is included in **section 3.5**.

4.3 **State Planning Regulatory Provisions**

A State Planning Regulatory Provision is an instrument made under Division 2 and Part 6 of the SPA for an area to advance the purpose of the Act by—

- (a) providing regulatory support for regional planning or master planning; or
- (b) providing for a charge for the supply of infrastructure; or
- (c) protecting planning scheme areas from adverse impacts.

A State Planning Regulatory Provision includes a draft State Planning Regulatory Provision.

Section 313(2)(a) of the SPA requires an assessment manager to assess an application against a State Planning Regulatory Provision to the extent the State Planning Regulatory Provision is relevant to the development.

At the time of being properly made, the following State Planning Regulatory Provisions were in force and applicable to the development:

- **Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions 2009**

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the Far North Queensland region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes ‘electricity infrastructure’ and is therefore not considered an ‘urban activity’ regulated by Division 2 of the Regulatory Provisions.

The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.

4.4 State Planning Policies

A State Planning Policy is an instrument made by the Minister about matters of State interest. As prescribed by Section 313(2)(d) of the SPA, an assessment manager must have regard to State Planning Policies, if they are not identified in the planning scheme as being appropriately reflected in the planning scheme.

At the time of being properly made, some SPP's are reflected in the Mareeba Shire Planning Scheme (Planning Scheme) as detailed below. The following State Planning Policies were in force:

State Planning Policy	Comment
SPP 1/92 Development and the Conservation of Agricultural Land	This State Planning Policy sets out broad principles for the protection of good quality agricultural land from inappropriate developments. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This State Planning Policy sets out broad principles for protecting airports and associated aviation facilities from encroachment by incompatible developments in the interests of maintaining operational efficiency and community safety. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.
SPP 2/02: Planning and Managing Development Involving Acid Sulfate Soils	This State Planning Policy is not reflected in the Planning Scheme and aims to ensure that development involving acid sulfate soils is planned and managed to avoid the release of potentially harmful contaminants into the environment. The development site does not include land at or below 5 metres AHD and nor is Tablelands Regional Council listed as an applicable local government area to which the SPP applies, therefore this SPP is not applicable.
SPP 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This State Planning Policy aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. This is applicable but is reflected in the Mareeba Shire Planning Scheme and therefore does not require separate assessment.

SPP 1/07: Housing and Residential Development	This State Planning Policy is not reflected in the Planning Scheme and seeks to ensure that large, higher growth local governments identify their community's housing needs and analyse, and modify if necessary, their planning schemes to remove barriers and provide opportunities for housing options that respond to identified needs. The application does not propose housing and therefore it is not applicable.
SPP 2/07: Protection of Extractive Resources	This State Planning Policy is not reflected in the Planning Scheme and identifies those extractive resources of State or regional significance where extractive industry development is appropriate in principle, and aims to protect those resources from developments that might prevent or severely constrain current or future extraction when the need for utilization of the resource arises. This SPP is not reflected in the planning scheme, but is not applicable as no Key Resource Areas (KRA's) are applicable to the site.
SPP 2/10: Koala Conservation in South East Queensland	This State Planning Policy seeks to ensure koala habitat conservation is taken into account in the planning process, contributing to a net increase in koala habitat in South East Queensland, and assist in the long term retention of viable koala populations in South East Queensland. The development site is not located in South East Queensland and therefore this SPP is not applicable.
SPP 3/10: Acceleration of Compliance Assessment	This State Planning Policy provides a standard code for reconfiguring a lot (subdividing one into two) and associated operational works that require compliance assessment. This SPP is not reflected in the planning scheme, but is not applicable as the development application does not involve compliance assessment.
SPP 4/10: State Planning Policy for Healthy Waters	This State Planning Policy aims to ensure that development for urban purposes under the <i>Sustainable Planning Act 2009</i> , including community infrastructure, is planned, designed, constructed and operated to manage stormwater and waste water in ways that protect the

	environmental values prescribed in the Environmental Protection (Water) Policy 2009. This SPP is not reflected in the planning scheme, however it is not applicable as the proposed development is not an urban purpose.
SPP 5/10: Air, Noise and Hazardous Materials	This State Planning Policy complements the existing management framework by providing a more strategic focus on the location of industrial land uses. The policy will ensure that planning instruments provide strategic direction about where industrial land uses should be located to protect communities and individuals from the impacts of air, noise and odour emissions, and the impacts from hazardous materials and how land for industrial land uses will be protected from unreasonable encroachment by incompatible land uses. This SPP is not reflected in the planning scheme, but is not applicable as an industrial land use is not proposed.
Temporary SPP 2/11: Planning for Stronger, More Resilient Floodplains	This State Planning Policy seeks to ensure that development is planned, designed and constructed to minimise potential flood damage to towns and cities and to improve safety of individuals and communities. This SPP is not reflected in the planning scheme, but is not applicable as the site is not identified as subject to flooding.
SPP 3/11 Coastal Protection	This State Planning Policy protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters. This aims to satisfy, in part, the object of the <i>Coastal Protection and Management Act 1995</i> . This SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the coastal zone.
SPP 4/11: Protecting wetlands of high ecological significance in Great Barrier Reef catchments	This State Planning Policy seeks to ensure that development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to prevent the loss or degradation of

	wetlands and their environmental values, or enhances these values. This is SPP is not reflected in the planning scheme, but is not applicable as the site is not located in the Great Barrier Reef catchment.
SPP 1/12: Protection of Queensland's strategic cropping land	This State Planning Policy seeks to protect Strategic cropping land (SCL) by ensuring development impacts on SCL or potential SCL are managed to preserve the productive capacity of the land for future generations through assessment under this SPP. This SPP is not reflected in the planning scheme, but as no SCL is identified for the site this is not applicable.

4.5 Far North Queensland Regional Plan 2009-2031

The *Far North Queensland Regional Plan 2009 – 2031* ('FNQRP 2009') is applicable to the site and to the proposed development.

The site is designated as being within the Regional Landscape and Rural Production Area.

The Intent statement contained within the FNQRP 2009 for the Regional Landscape and Rural Production Area (RLRPA) includes reference to lands that have regional landscape, rural production or other non-urban values, and protects these areas from encroachment by inappropriate development, particularly urban or rural residential development.

The FNQRP 2009 contains desired regional outcomes. The land uses policies relating to the Economic Development desired regional outcome include that viable renewable energy source generation, including wind farm generators, are recognised as acceptable land uses and supported for their contribution to reducing greenhouse emissions.

4.6 Mareeba Shire Planning Scheme 2004

The Mareeba Shire Planning Scheme 2004 took effect from 10 January 2005. Version 1/2007 (Incorporating Planning Scheme Amendment No 1 of 2007 (Waste Management Facilities)) commenced on 23 November 2007 and was the version in effect when the development application was properly made.

Section 5.2 of TLPI 01/11 (see section 4.7 below), which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17), and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other Overlay code identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004.

The development application site is identified within the Rural Zone. Section 4.76 of the Rural Zone Code states that development that is consistent with the specific outcomes in s4.78 to s4.80 complies with the Rural Zone Code. Section 4.77 states that the overall outcomes are the purpose of the Code.

The overall outcomes sought for the Rural Zone Code are to achieve an area:

- (a) That caters for a range of primary industries including forestry and aquaculture to contribute to the economic wellbeing of the Mareeba Shire;
- (b) Where agricultural production and the raising of animals are protected from incompatible land uses;

- (c) Where Good Quality Agricultural Land (GQAL) is protected from fragmentation and alienation, not developed for purposes other than agricultural and support uses, and is protected from incompatible land uses in accordance with SPP1/92;
- (d) In which agricultural uses and works are located, designed and managed to maximise the efficient use and operation of infrastructure including the MDIA channel infrastructure;
- (e) That allows tourist uses that are ecologically sustainable and dependent on the values of the cultural heritage and natural resource or features located in the rural zone;
- (f) That excludes residential uses unless these uses are primarily ancillary and necessary to agricultural uses;
- (g) Where a distinct boundary between the towns of Mareeba, Kuranda and Dimbulah is clear so that those towns do not extend beyond identified boundaries;
- (h) Where provides adequate services to cater for the needs of industry are provided whilst ensuring likely environmental and social impacts of industrial developments and activities (e.g. Both construction and operational impacts) and the cumulative impacts of trucks/transportation to and from industrial sites are minimised;
- (i) Impacts on development on the natural values and water quality are minimised;
- (j) That allows for rural value adding industries where appropriately located;
- (k) Where GQAL is conserved for agricultural uses that are dependent on the quality of agricultural land;
- (l) Where the scenic values of the Shire are maintained;
- (m) Where, in the Southedge Potential Tourist Area (as shown on Strategic Framework Maps SP1 & SP2) allows for tourist facilities directly associated with the natural attributes of the Southedge site, provided there is a demonstrable need for the facilities and adequate support systems are in place;
- (n) Where, in Preferred area No 3 (as shown on Maps Z8, Z9 and Z10) the Clohesy River Area is protected for future long term urban development as identified by the FNQ Regional Plan;
- (o) Where uses and works are located, designed and managed to avoid significant effect on the environment;
- (p) Where, in Preferred Area No 2 (as shown on Map Z10) the Mona Mona Reserve is planned for its continued development in accordance with an approved Plan of Development and Land Management and the Supplementary Table of zones;
- (q) Makes effective use of the land and of the services provided to enable the functioning of the zone.

An assessment against the relevant Planning Scheme provisions is made in **Chapter 6**.

4.7 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument (TLPI) provides use definitions, level of assessment and an assessment framework for wind development and overrides the provisions of the planning scheme. This version commenced on 05 October 2011 and ceased to have effect on 07 October 2012. This version was effective at the time the application was properly made.

Pursuant to the TLPI 01/11, a development application for a Material Change of Use for a Wind Farm is Code Assessable where located within the Arriga Locality on land included in the Rural Zone. A map of the Arriga locality is included on page 12 of the TLPI 01/11 (Wind Farms) – the site is a part of the Arriga locality .

The intent of the code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. The intent states that wind farm development will have minimal impact on the environment and on amenity (at both a local and wider area scale), and will aim to achieve social, environmental and economic benefits to the community at both local and regional level.

Section 6.2 of the Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the following outcomes (the overall outcomes):

- (a) Wind farms are located, designed and operated to address and minimise potential impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.
- (c) Wind farm assessment utilises and takes comprehensive account of national and/or state government recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.
- (d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.
- (e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing, nearby, high-voltage electricity transmission lines.
- (j) Wind farms are located within an economically viable wind resource.
- (k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The code includes Specific Outcomes and (where applicable) Probable Solutions. The Specific Outcomes relate to:

- Ecologically Sustainable Development
- Location & Site Suitability
- Visual and Landscape Impacts
- Noise Impact
- Shadow Flicker Impact
- Radio & Television Impact

- Wind Farm Access
- Wind Farm Construction Management
- Wind Farm Operational and Maintenance Management
- Signage
- Decommissioning and Rehabilitation

An assessment against the Wind Farm Code of the TLPI 01/11 is provided in **Chapter 6**.

4.8 Planning Instrument, Code, Law or Policy Since the Development Application was Properly Made

4.8.1 Introduction

Since the development application was properly made an amendment to the Mareeba Shire Planning Scheme and the State Planning Policy (SPP) has come into effect. The original TLPI 01/11 was extended for a further year as TLPI 1/12 until it was incorporated as an amendment into the Mareeba Shire Planning Scheme. The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation (until 13 May 2014).

The following section of this report provides an overview of the relevant planning instruments, codes and policy that have come into effect or have been issued in draft for consultation.

4.8.2 State Planning Policy (December 2013)

The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E - Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.

The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect. Appropriate weight should be given to the SPP under section 317 of the SPA.

The following interim development assessment requirements in Part E of the SPP are identified for the following state interests and are relevant to the assessment of this development application:

- Biodiversity
- Natural hazards

An assessment against the requirements of Part E – Interim development assessment requirements is provided in **Chapter 6**.

4.8.3 The Mareeba Shire Planning Scheme

The Mareeba Shire Planning Scheme was amended to incorporate Planning Scheme Amendment No 1/11- Wind Farms and commenced on 30 September 2013.

Division 13-Assessment Tables for Rural Zone, Table 13, identifies that making a material change of use for a Wind Farm is Impact Assessable development.

A defined use that is inconsistent with the outcomes sought for the Rural Zone is noted in column 1 of table 13. If a defined use is not noted as inconsistent in column 1 of table 13, it is a consistent use. A wind farm is not listed as an inconsistent use and therefore the proposed wind farm is identified as a consistent use within the Rural Zone.

A Wind Farm Code has been incorporated into the Mareeba Shire Planning Scheme at Division 23 – Wind Farm Code.

The intent of the Wind Farm Code is to facilitate the establishment of new wind farms or expansion of existing wind farms, in appropriate locations. The intent states that wind farm development will not have unacceptably adverse impacts on the environment and on amenity (at both a local and wider area scale), and will have social, environmental and economic benefits to the community at both local and regional level.

Section 6.2 of the Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code.

The purpose of the Wind Farm Code is to achieve the following outcomes (the overall outcomes):

- (a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environment, economic and social values;
- (b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts associated with wind farms.
- (c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.
- (d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.
- (e) Where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.
- (f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits.
- (g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.
- (h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.
- (i) Wind farms are readily connected to existing high-voltage electricity transmission lines.
- (j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1 of the Wind Farm Code. An assessment against the relevant provisions is made in **Chapter 6**.

4.8.4 Temporary Local Planning Instrument 01/12 (Wind Farms) (TLPI)

TLPI 01/12 commenced on 07 October 2012 and ceased to have effect on 07 October 2013. The TLPI rolled forward the provisions of TLPI 01/11 until such time as the Mareeba Planning Scheme amendment No 1/11 (as set out above) took effect.

4.8.5 Draft Tablelands Regional Council Planning Scheme

Prior to de-amalgamation the Tablelands Regional Council embarked on developing a new planning scheme which will direct and manage growth over the entire Tablelands region and replace the previous four planning schemes of the former Atherton, Eacham, Herberton and Mareeba Shire Councils. Public consultation of the draft planning scheme was carried out during January to April 2013.

As mentioned previously, Section 317 of the Sustainable Planning Act 2009 states that the Assessment Manager may give weight to instruments, codes, laws and policies that came into effect after the application was, but before it enters the decision stage.

The Tablelands Regional Council has undergone a process of de-amalgamation where the former Mareeba Shire Local Government Area has been excised from the Tablelands Regional Council Local Government Area and a new Mareeba Shire Council has been formed which officially commenced operation on 1 January 2014. Given that the Mareeba Shire Council was not party to the preparation of the Draft Planning Scheme, it is expected that the Council will seek to review and amend the Draft Scheme prior to its adoption by the new Council.

At this time no draft Mareeba Shire Planning scheme has been released. No weight is afforded to the draft Tablelands Regional Council Planning Scheme and it is not considered appropriate to provide any technical commentary against the Draft Scheme at this stage.

4.8.6 Draft Wind Farm State Code

The draft Wind Farm State Code and draft Wind Farm State Planning Guideline were released for public consultation until 13 May 2014. The purpose of the draft code is to facilitate development of new wind farms or the expansion of existing wind farms in appropriate locations and to ensure potential adverse impacts on the community and environment are avoided during the construction, operation and decommissioning of wind farms.

The Code remains in draft and had not come into effect at the time the wind farm development application, subject to this assessment, started the decision stage. As such, the draft Wind Farm State Code has not been given any weight and therefore there has been no assessment of the development application against the draft Wind Farm State Code.

4.9 Summary

This assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012. The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made and has also been assessed.

The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI also identifies that the relevant assessment criteria for development is the Wind Farm Code included in the TLPI, the Rural Zone Code, Filling and Excavation and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation, Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code incorporated into the Amendment 01/11 – Wind farms of the Mareeba Shire Planning Scheme as compared to the provisions contained within the Wind Farm Code of the TLPI 01/12 – Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11).

Section 317 of the SPA states that the assessment manager may give weight it is satisfied is appropriate to a later planning instrument, code, law or policy. As such, this report undertakes an assessment against the planning framework in place at the time of lodgement of the development application (as per s313 of the SPA) and has given weight to later planning instruments, codes, laws or policies, most significantly, the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms). Weight has been given to the Wind Farm Code of the amended Mareeba Planning Scheme, as it represents more recent planning thought for wind farm development in Mareeba Shire.

In summary, in accordance with Section 313 of the SPA the proposed wind farm development application has been assessed against:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies;
- the Mareeba Shire Planning Scheme (incorporating Amendment No 1 of 2007); and
- Temporary Local Planning Instrument 01/11 (Wind Farms).

In accordance with Section 317 of the SPA the assessment of the proposed wind farm development application has also given weight to:

- the State Planning Policy; and
- the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

5 Technical Assessment

5.1 Introduction

Cardno HRP has undertaken an assessment of the application material, supported by technical experts within Cardno who have provided technical services for the following fields:

- Landscape Visual Amenity – visual impact of the proposal on local context and views;
- Ecological – impacts of wind farm on protected flora and fauna;
- Agricultural Land and Environmental - Agricultural Land and impact on ability to crop spray, and environmental / contaminated land matters;
- Noise – noise impacts of wind farm on residential and other sensitive land uses;
- Aeronautical – impacts of turbines on plane movements and airfields;
- Traffic – impact of wind turbine delivery from port to site, local traffic, and site access;
- Civil and Electrical engineering – design and construction matters, including wind farm layout, access roads, crane hardstands, construction effects, cable route, substation location underground/overhead power transmission.

An economic review of the Mount Emerald Wind Farm was undertaken by Foresight Partners in parallel with this assessment.

This chapter summarises the outcomes of the technical assessment for each technical service, including the economic review undertaken in parallel by Foresight Partners.

5.2 Landscape Visual Amenity

A landscape visual amenity assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the landscape visual amenity assessment is to determine the visual impact of the proposed wind farm on the local context and views, particularly with regards to areas of regional landscape significance, significant landscape features, and landscape and scenic values as described by the applicable planning framework. The assessment also assesses shadow flicker.

In this regard, of particular relevance to the landscape visual amenity assessment is the material prepared by the applicant that describes and presents the visual impacts of the proposed development. The following material prepared by the applicant adequately describes the proposed development in landscape visual amenity terms.

- Identification of site ridgelines and their elevation as seen from various viewpoints;
- Numbering visible turbines in each view and their ground level elevations;
- Calculation of length (in kilometres) of the visible array of skyline turbines relative to the total length of visible skyline ridge;
- Comparison of turbine height to nearby existing 275kV power pylons; and
- Shadow flicker assessment.

The material prepared by the applicant adequately allows for a thorough assessment of the likely appearance and visual impacts of the wind farm proposal to be undertaken. However, it is noted that none of the planning or visual impact technical material substantially address the

question of whether or not the Mt Emerald – Walsh Bluff mountain range system is a 'significant' landscape feature. This is addressed in this assessment.

Under the FNQ Regional Plan, the subject land is in the Regional Landscape and Rural Production Area, intended to protect landscapes of regional value, but the mountain range is not identified as being of 'regional landscape significance'. The FNQ Regional Plan gives encouragement to wind farms, and the Regulatory Provisions do not cover electricity infrastructure.

It is also relevant that the Mt Emerald – Walsh Bluff mountain range is not mapped or specifically identified as significant in the Mareeba Shire Planning Scheme, although the Planning Scheme defines any landform greater than 600 m AHD as a 'significant landscape feature'.

The TLPI 01/11 (Wind Farms) allowed wind farms to be code assessable in the Arriga Locality, and the intent of the Wind Farm Code of TLPI 01/11 sought that they have "*minimal impact on the environment and on amenity (both at a local and wider area scale)*". This TLPI became Planning Scheme amendment 01/11 (Wind Farms) in September 2013, except that wind farms are now impact assessable. Wind Farms are required to comply with the Wind Farm Code and the Rural Zone Code of the Planning Scheme. The intent of the Wind Farm Code in the amended planning scheme altered the above TLPI wording to seek that development "*will not have unacceptably adverse impacts in the environment and on existing amenity (at both a local and wider area scale)...*". However, it is the overall outcomes and specific outcomes which determine compliance with the Code (and it follows, with the intent of the Code).

The Rural Zone Code includes "... *the scenic values of the Shire are maintained*". It is considered that 'significant landscape features' are part of the scenic values.

The purpose of the Wind Farm Code in the TLPI 01/11 includes overall outcome (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*"

The purpose of the Wind Farm Code in the Planning Scheme (incorporating Amendment 01/11 – Wind Farms) includes overall outcome (b) "*The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and demonstrable impacts associated with wind farms*" and (f) "*Any variation to existing amenity, visual, light, ... as a result of the wind farm is maintained within acceptable limits.*" For the purpose of landscape visual amenity assessment, the relevant overall outcomes are essentially consistent between the two Codes.

At the time the application was made, no State Planning Policies in force addressed visual amenity impacts and there was no Planning Scheme requirement for assessment of visual impacts on significant landscape features, although it is a requirement under the TLPI 01/11 and Planning Scheme amendment 01/11 Wind Farms (September 2013) where the Wind Farm Codes require that the siting of wind farms is sensitive to landscape and scenic values (Specific Outcome S2c) and they do not cause unacceptable visual impacts on 'significant views' (Specific Outcome S3a).

It is apparent from the material prepared by the applicant, and from field inspection, that the Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.

The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area.

The term 'minimal impact' is replaced in the Wind Farm Code of the amended Mareeba Shire Planning Scheme (September 2013) with 'unacceptably adverse impacts', and the amendment is given weight in the planning assessment. Further, it is compliance with the overall outcomes and specific outcomes which demonstrate compliance with the Code (and it follows, with the intent of the Code).

The Mareeba Shire Planning Scheme does not specifically protect significant landscape features in rural areas, nor is there any protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. It is also relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.

It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework for the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites.

It is concluded that the extent and nature of the impacts have been generally well analysed and technically assessed, although the local importance of the mountain range as a significant landscape feature was not addressed. However, notwithstanding all the investigations and evidence, the acceptability of visual impacts are largely subjective. Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to statutory requirements related to visual amenity which were applicable at the time of application and or given weight during the assessment. In this regard, the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the planning expectations for wind farms and their siting requirements, and as such the proposed wind farm will not result in unacceptable visual impacts on view scapes. Therefore, whilst not 'natural' and representing a change to the landscape, the visual impact is nonetheless acceptable.

It is therefore determined that the likely impacts of the proposed wind farm on visual amenity are not contrary to any statutory provisions applicable in this assessment. The proposed development may be approved subject to the inclusion of appropriate conditions. In terms of those conditions, the visual impacts of wind farms located on the skyline of prominent ridges cannot be mitigated, except in a minor way, for example 'blade glint' can be reduced by low-reflectivity materials and surfaces. Recommended visual amenity conditions include (refer to Appendix A for full conditions):

- non-reflective colours and materials are used for turbines and especially blades (as per Specific Outcome S3b of the Wind Farm Code); and
- electrical connections are provided underground in all instances, where practicable (as per Specific Outcome S3c of the Wind Farm Code).

An assessment of shadow flicker has identified that the distance between residences and the proposed wind turbines provides sufficient buffer to reduce potential shadow flicker impacts and the proportion of rural views affected to acceptably low levels. The proposed development may be approved subject to the inclusion of a condition that ensures compliance with shadow flicker requirements is maintained. The recommended shadow flicker condition is:

- the measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling (as per Specific Outcome PS6(b) of the Wind Farm Code).

5.3 Ecological

An ecological assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the ecological assessment is to determine the impact of the proposed wind farm on State and local ecological features, including Matters of State Environmental Significance, and if so, whether appropriate impact mitigation and management measures and offset commitments can reduce the magnitude of ecological impacts.

Cardno note that the applicable planning framework refers to the terms 'areas of significant ecological value' (overall outcome e) of the Wind Farm Code in TLPI 01/11) or 'areas of state environmental significance' (probable solution S4 of the Wind Farm Code in Mareeba Planning Scheme incorporating Amendment 1/11 – Wind Farms). These terms are not defined by any applicable planning instrument and, as such, the proposed wind farm is not located within such areas. In any case, 'Matters of State Environmental Significance' and 'Areas of Ecological Significance' (as per the FNQRP) are assessed.

Matters of State Environmental Significance (MSES) that are potentially applicable to the site include the following natural values and areas:

- protected areas (including all classes of protected area except coordinated conservation areas) under the Nature Conservation Act 1992 - not applicable, the site does not contain or adjoin any protected areas;
- marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 - not applicable, the site does not contain or adjoin any marine protected areas);
- areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008 - not applicable, the site does not encompass or adjoin and declared fish habitat areas;
- threatened wildlife under the Nature Conservation Act 1992 and special least concern animal under the Nature Conservation (Wildlife) Regulation 2006 - **applicable**, site surveys confirmed the presence of several threatened wildlife species including *Homoranthus porter*, *Grevillea glossadenia* and *Hipposideros diadema* and several other threatened wildlife species that were not detected during field surveys are considered likely to inhabit the site;
- regulated vegetation under the Vegetation Management Act 1999 – **applicable**, the site contains areas of regulated vegetation with one or more of the following attributes:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems
 - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems
 - Category R areas on the regulated vegetation management map

- areas of essential habitat on the essential habitat map for wildlife prescribed as 'endangered wildlife' or 'vulnerable wildlife' under the Nature Conservation Act 1992
- regional ecosystems that intersect with watercourses identified on the vegetation management watercourse map
- regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map
- high preservation areas of wild river areas under the Wild Rivers Act 2005 - not applicable, the site is not in a declared area;
- wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environmental Protection Regulation 2008 - not applicable, the site does not encompass or adjoin any such wetlands;
- wetlands and watercourses in high ecological value waters as defined in the Environmental Protection (Water) Policy 2009, schedule 2 - not applicable; and
- legally secured offset areas - not applicable, the site does not encompass or adjoin any legally secured offset areas.

Areas of Ecological Significance identified by the FNQRP that are potentially applicable to the site include:

- Protected areas – not applicable, the site is not in a protected area;
- World heritage areas – not applicable the site is not in a world heritage area;
- Wetlands – not applicable, the development activity will not occur in a protected wetland;
- Terrestrial area –
 - habitat of rare or endangered species including essential habitat of the Southern cassowary and mahogany glider – **applicable**, the site contains habitat for threatened wildlife species including some mapped areas of essential habitat for the Southern Cassowary;
 - habitat of rare or endangered species including regional ecosystems with a Vegetation Management Status of 'endangered' or 'of concern' and 'non woody' regional ecosystems – **applicable**, the site contains regional ecosystems identified as being 'of concern';
 - Significant coastal dune systems – not applicable, the site is not in a significant coastal dune system;
 - Einasleigh Uplands bioregion – **applicable**, the site is located on the eastern edge of the Einasleigh Uplands bioregion.

Of particular relevance to the ecological assessment is the draft Environmental Impact Statement and the Statement of Commitments, as prepared by the applicant. The material prepared by the applicant includes relevant ecological surveys and assessments that provide an adequate basis for assessment of the application.

The ecological assessment has identified that the proposal will have adverse ecological impacts, including adverse impacts to those MSES, as defined by the State Planning Policy, and Areas of Ecological Significance, as defined in the FNQRP. This is recognised by the applicant in the application material, including in the Environmental Impact Statement. The adverse ecological impacts primarily relate to:

- direct loss and degradation of vegetation and fauna habitat resource associated with the construction of the proposed wind farm; and

- fauna mortality, morbidity and habitat degradation/alienation associated with operation of the proposed wind farm.

In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur.

The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. The impact mitigation and management measures are identified in a 'Statement of Commitments' prepared by the applicant, which include a range of 'environmental management plans'. The environmental management plans include:

- a construction and work site operational management plan;
- a sediment, erosion and storm water management plan;
- a hydrocarbon and hazardous substances plan;
- a bushfire risk management plan and emergency evacuation plan;
- a threatened species management plan;
- a weed and pest management plan;
- a rehabilitation plan;
- a habitat clearing and management plan;
- an ecological fire management plan;
- a cultural heritage management plan;
- an environmental management plan training program; and
- an environmental management plan reporting program.

With regards to that documentation:

- the documentation recognises that there is some uncertainty regarding some of the potential ecological impacts of the proposal (e.g. impacts on native fauna such as birds, flying foxes and the Northern Quoll) and the effectiveness of proposed impact mitigation strategies;
- the documentation generally proposes the use of current best practice, and in some instances innovative, monitoring and adaptive management strategies to address knowledge gaps and maximise the effectiveness of available impact mitigation technologies (e.g. development and use of proactive avoidance action system involving a bird and bat radar); and
- the proposal includes a commitment to the delivery of a program of environmental offsets with respect to significant residual ecological impacts.

It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed, mitigated or offset pursuant to the range of 'environmental management plans' being appropriately implemented. The proposal may be approved subject to the inclusion of appropriate conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner. Recommended conditions include (refer to Appendix A for full conditions):

- approval and implementation of the 'environmental management plans' identified in the material prepared by the applicant and referenced above;
- where the development involves the clearance of native vegetation and wildlife habitat, detailed Significant Species Management Plans must be prepared; and

- where the development involves the clearance of native vegetation and wildlife habitat, an appropriate Environmental Offset must be secured.

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES), such as the Northern Quoll and Spectacled Flying-Fox. Nevertheless, conditions are identified (refer **Chapter 7**) relating to the management of these species.

5.4 Agricultural Land and Environment

An agricultural land and environmental assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

Agricultural Land

The purpose of the agricultural land assessment is to determine whether the proposed development has the potential to adversely or positively impact the agricultural land use values of the local area (including as identified in the Economic Growth Module of the State Planning Policy).

Of particular relevance to the agricultural land assessment are the provisions of the Mareeba Shire Planning Scheme and the State Planning Policy. The application material appears to adequately address the following matters:

- the provision of an assessment of the potential for fragmentation of existing agricultural land uses;
- material regarding the economic opportunities of the development and socio economic benefits and dis-benefits of the development; and
- a response to the matter of impact to aerial spraying.

It is noted that the applicant suggests that the land is not considered Good Quality Agricultural Land under the Planning Scheme, which is confirmed to be consistent with the Council's planning scheme maps. Further, the State government mapping does not identify the site as Agricultural Land Class A or B, or Strategic Cropping Land. The site is not currently used for cultivation, and only stock grazing is possible.

Matters of spray drift associated with aerial spraying have been assessed and have been determined to be acceptable.

It is concluded that the proposed wind farm is compatible with the rural nature of the site, as identified by the FNQ Regional Plan. Further, having regard to the wind farm footprint and to the broader socioeconomic benefits of the project, this assessment identifies that the proposal is acceptable in terms of the agricultural land values of the site and the local area. The proposal may be approved; no conditions are required to be imposed.

Environmental / Contamination

The purpose of the environmental assessment is to determine whether there is potential for residual unexploded ordnance (UXO) contamination to be uncovered or disturbed by the development, with consequential risk to human health and safety (as per the Contamination Module of the State Planning Policy).

The Commonwealth Department of Defence lists all land in Queensland that has been identified and assessed as having been used by the military in a way that may result in residual UXO on the land. In the event that substantial risk is deemed to exist a UXO assessment is required to be completed in order to facilitate the development.

The application material states the following:

The wind farm development occurs within an area for which Area Management Advice has been issued and for which 'slight' potential for UXO occurrence has been deemed to exist by DEHP.

An initial assessment of the application material by DEHP indicated a substantial risk existed, and UXO commentary identified the need for an investigation along with a management plan for the proposed work. However, a subsequent revision to the risk assessment by DEHP was issued to a 'slight' possibility of occurrence of UXO. The revised risk assessment has resulted in changes to recommendations made by DEHP regarding UXO matters. Land uses in the areas classified as of 'slight' residual UXO potential have been identified by DEHP as possible to proceed without the need for further investigation as long as a procedure is in place if an object suspected of being UXO is disturbed.

The content of the Environmental Impact Statement appears to concur with DEHP's recommendation regarding the assessment of UXO related matters.

It is therefore concluded that the UXO issues present on site have been assessed to be able to be managed. The proposal may be approved subject to the inclusion of appropriate 'general advice' attached to the approval that identifies the relevant procedure for the possibility of UXO disturbance.

5.5 Noise

An acoustic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the acoustic assessment is to determine the impact of the proposed wind farm on the local acoustic environment, in particular, on any nearby sensitive receivers.

In terms of the applicable planning framework, of particular relevance to the assessment is Specific Outcome S5 of the Wind Farm Code and the corresponding Probable Solution PS5, which does not contain any statutory text to the probable solution but does include a note that makes reference to the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind Farm Noise (NZS6808:2010). Various applicable standards have been considered, as per the Specific Outcome, but with particular emphasis on the New Zealand Standard which is specifically referenced in the planning scheme.

The acoustic assessment has identified that the applicant's material indicates that the wind farm noise emissions are likely to be compliant with the requirements of NZS6808 and the Mareeba Shire Plan provided the "high amenity" criteria is adopted for receivers R05 and R06 and any other sensitive receiver locations where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints. The applicant has advised that the noise from the turbines can be regulated (i.e. reduced) by slowing the rotors.

There are standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian "Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft (and to be given no weight), this also refers to a 35 dB (A) noise limit.

In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.

It is concluded that that the proposed wind farm will be able to be appropriate in acoustic terms, where particular noise criteria are enforced and complied with. The proposal may be approved subject to the inclusion of appropriate conditions that enforce particular noise criteria. Recommended conditions include (refer to Appendix A for full conditions):

- ensure the development meets appropriate noise criteria of 35dB(A) in particular circumstances (as discussed above), and 40 dB(A) otherwise; and
- demonstrate compliance and complaints management with regards to the noise criteria specified above.

5.6 Traffic Impact

A traffic assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the traffic assessment is to determine whether the traffic likely to be generated by the proposed development during construction and operation is appropriate having regard to the immediate and broader road network.

Of particular relevance to the traffic assessment is the Traffic Report prepared by Jacobs in response to the Information Request, titled "Technical Note 2 – Traffic Impact Assessment Engineering Response" and dated 29 August 2014. That traffic report addressed various traffic matters as follows.

- A clear description of the whole of the potential access routes to the site for oversized vehicles, including a high level identification of constraints along the network.
- An assessment of the access to site (along Hansen Road and Springmount Road) for vertical geometry which utilises recent survey data.
- Likely staff travel movements to the site, and how these can be managed in a way that will allow the maximum number of staff vehicles to remain below 30 vehicles per day.
- Where sufficient measures to restrict staff traffic to 30 vehicles per day are not able to be provided, assessment identifying the worst case traffic impact on the road network.

An assessment of the application material has been undertaken and it is confirmed that the application material has provided details of the roads that will be impacted by the two routes which are identified as potential construction routes from Cairns Port to Mount Emerald. The entire route identified in both options is identified as being approved for Multi-Combination Vehicles by DTMR. Therefore, much of the delivery routes of construction vehicles are able to be accommodated on the existing road alignment.

The Jacobs report also details the following potential issues that may be experienced:

- Temporary Lane Closures;
- Assessment of vertical clearance of vehicle envelope to overhead power lines, gantry signals, signal mast arms and overhead fauna crossings;
- Potential assessment of structural integrity of culvert and bridge crossings in consultation with DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council; and

- Requirements for permits and escorts to traverse the detailed routes.

These matters are not able to be fully assessed at the moment as the details of construction schedule and other variables are likely subject to change prior to construction occurring. It is recommended that the detailed assessment of each route can be conditioned in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any traffic issues are resolved prior to construction.

It is also recommended that given that more detail regarding the type of oversized vehicles, when these details are known, will be required to ensure the routes are acceptable, and as such the assessment of the suitability of Hansen Road and Springmount Road for oversized vehicle movements should be included as a condition.

In respect of managing staff vehicles, the Jacobs assessment has provided more detail of the breakdown of workers travel to the site. In addition they have proposed that the following be adopted by the client and contractor during construction:

“The nominated construction contractor will provide a 30-seater shuttle bus services for construction workers arriving and departing the project site.

The 30-seater shuttle bus will service the key townships where the construction workers live.

Provide minimal or restricted on-site parking to discourage workers arriving to and departing from the project site via private vehicles.

These measures should be outlined in detail within the construction management plan to be developed in close consultation with the relevant Local Authorities and stakeholders.”

It is determined that these measures would ensure that significant traffic impact be avoided (other than that caused by oversized construction delivery, which can be managed). A condition should be applied requiring submission of detailed traffic management arrangements, when further details are known.

It is concluded that that the proposed wind farm is able to be appropriately managed in terms of traffic matters, including during construction. The proposal may be approved subject to the inclusion of appropriate conditions relating to traffic management. Recommended conditions include (refer to Appendix A for full conditions):

- preparation and approval of a construction traffic management plan, prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council for local public roads in the vicinity of the wind energy facility, that includes:
 - existing conditions survey of Hansen Road and Springmount Road;
 - designation of all vehicle access points to the site from surrounding roads;
 - designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;
 - engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways;
 - recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements;
 - measures to be taken to manage traffic impacts associated with the ongoing operation of the wind energy facility;
 - a program to rehabilitate existing public roads of Hansen Road and Springmount Road, to its existing condition where required.

5.7 Aeronautical

An aeronautical assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the aeronautical assessment is to determine whether appropriate aeronautical matters have been addressed in the proposed wind farm development.

The application material includes evidence of consultation with the Civil Aviation Safety Authority (CASA). The consultation with CASA recommended that approval will also be required from the Mareeba Aerodrome Manager. Evidence of this further consultation, including assessment from Air Services Australia and Mareeba Airport Upgrade Coordinator confirms that, subject to amending the location of turbine 34, the remaining turbines will not affect any sector or circling altitude, and will not affect any instrument approach or departure procedure at Cairns, Mareeba and Atherton aerodromes. Development to a maximum height of 1179.5m AHD will similarly not impact upon the performance of Precision/Non Precision Nav aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links. Subsequent to that consultation, turbine 34 has been moved and no other turbine tip height exceeds the height of 1179.5m AHD.

It is concluded that the application is appropriate in aeronautical terms, subject to conditions relating to turbine height and further approval from relevant authorities should the wind farm layout be altered. The proposal may be approved subject to the inclusion of those conditions. Recommended conditions include (refer to Appendix A for full conditions):

- limitations on the overall maximum height not exceeding 1179.5m AHD; and
- details of any micro-siting of turbines must be submitted to CASA and the Department of Defence for approval and inclusion on aeronautical charts.

5.8 Civil and Electrical Engineering

5.8.1 Civil

A civil engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the civil engineering assessment is to determine whether appropriate civil engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is appropriate, in civil engineering terms, and is able to be appropriately developed. Matters considered in the assessment that were determined to be appropriate, in principle, include road alignment of main access road, road grading along the proposed alignment, the ability to manage stormwater runoff, maintenance access to the proposed sites, and Impact footprint in construction areas.

However, the nature of civil engineering matters is that they are largely and often fully assessed at detailed design stage, following the initial land use assessment contemplated by this development application.

Pursuant to the above, the following identifies matters that will need to be further addressed during the detailed design process in response to the relevant development conditions and associated Operational Works applications.

- Vertical grading to site access road. Road grading in specific areas shall be subject to detailed design at Operational Works stage to ensure the heavy low loader vehicles can navigate the roadway without undue constraints. The traffic assessment has identified that the road access is appropriate, in principle.

- Road cross sections. Depending on the side slope of the local topography, further detail is required at Operational Works stage to ensure that the batters developed from the associated road grading do not cause stability and rehabilitation issues on the constructed batters adjacent to the roadway.
- Construction management plan. A construction management plan should be prepared and approved prior to commencement of construction.
- Sediment and erosion control. Sediment and erosion control management plans should be prepared and approved prior to commencement of construction, to ensure undesirable sediment and erosion issues do not impact on the development site and surrounding areas. This is particularly relevant in the areas where steep road grades and associated cut and fill batters are developed.
- Water quality management. Water quality management details should be prepared and approved prior to commencement of construction, to ensure the quality of stormwater runoff from the site is maintained within acceptable limits.
- Stormwater management. Stormwater management plans should be prepared and approved prior to commencement of construction, to ensure stormwater runoff from the site is controlled and managed with minimal impact on the development site and adjacent properties.
- Decommissioning and rehabilitation of the site. Further details regarding decommissioning and rehabilitation should be conditioned.

It is concluded that the application is appropriate, in principle, in civil engineering terms, subject to further details being provided at Operational Work stage of the civil engineering design. The proposal may be approved subject to the inclusion of conditions relating to the matters identified above (refer to Appendix A for full conditions).

5.8.2 **Electrical**

An electrical engineering assessment of the proposed development has been undertaken. The assessment was undertaken against the relevant State and local planning framework, and pursuant to the common material for the development.

The purpose of the electrical engineering assessment is to determine whether appropriate electrical engineering matters have been addressed in the proposed wind farm development.

The assessment has determined that the layout of the proposed development is sound, in electrical engineering terms, and can be appropriately developed. However, the nature of some electrical engineering matters is that they are largely developed at detailed design stage, following the initial land use assessment contemplated by this development application.

In this regard, the electrical engineering assessment identified that the material provided in response to the information request did not include all of the information requested, it is considered that these matters can be addressed at detailed design stage pursuant to the relevant Building Works and Operational Works applications, or via conditions.

The electrical assessment identified that Specific Outcome S2(b) of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires the wind farm to be readily connected to existing, nearby high voltage electricity transmission lines without significant environmental, social or amenity impact. The application material does not include or sufficiently present the impacts of the proposed high voltage interconnection substation to Powerlink's 275kV network. Interconnection arrangements will need to be progressed and agreed with Powerlink. Powerlink, in their advice agency response, identified that whilst there is no connection agreement in place, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the applicant complying with its obligations under relevant electricity laws. A condition is recommended in terms of connection to the Powerlink network. As such, the viability of

interconnection design and grid connection to the Powerlink network can be established through the ongoing engagement with Powerlink pursuant to that condition.

Minimum clearances of turbine structures to Powerlink's assets need to be complied with and should form a condition of approval for the wind farm development. The required clearance of structures to Powerlink's assets was advised in Powerlink's advice agency response. A condition is recommended in terms of clearance between structures and Powerlink assets.

The electrical assessment also considered the proposed wind farm against the National Electricity Rules and Codes, as it applies to wind farms. The connection to Powerlink's network will need to comply with the National Electricity Rules and Codes, as is standard practice for such connections.

The electrical assessment identified that Specific Outcome S5 of the Wind Farm Code of the Mareeba Shire Planning Scheme (September 2013) requires an assessment of noise contribution from the power transformers to the ambient and total noise levels, and possible impact on residents nearby. The application material adequately addresses this matter and the proposed considered appropriate in this regard.

It is noted in application material that the high voltage reticulation within the development may use overhead lines, and not exclusively underground cables. This is not recommended in the heavily vegetated areas, and presents risk of bush fires from electrical faults, despite management plans being proposed. Instead, exclusive use of underground cables is recommended (except where physically constrained) and specified for electricity reticulation within the development, as a condition of the approval.

It is noted that the possible increased risk from lightning strikes on the turbine structures and risk of bush fires has not been assessed in detail, although preliminary commitments to management plans has been identified in the application material. It is recommended that a lightning and earthing system to mitigate against the risk of bushfires caused by direct lightning strikes on turbines be conditioned. In respect of bushfire, a Bushfire Risk Management Plan is also recommended to be conditioned.

It is concluded that the application is appropriate, in principle, in electrical engineering terms, subject to further details being provided as detailed design progresses, at Operational Work and Building Work stage and in response to conditions. The proposal may be approved subject to the inclusion of conditions identified below (refer to Appendix A for full conditions).

- engagement with Powerlink must occur with regards to a connection to Powerlink's transmission line network;
- further technical assessments regarding safe clearance between turbines and Powerlink infrastructure must be prepared and approved;
- electrical high voltage reticulation within the development must be underground (except where physically constrained);
- a suitable lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines must be designed and installed; and
- a Bushfire Risk Management Plan shall be prepared and approved.

5.9 Economic

Separate to this assessment, Foresight Partners Pty Ltd has undertaken a review of the application material, particular that which was prepared in respect of economic matters in response to the Minister's request for additional information. The economic review provides a recommendation on whether the Minister should approve, approve with conditions or refuse the development application based on the economic matters.

It is stated that as part of the applicant's response, two documents were produced:

- *Socio-Economic Baseline and Market Analysis* – Sinclair Knight Merz Pty Ltd (Jacobs), 29 August, 2014; and
- *Development Application Response to Ministerial Information Request* – Ratch Australia & Port Bajool, September 2014.

Foresight Partners Pty Ltd concluded that:

“Our May 2014 review of the application material concluded that, from an economic perspective, the proposed Mt Emerald wind farm project involves significant and robust economic state interests. The additional material provided by the applicant in response to the Ministerial information request addresses some identified information gaps which better places the proposed development in a local and regional context.

The applicant’s discussion of the potential effects of unfavourable changes to the Renewable Energy Targets recognises the implications for this project. Regulatory uncertainty remains a key variable in the projects economic viability, at least in the short-term. Consequently, there is the possibility that, even with Ministerial approval, the project may not proceed until the regulatory environment is settled favourably for renewable energy markets, or the costs of other fuels rise to make wind energy more directly competitive. This uncertainty is impacting virtually all proposed new renewable energy projects in Australia.

Despite the state of flux affecting the renewable energy industry at present, the proposed Mt Emerald wind farm, remains, in our opinion, a project with significant and robust economic state interests, as outlined in the Call In Notice, and we recommend its approval by the Minister.....”.

6 Formal Assessment of Development Application

6.1 Introduction

The relevant assessment criteria are identified with reference to section 313 of the SPA and **section 6.3** below provides a summary of those matters or things comprising the assessment criteria, to the extent relevant to the development application.

This chapter provides the formal assessment against the Statutory Town Planning Framework identified in Chapter 4.

6.2 Level of Assessment

An amended acknowledgement notice was issued by Tablelands Regional Council on 30 March 2012 and confirms the level of assessment as Code Assessable. The Level of Assessment for the development is prescribed in the Tablelands Regional Council Temporary Local Planning Instrument 01/11 (Wind Farms) dated 05 October 2011. Section 5.1 of the TLPI categorises that a development for a Material Change of Use for a Wind Farm is code assessable where located in the Arriga locality on land included in the Rural Zone.

6.3 Assessment Criteria

For development applications that are Code Assessable, section 313 of the SPA states the assessment manager must assess the part of the development application against each of the following matters or things to the extent the thing or matter is relevant to the development.

Assessment Requirement	Response
<i>the State planning regulatory provisions;</i>	The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions implement the regional plan for the FNQ region. These State Planning Regulatory Provisions are not relevant to the proposed development as the development constitutes 'electricity infrastructure' and is therefore not considered an 'urban activity' regulated by Division 2 of the Regulatory Provisions. The Far North Queensland Regional Plan 2009-2031 State Planning Regulatory Provisions were repealed on 26 October 2012.
<i>the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;</i>	The Far North Queensland Regional Plan 2009 – 2031 ('FNRP 2009') is applicable to the development. The site is designated as being within the Regional Landscape and Rural Production Area. An assessment against the relevant provisions of the FNRP is provided below in Section 6.4 .
<i>any applicable codes, other than concurrence agency codes the assessment manager does not apply, that are identified as a code for IDAS under this or another Act;</i>	Not applicable – there are no Codes for IDAS under SPA or another Act that are relevant to the development application.
<i>State planning policies, to the extent the policies are not identified in—</i>	An assessment against State Planning Policies in effect at time the application was properly

<p><i>(i) any relevant regional plan as being appropriately reflected in the regional plan; or</i></p> <p><i>(ii) the planning scheme as being appropriately reflected in the planning scheme;</i></p>	<p>made is discussed in 6.5 below.</p> <p>The State Planning Policy (SPP) came into effect in December 2013 (since the application was properly made) and is not yet reflected in the Mareeba Shire Planning Scheme. As such the SPP at Part E-Interim development assessment requirements, include interim development assessment measures to ensure that state interests are appropriately considered in development applications.</p> <p>The requirements should be considered by the assessment manager when assessing a development application. The interim development assessment requirements will remain in force for a particular local government area until such time as the planning scheme, that the Minister is satisfied has appropriately integrated the state interests in the SPP, takes effect.</p> <p>The following interim development assessment requirements are identified for the following state interests and are relevant to the assessment of this development application:</p> <ul style="list-style-type: none"> • Biodiversity Conservation • Natural Hazards, Risk and Resilience <p>The above interim development assessment requirements are identified and assessed in Section 6.5 below.</p>
<p><i>Any applicable codes in the following instruments-</i></p> <p><i>(i) A structure plan</i></p> <p><i>(ii) A master plan</i></p> <p><i>(iii) a temporary local planning instrument;</i></p> <p><i>(iv) a preliminary approval to which section 242 applies</i></p> <p><i>(v) a planning scheme;</i></p>	<p>The applicant was advised that the development application was properly made, by an amended acknowledgment notice issued by Tablelands Regional Council dated 30 March 2012.</p> <p>At this time the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) was in effect (commenced on 23 November 2007).</p> <p>Temporary Local Planning Instrument 01/11 (Wind Farms) took effect on 05 October 2011 and so was also in effect at the time the application was properly made. TLPI 01/12 replaced TLPI 01/11 (when TLPI 01/11 ceased to have effect on 07 October 2012) and ceased to have effect on 07 October 2013.</p> <p>Pursuant to the TLPI 01/11 the proposed Wind Farm development application was identified as code assessable.</p> <p>Section 5.2 of TLPI 01/11, which was effective at the time the development application was properly made, identifies the relevant assessment criteria for development identified in the TLPI as the Wind Farm Code (TLPI), Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and any other overlay code identified as applicable in</p>

	<p>Part 5 of the Mareeba Shire Planning Scheme 2004.</p> <p>Each of the codes applicable at the time the development application was properly made (including the TLPI 01/11 Code and the Planning Scheme Codes) have been assessed in this Chapter.</p> <p>Pursuant to section 317 of the SPA, in assessing the application the assessment manager may also give weight it is satisfied appropriate to a planning instrument or code, law or policy that came into effect after the application was made, but before the decision stage for the application started.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) was adopted on 19 September 2013 and commenced on 30 September 2013.</p> <p>The Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) ('the Planning Scheme') is currently effective and contains relevant provisions for assessment of wind farms. Table 13 of the Planning Scheme identifies assessment categories for material change of use in the Rural Zone. In accordance with section 4.73 (2) if a defined use is not identified as an inconsistent use in column 1 of table 13, it is a consistent use. A wind farm is not identified as being inconsistent.</p> <p>There are some changes between the wording in the Wind Farm Code in the TLPI 01/11 (in effect at the time of lodgement) and the Wind Farm Code contained in the Planning Scheme Amendment 1/11 – Wind Farms (in effect at the commencement of the decision stage). To the extent there are differences, it is considered appropriate to place weight on the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms as it is more recent and current than the TLPI (which has expired).</p> <p>The Rural Zone Code, Filling and Excavation, Car Parking Code and identified Overlay codes remain the same between Amendment No 01/11 – Wind Farms and the Amendment No 1 of 2007 of the Mareeba Shire Planning Scheme. These provisions are considered relevant to the assessment of the proposed development application.</p> <p>An assessment against the applicable codes of TLPI 01/11 is contained at section 6.6 of this report.</p> <p>An assessment against the applicable codes of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms) is contained at Section 6.7.</p>
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	There are no structure plans, master plans or preliminary approvals to which section 242 applies relevant to the assessment of the development application.
<i>if the assessment manager is an infrastructure provider— an adopted infrastructure charges resolution or the priority infrastructure plan.</i>	<p>The Mareeba Shire Council-Adopted Infrastructure Charges Resolution (effective from 03 January 2014) identifies that the changes adopted by the Council are identified in the following Mareeba Shire Planning Scheme 2004 Policies:</p> <p>Policy 2-Headworks Charges for water Supply and Sewerage;</p> <p>Policy 4 – Development manual (FNQROC Development manual);</p> <p>Policy 5 – Open Space Contributions;</p> <p>Policy 6 – Augmentation of Road network;</p> <p>Policy 7 – Car parking contributions.</p> <p>The resolution declares that the maximum adopted infrastructure charges schedule does not apply for Mareeba Shire Council local government area. Infrastructure charges applicable to development in the Mareeba Shire Council local government area under the above policies are listed in Council's Schedule of Fees and Charges.</p> <p>Policy 2 is not applicable as the subject lot is not served by reticulated water supply or sewerage works and connection to the reticulated system does not form part of the development application.</p> <p>Policy 4 refers to the FNQROC Development manual which will be applicable to future operational and building work assessment.</p> <p>Policy 5 is the policy applicable to establish the amount of monetary contribution to be paid in lieu of providing land for open space and recreation purposes when land is subdivided or when the population density of a development is increased as a result of development. Neither of which are applicable to the proposed development application.</p> <p>Policy 5 will be established through the Traffic Management Plan.</p> <p>Policy 7 is applicable to establishment of a monetary contribution to be paid in lieu of provision of car parking spaces in the business, commercial and village zones of Mareeba and Kuranda. This policy is not applicable to the assessment of the development application.</p>

Table 1: Summary and response to section 313(2) of the SPA.

6.4 Far North Queensland Regional Plan 2009-2031

While the Far North Queensland Regional Plan Regulatory Provisions have been repealed, the Regional Plan remains in effect, so an assessment of the proposal against the Regional Plan is relevant to aspects which are not appropriately included within the current Planning Scheme, pursuant to Section 313(2) of the SPA.

The Planning Scheme does not identify that the Regional Plan has been appropriately reflected; therefore the application must be assessed against all relevant provisions of the Regional Plan, which include the following.

Assessment Requirement	Response
<i>Policy 1.1 Biodiversity Conservation</i>	<p>The project area contains Terrestrial Areas of High Ecological Significance which is based on current designations of the site under the <i>Vegetation Management Act 1999</i> as containing both <i>Of Concern</i> and <i>Least Concern</i> Regional Ecosystems, and the relatively undisturbed nature of the site.</p> <p>Policies relating to biodiversity conservation and areas of ecological significance (including land use policy 1.1.1) seek that urban development be located outside of areas of high ecological significance.</p> <p>Despite the Regulatory Provisions excluding 'electricity infrastructure' from the definition of 'urban activity', the Regional Plan uses the term 'urban development'. The term 'urban development' neither explicitly excludes infrastructure items, nor includes renewable power generation in the range of uses stated in the definition. The expectation is that wind farms will be located in rural areas and would not be considered 'urban development'.</p> <p>Further, page 40 of the Regional Plan states:</p> <p><i>'Essential community infrastructure, such as power lines and telecommunications towers may be permitted in areas of high ecological significance, subject to adverse impacts being avoided or mitigated, including the use of offsets'.</i></p> <p>An ecological assessment report prepared by RPS accompanied the development application, however further information has been requested by the Council in its information request and by Minister as part of the information request associated with the call in.</p> <p>The project was referred under the <i>Environment, Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act), to the Minister for Sustainability, Environment, Water, Population and Communities (now the Department of Environment) on 21 December 2011. A delegate for the Minister determined on 24 January 2012 that the proposed development constituted a controlled action under the provisions of the EPBC Act, as action has the potential to have significant impact on a number of matters of national Environmental Significance. On the same date a delegate of the Minister determined, that the proposed activity be assessed by an Environmental Impact Statement (EIS).</p> <p>The applicant has provided further ecological assessment undertaken in relation to the EIS. This was submitted on 10 September 2014 as part of the response to the Information Request issued by the Minister on 11 June</p>

	<p>2014.</p> <p>The assessment of the ecological material is set out in Section 5.3 above.</p> <p>The proposed wind farm is not considered urban development and in any case the development can be constructed with adverse impacts being avoided or mitigated (subject to conditions in Appendix A).</p> <p>It is concluded that there are no substantive reasons for recommending refusal of the proposal based on non-compliance with State and Local Government regulatory requirements with a focus on ecological issues. Any approval of the proposal should include conditions that are designed to ensure that the proposed impact mitigation and offset commitments are implemented in an effective manner.</p>
Policy 1.3 Air and Acoustic Environment Protection	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist as set out in Section 5.5.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases, other than as described below.</p> <p>Notwithstanding the above, the raw data provided by the</p>

	<p>applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition is recommended to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p>
<i>Policy 2.1 Regional Landscape Values</i>	<p>The project area includes areas identified as being Terrestrial Areas of High Ecological Significance. All 63 turbines sites, currently being considered, are proposed to be located in remnant vegetation habitats, as defined under the <i>Vegetation Management Act 1999</i>. The regional landscape value of the site, which forms the vegetated hill slope background of this part of the Tablelands, is recognised.</p> <p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>Additionally, the subject site is not located within or adjacent to any areas of World Heritage significance (such as Wet Tropics Area), which forms the majority of the landscape values referred to, nor does it impact upon cultural heritage values (European or Indigenous) with no significant sites being recorded.</p>

	<p>Notwithstanding, it is identified that a Cultural Heritage Management Plan is to be prepared prior to construction to ensure appropriate management strategies are employed to preserve any areas of cultural significance.</p> <p>Preliminary advice regarding Indigenous Cultural Heritage prepared by Converge was included with the development application.</p> <p>The Regional Plan also recognises the value of the landscape for renewable energy projects (as per land use policy 2.1.1) and suggests that such projects should be given <i>'appropriate recognition in land use planning and development assessment'</i>.</p> <p>This is an important aspect to consider in providing a balanced assessment of the expected impacts upon the environment through vegetation clearing. This policy essentially recognises that, inevitably, such uses are required to be located in areas of forested hill slopes, which form part of the regional landscape of the area, and that provided these impacts can be minimised and managed through construction techniques, and the sustainability of fauna populations and important ecosystems are not adversely affected, wind farms are a legitimate land use in these areas.</p> <p>Given the above, the proposed development is considered to satisfactorily address the Regional Landscape values policy.</p>
<i>Policy 2.3 Scenic Amenity, Outdoor Recreation and Inter-urban Breaks</i>	<p>Land use policies relating to scenic amenity within the Regional Plan recognise that the rural landscape and natural areas are a major economic asset of the region, containing culturally significant landscapes, and importantly, contributes to the way of life. A particular landscape feature that is valued in the region is its hill slopes.</p> <p>Section 2.3 recognises that public utilities and infrastructure may located on hill slopes but should be designed and located to minimize the impacts on scenic amenity. Land use policy 2.3.1 states that the visual amenity of the region's landscapes and seascapes is protected and enhanced by assessing proposed developments on landscapes that are vulnerable to visual impact due to their prominence, topography or degree of naturalness. Regard must also be given to land use policy 2.1.1, which recognises the value of landscapes for renewable energy resource areas.</p> <p>A visual assessment report prepared by RPS accompanied the development application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape visual amenity.</p>

	<p>An assessment of the of the landscape visual amenity matters relating to the proposal has been undertaken. The assessment confirms that:</p> <ul style="list-style-type: none"> • It is apparent from the material prepared by the applicant, and from field inspection, that the Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed. • There is not any specific protection of the Mt Emerald – Walsh Bluff landscape feature in the FNQ Regional Plan. • The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. • It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast, and the acceptability of visual impacts are largely subjective. • The proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites. • Although the mountain range is a significant landscape feature which will be subject to change to its skyline character, the proposed development is not contrary to the FNQRP related to scenic amenity. Therefore, whilst not 'natural' and representing a change to the landscape, the visual impact is nonetheless acceptable.
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<i>Policy 5.4 Primary Industries</i>	Land Use Policy 5.4.2 states that threats to primary production from incompatible development are identified and managed through land use planning and where appropriate, by developer- established buffers. The assessment in section 5.4 of this report identifies that the proposed wind farm is compatible with the rural nature of the site, and that the proposal is acceptable in terms of the agricultural land values of the site and the local area.
<i>Policy 6.1 Infrastructure Planning and Coordination</i>	Overall, the project represents a collaborative partnership between Mt Emerald Wind Farm Pty Ltd, landowners and Powerlink to produce additional energy in a renewable form and is consistent with the aligned policy 6.1C which encourages collaboration in the design and provision of infrastructure within a chosen corridor.
<i>Policy 6.3 Energy</i>	Land use policy 6.3.1 encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a acceptable land uses and supported for their contribution to reducing greenhouse emissions'</i> . The Mount Emerald Wind Farm is intended to complement the existing Windy Hill Wind Farm and proposed High Road Wind Farm, to create a wind farm node within the Tablelands which will enhance the security of renewable energy supply for residents of the region. Cumulatively, these wind farms will contribute to meeting Queensland's renewable energy targets and ultimately, assist in reducing greenhouse gas emissions, which will have a positive impact upon sustainability of ecosystems.

It is considered that the proposed wind farm development demonstrates compliance with the relevant policies of the Far North Queensland Regional Plan.

6.5 Applicable State Planning Policies

The State Planning Policies set out in **section 4.4** and applicable when the development application was made have since been repealed and replaced by the single State Planning Policy (SPP). **Section 4.4** of this report lists the SPP's that were in effect at the time the application was properly made and identifies those which were reflected in the Mareeba Shire Planning Scheme or are otherwise not relevant to the assessment of this development. Please refer to Section 4.4 for an assessment of applicability.

The July 2014 version of the SPP is the most relevant version of the SPP. Part E: Interim development assessment requirements, provides the interim development assessment requirements that must be applied by local government until the SPP has been appropriately integrated into the relevant local planning scheme. As the SPP is not reflected in the Mareeba Shire Planning Scheme it is necessary to assess the development application against the relevant sections of Part E of the SPP.

The following table sets out the relevant state interests identified in Part E of the SPP and the corresponding assessment against those identified provisions.

State Interest	Assessment Requirements	Response
Biodiversity	Development: (1) enhances matters of state environmental significance where possible, and (2) identifies any potential significant adverse environmental impacts on	In responding to the Ministerial Information request (dated 11 June 2014) on 10 September 2014 the applicant provided a copy of the EIS submitted to the Commonwealth. The development application material has been assessed by an ecologist.

	<p>matters of state environmental significance, and</p> <p>(3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts.</p>	<p>Please refer to Section 5.3 above for a summary of the assessment.</p> <p>It is noted that the EIS identifies potentially significant impacts upon species protected by the Commonwealth EPBC Act, namely the Northern Quoll and the Spectacled Flying Fox and a suite of mitigation measures are suggested. The assessment of the impact upon these species will be subject to the separate EPBC Commonwealth approval.</p> <p>As per the conclusions in section 5.3, the proposed development satisfies the relevant assessment requirements as:</p> <ul style="list-style-type: none"> • potential adverse environmental impacts on matters of state environmental significance are identified; and • measures are identified by the applicant and will be conditioned that manage the potential adverse environmental impacts on matters of state environmental significance through protection or mitigation; and • via the provision of a program of environmental offsets, the impacted matters of state environmental significance will be enhanced.
Natural Hazards, Risk and Resilience	<p>For all natural hazards: Development:</p> <p>(1) avoids natural hazard areas or mitigates the risks of the natural hazard to an acceptable or tolerable level, and</p> <p>(2) supports, and does not unduly burden, disaster management response or recovery capacity and capabilities, and</p> <p>(3) directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and</p> <p>(4) avoids risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of</p>	<p>The site is identified in the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently, other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed.</p> <p>A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application. The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site.</p> <p>The applicant advises that the potential for the structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and</p>

	<p>a natural hazard, and</p> <p>(5) maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard, and</p>	<p>regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • personnel on site who understand how to respond quickly to fire and use equipment available on site. • accessible sources of water. • adequate fire fighting facilities. <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard and includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Other natural hazards associated with matters such as stormwater and storage of hazardous good can be controlled through the implementation of appropriate management plans and mitigation. These are recommended as conditions in Appendix A.</p> <p>Given the above, the proposed development is considered to satisfactorily address the natural hazards, risk and resilience requirements in the SPP.</p>
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It is considered that the proposed wind farm development demonstrates compliance with the relevant interim development assessment requirements identified in Part E of the SPP.

6.6 Temporary Local Planning Instrument 01/11 (Wind Farms)

The Temporary Local Planning Instrument 01/11 (Wind Farms) was in effect when the application was lodged and taken to be properly made. As such, an assessment is made against the relevant provisions of the TLPI 01/11 below.

TLPI 01/12 replaced TLPI 01/11 when it expired on 7 October 2012. TLPI 01/12 contained provisions consistent with TLPI 01/11 and so the assessment below also represents an assessment against TLPI 01/12.

As discussed in **section 6.3** of this report, an assessment must be made against TLPI 01/11 as it was in effect at the time the application was properly made. However, since that time and prior to the commencement of the decision stage, TLPI 01/11 and subsequently TLPI 01/12 expired, and Planning Scheme Amendment 1/11 took effect. The Planning Scheme Amendment, which includes a Wind Farm Code with some changes to the TLPI Wind Farm Code reflecting more recent planning thought, has been given weight in this assessment.

Section 6.2 of the Wind Farm Code of TLPI 01/11 states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4 of the code, complies with the Wind Farm Code (and it follows, with the intent of the Code).

Overall Outcomes

The purpose of the Wind Farm Code is to achieve the following outcomes.

Overall Outcome	Response
a) Wind farms are located, design and operated to address and minimise potential impacts on environmental, economic and social values.	<p>The proposed development is located, designed and operated to address and minimise potential impacts on environmental, economic and social values.</p> <p>Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.</p> <p>To the extent that overall outcome a) changes between the TLPI and the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment, which also seeks that wind farms are located to take advantage of viable wind resources.</p>
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, environment, heritage, landscape and scenic values.	<p>The proposed wind farm and associated infrastructure takes account of and is appropriately sensitive to existing development, environmental matters, and landscape and scenic values. These matters are addressed in detail in Chapter 5.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p> <p>The changes to overall outcome b) between the TLPI and the Planning Scheme Amendment are minor.</p>
c) Wind farm assessment utilises and takes comprehensive account of recognised scientific knowledge and standards and is commensurate with the significance, magnitude and extent of both direct and non-direct impacts.	<p>The proposed wind farm has referred to scientific knowledge and standards. The potential impacts of the wind farm have been considered in this assessment.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p> <p>To the extent that overall outcome c) changes between the TLPI and the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment, which seeks that assessment considers both positive and negative impacts.</p>
d) Wind farms and associated infrastructure are compatible with existing uses on the subject land and future preferred settlement patterns.	<p>The proposed wind farm and associated infrastructure is compatible with the vacant rural nature of the site. Future preferred settlement patterns anticipate limited change to the surrounding rural landscape. The assessment identifies that the wind farm can be managed to ensure compatibility with surrounding uses and dwellings.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind</p>

	<p>Farm Code below.</p> <p>The changes to overall outcome d) between the TLPI and the Planning Scheme Amendment are minor.</p>
<p>e) Wind farms are not located within areas of significant ecological value and do not adversely impact on ecological processes or the sustainability of fauna populations.</p>	<p>The proposed wind farm is not located within areas of significant ecological value, as this is not a term defined by any applicable statutory planning instrument. An assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) are addressed in section 6.4.</p> <p>The applicant acknowledges and this assessment identifies that proposed development may have adverse ecological impacts, including on fauna populations. In determining whether the adverse ecological impacts can be avoided, it is noted that the proposal has specific locational requirements which the proposed site satisfies. In this regard, the proposal could not readily be located at an alternative site where adverse ecological impacts would not occur. The proposal includes a range of impact mitigation and management measures that are intended to reduce the magnitude of ecological impacts. It is concluded that the likely ecological impacts of the proposed wind farm will be able to be appropriately managed or mitigated pursuant to the range of 'environmental management plans' being appropriately implements (as per conditions recommended to be imposed in Appendix A).</p> <p>However, the overall outcome refers to "do not adversely impact on ecological processes", and some impact is expected (even though the impacts will be appropriately managed or mitigated).</p> <p>The overall outcome must be considered in the context of the broader Wind Farm Code – it is expected that any wind farm will have some impact on ecological processes or fauna populations, due to its very nature and change to the area, and that this should be minimised in terms of the wind farm use. In this context, the proposed development may not have an adverse impact having regard to the expected operation of wind farms and that the TLPI 01/11 which identified the Arriga locality as a location with a planning expectation for wind farms (by virtue of a reduced level of assessment and associated mapping).</p> <p>Further, S4 of the Wind Farm Code provides more precise detail as to the assessment of ecological matters, and the proposed development complies with the applicable Probable Solution. As such, it follows that</p>

	<p>compliance with the corresponding Overall Outcome can be satisfied.</p> <p>Overall outcome e) changes between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it seeks that “where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations”. The proposal complies with the amended overall outcome.</p> <p>As such, to the extent that there may be a conflict, the development is supported by sufficient grounds, that include:</p> <ul style="list-style-type: none"> the TLPI is out of date due to its age and the changing circumstances reflected by the more up to date provisions of the Planning Scheme Amendment and the new terminology and assessment provisions of the SPP and Matters of State Environmental Significance (which enable impacts to be managed or mitigated); there is an expectation for wind farms in landscape / rural areas by the FNQRP and in the Arriga locality by the TLPI; and other sufficient grounds as presented in chapter 7 of this report. <p>Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.</p>
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	<p>The proposed wind farm will manage amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions within acceptable limits, or can manage these matters subject to implementation of relevant conditions (refer to Appendix A).</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	<p>The road network intended to be used for transportation of infrastructure and equipment are of a suitable standard, and will be conditioned to be suitably maintained.</p> <p>Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.</p>
h) The operation of the wind farm is controlled by site-specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the	<p>The operation of the wind farm will be controlled by site-specific management plans, as per recommended condition (Appendix A).</p> <p>Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.</p>

operational life of the wind farm.	
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	The wind farm is able to be connected to the existing high-voltage electricity transmission line. Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Wind farms are located within an economically viable wind resource.	The applicant has provided information that advises that the proposed wind farm is located within an economically viable wind resource. To the extent that overall outcome e) changes between the TLPI and the Planning Scheme Amendment, in that it is removed from the Planning Scheme Amendment, weight is given to the Planning Scheme Amendment.
k) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	It is a recommended condition of approval that site rehabilitation be carried out at the end of the operational life of the proposed wind farm. Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

Specific Outcomes and Probable Solutions

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1, as reproduced and assessed below.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed. The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of	PS2 No probable solution provided.	a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from

<p>direct, non-direct and cumulative impacts in relation to environment, economic and social impacts.</p> <p>b) Wind farms are readily connected to existing, nearby high voltage electricity transmission lines without significant environment, social or amenity impacts.</p> <p>c) The siting of wind farms and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with an economically viable wind resource.</p>		<p>wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is concluded that sufficient account of impacts have been considered and through the imposition of conditions (as discussed in this assessment) impacts can be mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed within access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farm's impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Refer to Chapter 5 for an assessment summary. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended</p>
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		<p>conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict. Shadow flicker and other amenity matters have been assessed and are considered not to cause unacceptable conflict with nearby residents.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B,</p>
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		<p>WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro-siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity.</p> <p>An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>The conclusions in that summary include the following.</p> <ul style="list-style-type: none"> • The Mt Emerald – Walsh

		<p>Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern 8km (approximately) of the Great Dividing Range, as locally expressed.</p> <ul style="list-style-type: none"> The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. Therefore, whilst not 'natural' and representing a change to the
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		<p>landscape, the impact is nonetheless acceptable.</p> <ul style="list-style-type: none"> • It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. There is an expectation for wind farms in landscape / rural areas by the FNQRP and particularly in the Arriga locality by the TLPI – and it is expected that the wind farms would be in elevated locations. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast. • It is Cardno's view that the proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites. • In this regard the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting
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		<p>the expected siting requirements for wind farms, and the proposed wind farm will not result in unacceptable visual impacts on view scapes.</p> <p>A condition requiring the submission and agreement in respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal. These matters are recommended to be imposed by conditions.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts.</p>
<p>S4 Ecological Impact</p> <p>Wind farms avoid unacceptable impacts on the ecology and sustainability of flora or fauna populations.</p>	<p>PS4</p> <p>a) Wind farms avoid areas of High Ecological Significance as identified in the Far North Queensland Regional Plan 2009-2031 and determined by Department of Environment and Resource Management.</p> <p>b) Where avoidance is not possible, impacts are minimised.</p>	<p>The probable solution seeks that wind farms avoid Areas of High Ecological Significance as identified in the FNQRP, or where avoidance is not possible, impacts are minimised. The Areas of High Ecological Significance are:</p> <ul style="list-style-type: none"> • Protected areas – the site is not in a protected area; • World heritage areas – the site is not in a world heritage area; • Wetlands – the development activity is not in a protected wetland; • Protected areas – not applicable, the site is not in a protected area; • World heritage areas – not applicable, the site is not

		<p>in a world heritage area;</p> <ul style="list-style-type: none"> • Wetlands – not applicable, the development activity will not occur in a protected wetland; • Terrestrial area – <ul style="list-style-type: none"> ○ habitat of rare or endangered species including essential habitat of the Southern cassowary and mahogany glider – the site contains habitat for threatened wildlife species including some mapped areas of essential habitat for the Southern Cassowary; ○ habitat of rare or endangered species including regional ecosystems with a Vegetation Management Status of 'endangered' or 'of concern' and 'non woody' regional ecosystems – the site contains regional ecosystems identified as being 'of concern'; ○ Significant coastal dune systems – the site is not in a significant coastal dune system; and ○ Einasleigh Uplands bioregion – the site is located on the eastern edge of the Einasleigh Uplands bioregion. <p>Compliance with the probable solution satisfies the specific</p>
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		<p>outcome as impacts are minimised through various measures to be implemented, in those occasions where avoidance is not possible. Notwithstanding, compliance with the specific outcome is also achieved as the development avoids unacceptable impacts on the ecology and sustainability of flora or fauna populations, as any potential impacts will be managed and monitored (including through imposition of conditions in Appendix A).</p> <p>The assessment of the ecological material is further set out in Section 5.3 of this report.</p> <p>The specific outcome and probable solutions change between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it refers to areas of state environmental significance, rather than more ambiguous terms, and reinforces that the TLPI is out of date.</p>
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with Queensland Government recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p>	<p>PS5 No probable solution provided.</p>	<p>The specific outcome and probable solutions change between the TLPI and the Planning Scheme Amendment, and weight is given to the Planning Scheme Amendment. The change is particularly relevant, as it refers more broadly to recognised standards (rather than just Queensland Government standards, of which there are limited), and provides an editor's note that refers to the Environmental Protection (Noise) Policy 2008 and the New Zealand standard NZA6808:2010.</p> <p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An</p>

<p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>		<p>Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). An Information Request response was submitted by the applicant on 10 September 2014.</p> <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of</p>
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		<p>Wind Energy Facilities in Victoria" similarly refers to the New Zealand Standard. Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p> <p>The proposal satisfies the Specific Outcome as it is (or can be via conditions) located, designed, constructed and operated in accordance with Queensland Government recognised standards with respect to noise emissions (of which there are limited), and noise emissions resulting from the wind farm are not expected to (including through management via conditions) result in unacceptable levels of nuisance, risk to human health or wellbeing, or ability to sleep or relax.</p>
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located in accordance with</p>	<p>PS6</p> <p>a) Modelled blade shadow flicker impacts do not exceed 30 hours</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118</p>

<p>national and/or State government recognised standards with respect to shadow flicker.</p> <p>b) Shadow flicker from wind turbines that potentially impact on an urban and rural development does not result in an unacceptable level of annoyance.</p>	<p>per annum and 30 min/day at existing urban or rural developments.</p> <p>b) Measured blade shadow flicker does not exceed 10 hours per annum at existing urban and rural developments.</p>	<p>receptors modelled, only 4 where predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.</p>
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre-existing television or radio reception or transmission.</p>	<p>PS7 No probable solution provided.</p>	<p>The applicant submitted an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff dated 28 July 2011. This report undertook initial investigation that concluded the electromagnetic interference is within reasonable levels,</p>

		<p>however it identifies that further assessment will be required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known. This is recommended to be managed by way of conditions.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or which cause nuisance or environmental degradation, are sealed.</p> <p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely to be subject to change prior to construction occurs.</p>

<p>drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post-construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p> <p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management

	<p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4m.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than 1 month.</p>	<ul style="list-style-type: none"> • Erosion and Sediment Control Plan • Stormwater management Plan <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p> <p>Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing monitoring programs; (iii) a Maintenance Management Plan 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include management techniques and ongoing monitoring programs that will be used.</p> <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above, it is considered that the operation and management of the proposed wind farm will be controlled and maintained.</p>
<p>S11 Signage</p> <p>Signage and advertising devices are limited in scale and confined to site and development interpretation.</p>	<p>PS11 No probable solution provided.</p>	<p>The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan.</p>

		Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.
<p>S12 Decommissioning & Rehabilitation</p> <p>Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.</p>	<p>PS12</p> <p>The site is rehabilitated such that:</p> <ul style="list-style-type: none"> (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; (iii) the sustainable ecological functioning of the site is maintained or improved; (iv) any agricultural function is restored; (v) wind farm infrastructure is removed from the site. 	<p>The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site.</p> <p>Decommissioning the site would involve:</p> <ul style="list-style-type: none"> • dismantling the turbines; • removing towers and replacing soil over foundations; • removing all material from site for recycling; • where tracks are of no use to the land owner, the land reinstated; • underground and above ground cabling removed; • the substation and associated buildings would be removed. <p>It is considered reasonable to include a condition requiring a site restoration plan.</p> <p>Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.</p>

The proposed wind farm development demonstrates compliance with the overall outcomes and specific outcomes of the Wind Farm Code of the TLIP 01/11, and therefore complies with the Wind Farm Code.

To the extent that conflict may be considered to exist (overall outcome e), the development is supported by sufficient grounds as presented in **Chapter 7** of this report.

6.7 Mareeba Shire Planning Scheme

At the time the application was made the Mareeba Planning Scheme Version 1/2007 (commenced on 23 November 2007) was in effect. The development site is included within the Rural Zone of the Mareeba Planning Scheme.

The TLPI 01/11 (Wind Farms) took effect on 05 October 2011 and was effective at the time the development application was properly made. TLPI 01/11 overrides the provisions and requirements of the Mareeba Shire Planning Scheme to the extent of the matters detailed

within sections 4-6 of the TLPI (Definitions, level of assessment and Wind Farm Code). Section 5.2 of TLPI 01/11 identifies the relevant assessment criteria for development identified in the Wind Farm Code as the Rural Zone Code (Part 4 Division 14), the Filling and Excavation Code (Part 6 Division 17, and the Car Parking Code (Part 6 Division 5) of the Mareeba Shire Planning Scheme 2004 and other Overlay codes identified as applicable in Part 5 of the Mareeba Shire Planning Scheme 2004. The following overlays are identified as relevant:

- Natural and Cultural Heritage Features Overlay
- Natural Disaster Bushfire (Medium Risk)
- Airport Overlay.

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for Wind Farms changed to Impact Assessable (although not affecting this application) the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same.

An assessment is provided below against the relevant codes of the Mareeba Shire Planning Scheme, including those in effect when the application was properly made (and which continued to have effect throughout the application process) and those which subsequently came into effect. .

6.7.1

Rural Zone Code

The development application area is included within the Rural Zone under the Mareeba Shire Planning Scheme 2004. Division 14 – Assessment criteria for Rural Zone comprise the Rural Zone Code. Development that is consistent with the specific outcomes in sections 4.78 to 4.80 complies with the Rural Zone Code. Assessment of the proposed development against the Rural Zone Code is set out below in **Table 2 – Assessment against Rural Zone Code**.

4.78 BUILDING SITING, SCALE AND AMENITY		
Specific Outcome	Probable Solutions	Response
For Self Assessable and Code Assessable Development		
S1 New development is consistent in scale with existing buildings and structures in the vicinity and does not detrimentally impact on road transport infrastructure and adjoining uses.	<p>PS1.1 Any building or structure does not exceed 12 metres and three storeys in height; and</p> <p>PS1.2 Any building or structure is located at least:</p> <ul style="list-style-type: none"> (i) 50 metres from the centre line of the existing Kennedy Highway, Peninsula Development Road, Mareeba-Dimbulah Road or other state controlled road (Main Road Marked Route) as identified on Maps R1 and R2, and (ii) 6 metres from any other road; and (iii) 10 metres from any common boundary of allotments; and <p>PS1.3 Buildings and other structures are located at least</p>	<p>The proposed wind farm structures do not comply with the prescribed Specific Outcome as the wind farm development is not consistent in scale with existing buildings and structures in the vicinity. Whilst this is the case the proposed wind farm is not considered to conflict with the overall outcomes for the Rural Zone.</p> <p>In support of the proposed height of the turbines the applicant advises that given the nature of the proposal, wind turbines necessitate an overall height beyond any existing built structures currently existing or likely to be established in the Rural Locality. It is advised that the Rural Zone is the most appropriate designation to site development of the type</p>

	25 metres from any Railway corridor land.	<p>proposed, given separation of the towers within the site from sensitive receptors and inconsistency of the farm with other 'urban' style development.</p> <p>Notwithstanding the non-compliance with S1, the TLPI 01/11, in effect at the time the application was properly made, identifies that it overrides the provisions and requirements of the Mareeba Shire Planning Scheme 2004 to the extent of the matters detailed in section 4-6 of the instrument (definitions, levels of assessment and the Wind Farm Code). The Wind Farm Code anticipates that wind farms will locate in rural areas, and it is implicit that wind farms will have height to enable access to viable wind resources (i.e. taller than houses and rural structures).</p> <p>It is considered that the proposed development application does not comply with S1 and therefore a recommendation to approve the development application is a potential conflict with the Mareeba Shire Planning Scheme and Rural Zone Code. The potential conflict arises because the Rural Zone Code was drafted prior to the Wind Farm Code(s), and does not anticipate the height of wind farm turbines expected by the Wind Farm Code(s).</p> <p>The potential conflict is appropriate because:</p> <ul style="list-style-type: none"> • pursuant to s326(c)(ii) of the SPA, the potential conflict arises because of a conflict between two or more aspects of the Planning Scheme, being the Rural Zone Code and the Wind Farm Code (which has been given weight and reflects the earlier TLPI), in that the Wind Farm Code anticipates wind farms in
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		<p>rural areas with considerable turbine height; and</p> <ul style="list-style-type: none"> • pursuant to section 326(b), there are sufficient grounds to justify the decision, including that land use policy 6.3.1 of the FNQRP (which is not reflected in the planning scheme and is a higher order planning instrument) encourages the establishment of viable renewable energy sources such as wind farms, which are <i>'recognised as a legitimate land use and supported for their contribution to reducing greenhouse emissions'</i>. Additional grounds are included in Chapter 7. <p>The Rural Zone Code of the Planning scheme is out of date, as the TLPI (and the subsequent inclusion of the Wind Farm Code in the planning scheme) and FNQRP promote wind farms in appropriate locations and recognise wind farms as a legitimate land use. Despite the identified conflict in the Planning scheme, it is considered that any decision to approve would best achieve the purpose of the Planning Scheme when read as a whole and that sufficient grounds exist to justify the decision.</p>
S2 Agricultural activities are protected from incompatible land uses.	<p>PS2.1 Where a site in the Rural Zone is not already used for agriculture or agriculture – intensive and it adjoins any other zone, a separation distance of 300metres is maintained between any new agriculture – intensive use and boundary of the adjoining zone/s.</p> <p>PS2.2 Non agriculture or</p>	<p>Given the site topography, and geological characteristics, the land is not considered Good Quality Agricultural Land (GQAL) under the Mareeba Shire Planning Scheme. No cultivation activities are undertaken on site and only limited stock grazing would be possible. Importantly, the establishment of the turbines will not prejudice the ongoing</p>

	<p>agricultural – intensive uses which adjoin any agriculture or agriculture – intensive uses are protected from spray drifts by the maintenance of a separation distance of 300 metres between the agriculture or agriculture – intensive uses and non agriculture or agriculture – intensive uses.</p>	<p>operation of the existing farmlands in proximity to the site due to their relatively benign physical impacts upon agricultural landscapes and their location generally along ridgelines.</p> <p>In the applicant's response to the Tablelands Regional Council's information request it is stated that consultation has been undertaken with the only Tableland based aerial spraying contractor in September 2011. It is confirmed that:</p> <ul style="list-style-type: none"> The Mount Emerald Wind Farm will not negatively impact on their ability to continue to safely operate in and around the traditional areas in which they have previously serviced customers and that there should be no negative impact to the new farming development within these areas. <p>A copy of the correspondence was included in the applicant's response to the information request.</p> <p>Given the above it is considered that the proposed wind farm is not incompatible with surrounding agricultural uses and is not expected to impact ongoing agricultural activities.</p>
S3 Functional, safe and convenient vehicular access and movement to the site for particular activity.	PS3 Access to the site is provided in accordance with Planning Scheme Policy 4-Development Manual Section D1.30.	The consideration of the provision of safe and functional access has been assessed as part of the response to the Wind Farm Code and found to be acceptable.
S4 Clearing of vegetation does not destabilise soil resources, result in a reduction in water quality or fragmentation of wildlife corridors (wildlife corridors are identified as Category B of Planning Scheme Maps V1 and V2).	<p>For Lots with areas of two (2) hectares or above:</p> <p>PS4.1 Vegetation is retained within fifty (50) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p>	The applicant advises that the turbines have certain location requirements which necessitate the removal of vegetation to ensure maximum efficiency and allow safe construction. Where practicable the turbines are sited to minimise vegetation clearing and to

	<p>For Lots below two (2) hectares in area:</p> <p>PS4.1 Vegetation is retained within ten (10) metres from the high bank of waterways and wetlands as indicated on any Planning Scheme map; and</p> <p>For all Lots</p> <p>PS4.3 Vegetation is retained on land with a slope of 15% or greater.</p>	<p>avoid other ecological impacts.</p> <p>The consideration of vegetation clearing and soil destabilisation has been assessed as part of the response to the Wind Farm Code and found to be acceptable.</p>
For Code Assessable Development		
<p>S5 Buildings are protected from adverse flooding and does not interfere with the passage or storage of stormwater.</p>	<p>PS5.1 Buildings are designed and located as not to be within and subject to flooding, unless:</p> <ul style="list-style-type: none"> (i) The floor level of all habitable rooms is at least 300mm clear of the Q100 flood level; and (ii) The building is elevated and the area below the building is not enclosed or otherwise does not impede the passage of stormwater. 	<p>The site is not identified as at risk from flooding.</p> <p>A Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that development does not interfere with the passage of or storage of stormwater.</p> <p>The SWMP will form part of the suite of plans forming the Environmental Management Plan (imposed as a condition in Appendix A).</p>
<p><i>For the Southedge Potential Tourist Area as identified on the Strategic Framework Maps SP1 & SP2</i></p> <p>S6 Utility services are provided which are:</p> <ul style="list-style-type: none"> (i) Cost effective over their life cycle; and (ii) Minimise potential adverse environmental impacts in the short and long 	<p>PS6 Development occurs in accordance with an approved plan which adequately addresses social, economic, environmental and regional considerations.</p>	<p>Not Applicable – the site is not in the Southedge Potential Tourist Area.</p>

<p>term; and</p> <p>(iii) Do not pose a risk to human health or the amenity of the locality; and</p> <p>(iv) Provided equitably.</p>		
<p><i>For Mona Reserve as identified on Map Z10 as Preferred Area No 2</i></p> <p>S7 Utility services are provided which are:</p> <p>(i) Cost effective over their life cycle; and</p> <p>(ii) Minimise potential adverse environmental impacts in the short and long term; and</p> <p>(iii) Do not pose a risk to human health or the amenity of the locality; and</p> <p>(iv) Provided equitably.</p>	<p>PS7 Development is carried out in accordance with a Plan of Development and Land Management and the Supplementary Table of zones, (as amended on 13 June 2001), approved by Council on 19 June 2001.</p>	<p>Not Applicable – the site is not in the Mona Reserve.</p>
<p><i>For Clohesy River Area identified on Maps Z8, Z9 and Z10 as Preferred Area No 3</i></p> <p>S8 Land situated within Preferred Area No 3 (as shown on Maps Z8, Z9 and 10) is protected for future long term urban development as identified by the FNQ Regional Plan.</p>	<p>PS8 New development within Preferred No 3 does not compromise its potential for future long term urban development.</p>	<p>Not Applicable – the site is not in the Clohesy River Area</p>
<p>S9 Tourism uses in or within 50 metres of a significant landscape feature are located on a site:</p> <p>(i) Without impacting on the attributes or values which give rise to the attractiveness of the site; and</p> <p>(ii) With proximity to infrastructure and services adequate to meet the-day to-day needs of the tourist population likely to be generated by development on the</p>	<p>PS9 No probable solution prescribed.</p>	<p>No public access to the site is proposed and as such the proposed development is not considered to be a tourism use.</p> <p>Specific Outcome S9 is not applicable.</p>

<p>site; and</p> <p>(iii) That contains land suitable in its physical characteristics to accommodate the form, scale and intensity of development; and</p> <p>(iv) Without impact upon the visual and landscape setting of the Shire.</p>		
<p>S10 Uses not dependent upon good quality agricultural land are not located on Good Quality Agricultural Land identified on Agricultural Land Quality maps S2 to S5, unless there is an overriding need and no alternative sites.</p>	<p>PS10 No probable solution prescribed.</p>	<p>The applicant states that the Council's Agricultural land quality mapping confirms that the eastern portion of the site is included within the 'Not Good Quality Agricultural Land' designation. The Agricultural land quality mapping confirms this to be the case and as such Specific Outcome S10 is not considered to be applicable.</p>
4.79 GRAVEL PITS, RESOURCE RESERVES AND MINING LEASES		
Specific Outcome	Probable Solutions	
For Self Assessable and Code Assessable Development		
<p>S1 The continuing or new use of gravel pits, resource reserves, mining lease areas and other areas of mineral interests identified on Maps M1 to M5 is not significantly constrained by the siting of incompatible uses or works.</p>	<p>PS1.1 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 500 metres of Mining Interests identified on Maps M1 to M5; and</p> <p>PS1.2 New dwelling houses and tourist facilities (not located on the same site as the mining interest) are not constructed within 1 km from Mining Interests (as identified on Maps M1 to M5) involving blasting and crushing of material.</p>	<p>Not Applicable.</p>
For Code Assessable Development		
<p>S2 Development of new extractive industries ensures neighbouring activities are not impacted upon.</p>	<p>PS2 No probable solution prescribed.</p>	<p>Not Applicable.</p>
4.80 RECONFIGURING A LOT		
<p>Specific Outcome and Probable Solutions not applicable as the proposed development does not include a reconfiguring a lot component.</p>		

The proposed wind farm development demonstrates compliance with the majority of the specific outcomes of the Rural Zone Code.

To the extent that conflict may be considered to exist (specific outcome S1), the conflict arises because of a conflict between two or more aspects of any one relevant instrument (s326(c)(ii) of the SPA), and the development is supported by sufficient grounds (s326(b)) as presented in **Chapter 7** of this report.

6.7.2 **Division 5 - Car Parking Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Car Parking code.

Specific Outcome	Probable Solutions	Response
For Self Assessable Development		
S1 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use.	AS1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	Not Applicable.
S2 Car parking spaces are to be of adequate size for their intended purpose.	AS2 A car parking space provided pursuant to AS1 shall have a minimum area of fifteen (15) square metres and a minimum width of two point seven five (2.75) metres.	Not Applicable.
S3 Adequate shade is provided for car parking areas.	AS3 Trees (see Schedule A of Planning Scheme Policy 9 – Landscaping for species) are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof.	Not Applicable.
S4 The carparking area is adequately constructed and maintained.	AS4 The carparking area is compacted, sealed, drained, marked and maintained and continue as such until such time as the development ceases. Car parking sealing may include bitumen, asphalt, concrete or paving blocks, however in the Rural and Rural Residential zones may also include compacted gravel.	Not Applicable.
S5 The development provide for loading, unloading and garbage areas.	AS5.1 All unloading, loading and garbage areas are provided on the site; and AS5.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a	Not Applicable.

	forward direction.	
For Code Assessable Development		
<i>Car Parking Design</i>		
S6 Car parking spaces are of adequate dimensions and standard to meet user requirements.	AS6 Car parking spaces meet the design requirements of Australian Standards AS2890.1–1986 and AS2890.2–1989 (as amended) provided that the minimum car parking space width is no less than 2.6 metres.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S7 Car parking spaces are used for their intended purpose.	AS7.1 Car parking spaces are kept and used exclusively for parking and maintained in a useable condition for parking; and AS7.2 Visitor car parking spaces are accessible and available for parking at all times; and AS7.3 Disabled car parking spaces are signed posted.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S8 Adequate shade is provided for car parking areas in excess of 1,000m ² .	AS8.1 Trees that will grow to provide shade are planted throughout the car park area and around its perimeter at the rate of one (1) tree per ten (10) car parking spaces or part thereof; or AS8.2 Shade structures are provided over 40% of the car parking spaces.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Car Parking Numbers</i>		
S9 Sufficient car parking spaces are provided to accommodate the demand likely to be generated by the use ² .	AS9.1 The number of car parking spaces provided for the use is in accordance with the Car Parking Schedule.	A Traffic Impact Assessment Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request. Assumptions in respect of traffic generation and the

		<p>maximum number of vehicles to visit the site are included in these responses.</p> <p>The Statement of Commitments accompanying the development applications also refers to the provision of a Traffic Management Plan, as part of the Construction Environmental Management Plan.</p> <p>A condition to secure the provision of car parking is considered reasonable.</p> <p>Given the above, it is considered that sufficient car parking spaces can be provided at the site to accommodate the demand likely to be generated by the proposed wind farm development.</p>
S10 The development provide for loading, unloading and garbage areas.	<p>AS10.1 All unloading, loading and garbage areas are designed such that all operations are carried out on site; and</p> <p>AS10.2 The design of unloading, loading and garbage areas shall enable all service vehicles to enter and leave the site in a forward direction.</p>	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
S11 The development provide for parking spaces in the vicinity of the development provided to accommodate the demand likely to be generated by the use.	AS11 Where car parking spaces cannot be provided for on the site in accordance with S4, a cash contribution is paid as laid out in the Planning Scheme Policy 7 – Car parking Cash Contribution.	Detailed matters in respect of car park construction and size are matters that can be conditioned as part of the Traffic Management Plan.
<i>Bicycle Parking</i>		
S12 Bicycle parking spaces are of adequate dimensions, standards and sufficient numbers to meet user requirements	<p>AS12.1 Bicycle parking spaces meet the design requirements of Australian Standards AS 2890.3-2000 (as amended) and</p> <p>AS12.2 Bicycle parking spaces being provided for the uses is in accordance with the bicycle parking schedule.</p>	Detailed matters in respect of bicycle parking matters can be conditioned as part of the Traffic Management Plan, however it is considered that given the nature of the proposed wind farm development it is unlikely that demand bicycle parking spaces will be generated.
<i>Movement and Access</i>		
S13 Access is safe,	AS13.1 Lots with two or more	A Traffic Impact Assessment

<p>functional, convenient and located in accordance with the Road Hierarchy Map R3.</p>	<p>street frontages have their access on the lower class of street in accordance with Road Hierarchy Map R3; and</p> <p>AS13.2 Accesses are to have a minimum sight distance in accordance with Austroads Guide to Traffic Engineering Practice Part 5 Intersections at Grade; and</p> <p>AS13.3 All on site traffic movements are to be designed for all vehicles to enter and leave the site in a forward gear; and</p> <p>AS13.4 All accesses on Council roads are to be designed and constructed in accordance with the Planning Scheme Policy - 4 Development Manual.4</p>	<p>Report prepared by SKM accompanied the original development application. A further Technical Note – Traffic Impact Assessment Engineering response was prepared by SKM and is dated 19 December 2012 in response to the Tablelands Regional Council Information Request dated April 2012. A further Traffic Impact Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire</p>
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		<p>Council) to ensure any issues are resolved prior to construction.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
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6.7.3 **Division 17 - Filling and Excavation Code**

Development that achieves the specific outcomes in section 6.4 of the code, complies with the Filling and Excavation Code.

Specific Outcomes	Probable Solutions	Response
<i>For Code Assessable and Self Assessable</i>		
S1 Visual Amenity Filling and excavation are undertaken to ensure that the visual amenity of the adjoining lots and the area is not compromised.	AS1 Filling and excavation is no greater than two (2) metres in height or depth.	<p>It is considered unlikely that significant filling and excavation will occur, however it is inevitable that the proposed development will result in some change to the visual amenity of the area.</p> <p>Where excavation and fill is undertaken in respect of the development access it will be done in accordance with methods and strategies identified in the Construction and Environmental Management Plan.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential impact upon visual amenity arising from filling and excavation.</p>
S2 Pest Management Filling and excavation does not result in the spread of declared plants.	AS2 No declared plants ¹⁵ are spread during any filling or excavation activities.	<p>The Statement of Commitments submitted in support of the development application identifies a Weed and Pest Management Plan to be submitted for approval as part of the Construction Environmental Management Plan.</p> <p>A condition securing the submission and approval of the plan by the relevant authority and implementation of the plan in accordance with the approved plan is considered reasonable.</p> <p>Given the above the wind farm is considered to be able to appropriately manage the potential spread of declared</p>

		plants.
<i>For Code Assessable only</i>		
S3 Stability Filling and excavation on land is carried out in a way that does not impact adversely on the stability of land.	AS3.1 Material is compacted in layers not exceeding 200 millimetres to the requirements of AS1289; and AS3.2 No filling or excavation is carried out within 1.5 metres of the site boundary; and AS3.3 Where the level of filling or excavation at the rear or sides of the proposed lot differs from the level of adjoining lots by more than 100 millimetres, either: (i) A retaining wall entirely within the development site is provided with at least a 50mm parapet above the allotment fill to ensure water is deflected from the adjoining land; or (ii) A batter with a slope not exceeding one in five is provided with the end of the batter at least 1.5 metres from the site boundary.	The applicant in the Statement of Commitments accompanying the development application identifies that an Erosion and Sediment Control Plan (ESCP) in accordance with the Institute of Engineers Australia Queensland ESC Guidelines will be prepared. The ESCP will describe temporary and permanent sediment control procedures and methods to minimise erosion during the construction of the project, covering discrete construction areas and which will account for the changing surface configuration at various stages of construction. Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained. The ESCP and SWMP will form part of the suite of plans forming the Construction Environmental Management Plan. Conditions that will mitigate the impacts of the proposed development have been included in Attachment A . Given the above it is considered that the development will be able to be carried out in a way that does not impact adversely on the stability of land.
S4 Flooding and Drainage Filling or excavation does not result in a change to the run off characteristics of a site that will have a detrimental effect upon the site and/or	AS4.1 Filling and excavation does not result in the ponding of water on the site or surrounding land or road reserves; and AS4.2 Filling and excavation	Related to the ESCP, a Stormwater Management Plan (SWMP) will be prepared in accordance with Queensland Urban Drainage Manual, with specific

surrounding land or road reserves.	<p>does not result in an increase in the flow of water across a site or any surrounding land or road reserves; and</p> <p>AS4.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths; and</p> <p>AS4.4 Filling and excavation complies with Planning Scheme Policy 4 – Development Manual.</p>	<p>reference to waterway crossings and stormwater outlets for all turbine pads and access tracks (where applicable) to ensure that water quality is maintained.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that the development will not result in a change to the run off characteristics of the site that will have detrimental affect upon the site or surrounding land.</p>
<p>S5 Environment</p> <p>Filling or excavation does not result in a reduction of the water quality of receiving waters.</p>	<p>AS5 Filling and excavation does not occur within fifty (50) metres of waterways or wetlands as identified on the Planning Scheme Maps.</p>	<p>Refer to S4 above.</p>
<p>S6 Environment</p> <p>Excavation does not result in the disturbance of contaminated soils and filling is identified as suitable for the specified purpose.</p>	<p>AS6 No contaminated material or unstable soil suitable for construction purpose is used for fill.</p>	<p>The Statement of Commitments submitted in support of the development application identifies that a Construction Environmental Management Plan is to be prepared and is to be submitted for approval. This plan should include management measures and mitigation should contaminated soil be disturbed.</p> <p>Conditions that will mitigate the impacts of the proposed development have been included in Attachment A.</p> <p>Given the above it is considered that S6 will be achieved.</p>

6.7.4 Division 2 – Assessment Criteria for Natural and Cultural Heritage Features Overlay Code

Development that achieves the specific outcomes in section 5.6, complies with the Natural and Cultural Heritage Features Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Cultural Heritage Places</p> <p>(a) significant elements of the mining history of Mareeba Shire are conserved; and</p> <p>(b) buildings, structures and</p>	<p>PS1 No probable solution provided.</p>	<p>There is no known significant mining history or buildings or structures which demonstrate significant historical periods in the development of the Shire.</p>

<p>operational works which demonstrate significant historical periods in the development of the Shire are conserved; and</p> <p>(c) known natural features which are significant to the indigenous cultural heritage of the Shire are protected.</p>		<p>A report prepared by Converge Heritage + Community and dated 5 July 2010 accompanies the development application. The report concludes that the potential for Aboriginal cultural heritage being present is moderate. It is stated that if Aboriginal cultural heritage was present, reasonable management approaches can usually mitigate that site and on this basis it is recommended that no or little project constraint will be an outcome.</p> <p>Converge recommends that a process be adopted whereby consultation with the appropriate Aboriginal Party for the area is initiated.</p> <p>It is expected that consultation would result in a cultural heritage survey and Cultural Heritage Management Plan (CHMP).</p> <p>The Statement of Commitments submitted in support of the development application identifies a CHMP as part of the Construction Environmental Management Plan.</p> <p>A condition in respect of securing a survey and identification of potential mitigation is considered reasonable and is included in the recommended conditions contained at Attachment A.</p> <p>Given the above, it is considered that the proposed wind farm will afford protection to matters of significant Aboriginal cultural heritage.</p>
<p>S2 Areas under the Nature Conservation Act 1992</p> <p>Development within 100 metres of an identified area under the Nature Conservation Act 1992 which has rare and threatened species recognised by the Act, has no significant adverse effects on the area,</p>	<p>.PS2 No probable solution provided.</p>	<p>An ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10 endangered, 9 vulnerable and 13 near-threatened) are listed under <i>the Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora</p>

<p>including those related to:</p> <p>(a) management of fire risk, including the use of natural firebreaks; or</p> <p>(b) changes to natural drainage; or</p> <p>(c) unmanaged public access; or</p> <p>(d) effluent disposal; or</p> <p>(e) changes to natural activities of animals with respect to the location and effects of uses, fencing, lighting and the like.</p>		<p>species protected under the QNCA are also identified.</p> <p>The assessment of the ecological material is set out in Section 5.3 above and it is concluded that the development will have no significant adverse effects on the area, provided the mitigation (to be secured by condition) is implemented.</p> <p>Given the above, it is considered that the proposed wind farms will not have significant adverse effects on the area.</p>
<p>S3 Wetlands and Waterways</p> <p>(a) There are no significant adverse effects on identified wetlands and identified waterways in terms of:</p> <p>(i) habitat; or</p> <p>(ii) water quality; or</p> <p>(iii) landscape quality.</p> <p>(b) For intensive agriculture, a buffer is maintained from the high bank of a waterway having regard to :</p> <p>(i) water quality, and</p> <p>(ii) fauna habitat corridor, and</p> <p>(iii) the retention of undisturbed vegetation , or</p> <p>(iv) revegetation of appropriate areas with local endemic species.</p>	<p>PS3 No probable solution provided.</p>	<p>Granite creek is identified running along the eastern edge of the wind farm project area and is mapped as a Wetland by DERM. The 'wetland 'trigger' has since been removed from the <i>Sustainable Planning Regulation 2009</i>. As such it is advised that EHP will not be providing an advice response on this issue.</p> <p>Notwithstanding this suitable mitigation strategies to deal with the potential impact upon wetlands and waterways are to be included within the proposed management plans as part of the Construction Environmental Management Plan. A condition to this effect is considered reasonable.</p> <p>Given the above, it is considered that there will be no significant adverse effects on identified wetlands and identified waterways.</p>
<p>S4 Conservation of Buildings and Places of Local Heritage Significance</p> <p>(i) Original in situ building fabric are preserved and restored; and</p> <p>(ii) material which is damaged or altered from its original state are repaired and replaced with contemporary materials consistent with existing built fabric; and</p>	<p>PS4 No probable solution provided.</p>	<p>Not Applicable as there are no buildings and places of Local Heritage Significance on the site.</p>

(iii) The curtilage and setting of the building are protected from development which conflicts with the character or scale of the existing building/s.		
S5 Respect for Form and Appearance of Natural Heritage Features and Cultural Heritage Features Development affecting Natural Heritage Features and Cultural Heritage Features does not adversely impact upon buildings and structures of historic significance.	PS5 No probable solution provided.	Not applicable as there are no buildings and structures of historic significance on the site.
S6 Retention of Natural Heritage Features and Cultural Heritage Features Buildings or structures within a Natural Heritage Feature or Cultural Heritage Feature are retained in an undamaged state or are enhanced through conservation of building fabric or structures.	PS6 No probable solution provided.	Not Applicable as there are no buildings or structures to be retained.
S7 Mineral Resources are Protected Mineral Resources are protected from conflicting land uses which may constrain the current or future utilisation of such resources.	PS7 No probable solution provided.	Not Applicable as there are no identified mineral resources on the site.

6.7.5 **Division 4 – Assessment Criteria For Airport and Aviation Facilities Overlay Code**

Development that is consistent with the specific outcomes in section 5.12 complies with the Airport and Aviation Facilities Overlay Code.

Specific Outcomes	Probable Solutions	Response
S1 Protection of the function of aviation Facilities (a) Development is located and designed to avoid all adverse effects on safe aircraft operation in the vicinity of aerodromes due to: (i) Physical intrusions; or (ii) Reduced visibility; or Collisions with birds	Obstacle Limitation Surfaces of the Mareeba Airport as delineated on Planning Scheme Map MA29: (i) a gaseous plume at a velocity exceeding 4.3m per second; or (ii) smoke, dust, ash or steam. PS1.4 Where uses involving	The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.

<p>or bats; or</p> <p>(iii) Air turbulence; or</p> <p>(iv) Other functional problems for aircraft (including artificial lighting, smoke and dust hazards), and</p> <p>(b) Development is located and designed to protect the function of aviation facilities from:</p> <p>(i) Physical obstructions; or</p> <p>(ii) Electrical or electromagnetic interference with aircraft navigation systems.</p>	<p>keeping, handling or</p> <p>acing of horses, or outdoor dining or food handling or food consumption (e.g. fairground,</p> <p>drive-in theatres or restaurant) are located within the 3km buffer zone of any aerodrome as</p> <p>delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and</p> <p>collected so that they are not accessible to wildlife.</p> <p>PS1.5</p> <p>(i) Uses involving food processing or abattoir or stock selling centre or fruit production or turf production or aquaculture or pig production or keeping of wildlife in enclosures, are not located within the 3km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4; and</p> <p>(ii) Where these uses are located between the 3km and 8km buffer zone of any aerodrome as delineated on Planning Scheme Maps A1, A3 or A4, food/waste sources are covered and collected so that they are not accessible to wildlife and for fruit and turf production, wildlife deterrence measures are carried out.</p> <p>PS1.6 Disposal of putrescible waste will not occur within the 13km buffer zone of the Mareeba Aerodrome</p>	<p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>Given the above, it is considered that the proposed wind farm is located and designed to avoid adverse impacts on safe aircraft operation in the vicinity of aerodromes.</p>
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	<p>as delineated on Planning Scheme</p> <p>Map A1. PS1.7 (i) Works or uses are not located within the</p> <p>500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>PS1.7</p> <p>(i) Works or uses are not located within the 500 metre buffer zone for the Saddle Mountain VHF facility that involve significant electrical or electromagnetic fields (e.g. arc welding) or create a permanent or temporary physical line of sight obstruction (ie, involving building structures or works above or exceeding 640 m AHD); and</p> <p>(ii) (ii) Works or uses are not located within the buffer zones for the Bibbohra VOR facility that:</p> <p>(a) involve any building or works within 300 metre buffer zone of the Bibbohra VOR; and</p> <p>(b) between the 300 metre buffer zone and the 1,000 metre buffer zone of the Bibbohra VOR:</p> <p>(i) create a permanent or temporary physical line of sight obstruction (ie, above 13 metres in</p>	
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	<p>height); or</p> <p>(ii) involve overhead power lines exceeding 5m in height; or</p> <p>(iii) involve metallic structures exceeding 7.5m in height; or</p> <p>(iii) involve trees and open lattice towers exceeding 10m in height; or</p> <p>(iv) involve wooden structures exceeding 13m in height; and</p> <p>(iii) Works or uses are not located within the 4km buffer zone for the Hann Tableland radar facility that involve any building, structures or work above 950 AHD.</p>	
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6.7.6 **Division 8 – Assessment Criteria For Natural Disaster –Bushfire Overlay**

Development that is consistent with the specific outcomes in section 5.24 complies with the Natural Disaster- Bushfire Overlay code.

Specific Outcomes	Probable Solutions	Response
<p>S1 Development maintains the safety of people and property by mitigating the risk through:</p> <ul style="list-style-type: none"> lot design and the siting of buildings; and including firebreaks that provide adequate: <ul style="list-style-type: none"> - setbacks between buildings/structures and hazardous vegetation, and - access for fire fighting/other emergency vehicles; providing adequate road access for fire fighting/other emergency vehicles and safe evacuation; and providing an adequate and accessible water supply for fire fighting 	<p>For Code Assessment:</p> <p>PS1.2 Buildings and structures:</p> <p>(a) on lots greater than 2,500m2:</p> <ul style="list-style-type: none"> are sited in locations of lowest hazard within the lot; and achieve setbacks from hazardous vegetation¹⁸ of 1.5 times the predominant mature canopy tree height or 10 metres, whichever is the greater; and are located a minimum of 10 metres from any retained vegetation strips or small areas of vegetation; and are sited so that 	<p>The site is identified to the Bushfire Hazard overlay in the Mareeba Shire Planning Scheme and is identified as containing medium and high bushfire hazard. The proposed structures do not increase the amount of people living or working (permanently other than during the construction phase) on the land, however the potential risk has been considered and mitigation is proposed. A Bushfire Fire Management Plan has been prepared and has been submitted in support of the development application.</p> <p>The Bushfire Management Plan considers the risk of fire and identifies that the greatest risk is from fire during construction or grass or bush fire entering the site. The applicant advises that the potential for the</p>

<p>purposes.</p>	<p>elements of the development least susceptible to fire are sited closest to the bushfire hazard.</p> <p>(b) on lots less than or equal to 2,500m², maximise setbacks from hazardous vegetation.</p>	<p>structures to ignite (from malfunctions of internal equipment) is extremely low, but will be managed through a consistent and regular maintenance program. The wind turbine generators themselves will generally be placed in cleared areas and therefore minimal fuel to feed a fire.</p> <p>Key aspects that are identified to reduce risk of fire include:</p> <ul style="list-style-type: none"> • a well designed and constructed road network throughout the site. • Personnel on site who understand how to respond quickly to fire and use equipment available on site. • Accessible sources of water. • Adequate fire fighting facilities. <p>The Bushfire Risk Management Plan is to form part of the Construction Environmental Management Plan.</p> <p>The draft Bushfire Management Plan is considered to provide sufficient consideration of natural bushfire hazard includes measures to avoid an increase in the severity of the hazard and potential mitigation to reduce the risk to the site and surrounding residential properties.</p> <p>Given the above the proposed wind farm will maintain the safety of people and property by including measures to mitigate Bush Fire Hazard.</p>
	<p>For Self Assessment and Code Assessment:</p> <p>PS1.3 For uses involving new or existing buildings with a gross floor area greater than</p>	<p>The applicant has identified that the following management plans relevant to bushfire management will be prepared as part of the Construction Environmental Management Plan:</p>

	<p>50m2, each lot has:</p> <ul style="list-style-type: none"> a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); <p>OR</p> <ul style="list-style-type: none"> an on-site water storage of not less than 5,000 litres (e.g. accessible dam or tank with fire brigade tank fittings, swimming pool). <p>For Code Assessment only:</p> <p>PS1.4 Lots are designed so that their size and shape allow for:</p> <p>(a) efficient emergency access to buildings for fire-fighting appliances (e.g. by avoiding long narrow lots with long access drives to buildings);</p> <p>AND</p> <p>(b) setbacks and building siting in accordance with PS1.2 above.</p> <p>For Code Assessment only:</p> <p>PS1.5 Firebreaks are provided by:</p> <p>(a) a perimeter road that separates lots from areas of bushfire hazard and that road has:</p> <ul style="list-style-type: none"> a minimum cleared width of 20 metres; and a constructed road width and weather standard complying 	<ul style="list-style-type: none"> Bushfire Risk Management Plan Ecological Fire Management Plan Emergency Evacuation Plan <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.</p>
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	<p>with local government standards.</p> <p>OR</p> <p>(b) where it is not practicable to comply with PS1.5 (a), fire maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and</p> <p>the fire/maintenance trails:</p> <ul style="list-style-type: none"> • have a minimum cleared width of 6 metres; <p>AND</p> <ul style="list-style-type: none"> • have a formed width and gradient, and erosion control devices to local government standards; <p>AND</p> <ul style="list-style-type: none"> • have vehicular access at each end; and provide passing bays and turning areas for fire-fighting appliances; <p>AND</p> <ul style="list-style-type: none"> • are either located on public land, or within an access easement that is granted in favour of the local government and Queensland Fire & Rescue Service. <p>AND</p> <p>(c) sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg creek corridors and other retained vegetation) to allow</p>	
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	<p>burning of sections and access for bushfire response.</p> <p>For Code Assessment only:</p> <p>PS1.6 Roads are designed and constructed in accordance with applicable local government and State government standards and:</p> <ul style="list-style-type: none"> a) have a maximum gradient of 12.5%;and b) b) exclude cul-de-sacs, except where a perimeter road isolates the development from hazardous vegetation or the cul-de-sacs are provided with an alternative access linking the cul-de-sacs to other through roads. <p>For Code Assessment only:</p> <p>PS1.7 Development complies with a Bushfire Management Plan19 for the premises.</p>	
<p>For Code Assessment only:</p> <p>S2 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.</p>	<p>For Code Assessment only:</p> <p>PS2 Development complies with a Bushfire Management Plan20 for the premises.</p>	<p>A draft Bushfire Management Plan has been submitted. The Statement of Commitments submitted by the applicant also identifies an Ecological Fire Management Plan which will detail the management strategies to be implemented in order to maintain an appropriate fire regime for various fauna and flora habitats represented on the site.</p> <p>A condition requiring these plans to be submitted to and approved by the relevant authority and implemented in accordance with the approved plan is considered reasonable.</p> <p>Given the above the proposed wind farm will</p>

		ensure that public safety and the environment are not adversely affected by detrimental impacts of bushfire.
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6.7.7 Division 23 Wind Farm Code

An assessment against the Division 23 (Wind Farm Code) of the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11-Wind Farms) is contained in the below table.

There are some changes between the wording of the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code in the TLPI 01/11 (in effect at the time of lodgement) and the Wind Farm Code contained in the Planning Scheme Amendment 1/11 – Wind Farms (in effect at the commencement of the decision stage). To the extent there are differences, it is considered appropriate to place weight on the Wind Farm Code contained in the Planning Scheme Amendment No 1/11 – Wind Farms as it represents more recent and current thinking than the TLPI (which has expired).

Section 6.2 of the Wind Farm Code states that development that achieves the overall outcomes in section 6.3 and specific outcomes in section 6.4, complies with the Wind Farm Code (and it follows, with the intent of the Code).

Overall Outcomes

The purpose of the Wind Farm Code is to achieve the following outcomes.

Overall Outcome	Response
a) Wind farms are located to take advantage of viable wind resources and are positioned, designed and operated to address and mitigate potentially significant adverse impacts on environmental, economic and social values;	<p>Wind farms are to be located in areas with a viable wind resource, usually in an elevated located, and the position, design and operation is consequent to that location.</p> <p>Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and 10m/s respectively, which confirms a sufficient wind resource.</p> <p>The proposed development is positioned, designed and operated to address and mitigate potential significant adverse impacts on environmental, economic and social values.</p> <p>Refer to the assessment response provided to Specific Outcome S2 of the Wind Farm Code below, in respect of site location and suitability.</p>
b) The design, siting, construction, management, maintenance and operation of wind farms and associated infrastructure takes comprehensive account of (and is sensitive to) existing urban and rural development, future preferred settlement patterns, environment, heritage, landscape and scenic values and recognised demonstrable impacts	<p>The proposed wind farm and associated infrastructure takes account of and is appropriately sensitive to existing development, preferred settlement patterns (expected to be rural for the foreseeable future), environmental matters, and landscape and scenic values. These matters are addressed in detail in Chapter 5.</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>

associated with wind farms.	
c) Wind farm assessment utilises and takes comprehensive account of recognised applicable standards and is commensurate with the significance, magnitude and extent of both positive and negative direct and non-direct impacts.	<p>The proposed wind farm has referred applicable standards in guiding design and operation, and such standards are contemplated by this assessment. The potential positive and negative impacts of the wind farm have been considered and balanced in this assessment.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p>
d) Wind farms and associated infrastructure mitigate adverse impacts on existing uses on the subject land, existing urban and rural development and future preferred settlement patterns.	<p>The proposed wind farm and associated infrastructure is can managed to mitigate adverse impacts on existing and future surrounding uses and development.</p> <p>Refer to the response provided to Specific Outcome S2, S3, S5, S6 and S7 of the Wind Farm Code below.</p>
e) Where located in areas of state environmental significance, wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations.	<p>The proposed wind farm is not located within areas of state environmental significance, as this is not a term defined by any applicable statutory planning instrument. An assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) are addressed in section 6.4.</p> <p>Refer to the response provided to Specific Outcome S1, S2 and S4 of the Wind Farm Code below.</p>
f) Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the wind farm is maintained within acceptable limits	<p>The proposed wind farm will manage amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions within acceptable limits, or can manage these matters subject to implementation of relevant conditions (refer to Appendix A).</p> <p>Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.</p>
g) Identified council-controlled roads directly associated with the transportation of infrastructure and equipment during construction and operation are of a suitable standard and are maintained during the life of the wind farm.	<p>The road network intended to be used for transportation of infrastructure and equipment are of a suitable standard, and will be conditioned to be suitably maintained.</p> <p>Refer to the response provided to Specific Outcome S8 of the Wind Farm Code below.</p>
h) The operation of the wind farm is controlled by site specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the wind farm.	<p>The operation of the wind farm will be controlled by site-specific management plans, as per recommended conditions (Appendix A).</p> <p>Refer to the response provided to Specific Outcome S9 of the Wind Farm Code below.</p>
i) Wind farms are readily connected to existing high-voltage electricity transmission lines.	<p>The wind farm is able to be connected to the existing high-voltage electricity transmission line.</p>

	Refer to the response provided to Specific Outcome S2 of the Wind Farm Code below.
j) Comprehensive site rehabilitation is carried out at the end of the operational life to restore the site to its pre-development state.	It is a recommended condition of approval that site rehabilitation be carried out at the end of the operational life of the proposed wind farm (refer Appendix A). Refer to the response provided to Specific Outcome S12 of the Wind Farm Code below.

Specific Outcomes and Probable Solutions

The specific outcomes sought for the Wind Farm Code are included in column 1 of Table 1 and probable solutions in column 2 of Table 1.

Specific Outcomes	Probable Solutions	Response
S1 Ecologically Sustainable Development Wind farms have environmental, economic and social benefits at both local and regional scale throughout its operational life.	PS1 No probable solution provided.	<p>The applicant advises that being a renewable energy project, Mount Emerald Wind Farm is fundamentally an ecologically sustainable development. It is acknowledged that whilst not without short term impacts upon the environment, over time, the impacts of the project can be offset and appropriate management and mitigation strategies employed.</p> <p>The development application and supporting material has been reviewed by Foresight Partners Pty Ltd. As set out in section 5.9 it is recommended that the Mt Emerald Wind Farm remains a project with significant and robust economic state interests and recommend its approval.</p>
S2 Location and Site Suitability a) Wind farm location and siting takes sufficient account of direct, non-direct and cumulative impacts in relation to environment, economic and social impacts. b) Wind farms are readily connected to existing high voltage electricity transmission lines without significant environment, social or amenity impacts. c) The siting of wind farms and associated infrastructure takes	PS2 No probable solution provided.	<p>a) The Applicant advises that the siting of turbines has been determined based on detailed environmental field investigations, outputs from wind data modelling, desk top analysis of topography, visual impact, noise impact, shadow flicker impact assessments, physical access constraints as well as the efficiency of the system. A number of alternative layouts were considered and the number of turbines has been reduced. It is considered that sufficient account of impacts has been considered and through the imposition of conditions (as discussed in this assessment) potential impacts can be</p>

<p>account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.</p> <p>d) Wind turbines and associated infrastructure are located at a suitable distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict.</p> <p>e) Wind farms do not adversely impact on aircraft or airport operations.</p> <p>f) Wind farms are located in areas with a viable wind resource.</p>		<p>mitigated to an acceptable level.</p> <p>b) An existing 275kV Powerlink transmission line traverses the site, and location of connecting cabling is proposed with existing access tracks. Where practicable, underground cabling will be utilised to minimise visual impacts, except where environmental factors require otherwise. An important factor for the operation of a wind farm is access to the electricity network. Whilst there is currently no connection agreement in place with Powerlink for the proposed development, Powerlink does not anticipate that there are any impediments to the connection of the wind farm to the electricity network subject to the wind farm complying with its obligations under relevant electricity laws.</p> <p>c) Studies have been undertaken on behalf of the applicant in respect of the wind farms impact on existing urban and rural development (noise), environment, heritage, landscape and scenic values. These reports have been assessed and it is considered that sufficient account has been given to these interests. Refer to Chapter 5 for an assessment summary. Where it is considered that further mitigation or management of an identified impact is required conditions are recommended. A copy of recommended conditions is contained in Attachment A.</p> <p>d) A noise impact assessment was originally undertaken by Noise Mapping Australia dated 16 March 2012. In response to the Information Request issued by Tablelands Regional Council in April 2012 Marshall Day prepared a further Noise Impact assessment dated 16 April 2014. Further updates prepared by Marshall Day have been submitted in response to the Ministers</p>
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		<p>Information Request. An assessment of these noise reports has been undertaken and it is considered that, subject to the imposition of reasonable conditions, the wind turbines and associated infrastructure are located a sufficient distance from existing uses on the subject land and future preferred settlement patterns to avoid unacceptable conflict with nearby residents.</p> <p>e) The site is located within 15km of the Mareeba aerodrome. Advice from CASA has been sought and a detailed Aeronautical Assessment undertaken by Rehbein Airport Consulting dated 26 September 2011. It is concluded that the proposed wind farm will not impact upon aircraft operations to and from Mareeba Aerodrome and the Atherton ALA.</p> <p>Further information was submitted in response to the information response from Tablelands Regional Council dated 11 June 2012. Air Services Australia advised in relation to the development application that the development to a max height of 1179.5m AHD will not impact the performance of precision/non-precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM, ADS-B, WAMor Satellite /Links.</p> <p>Given that the final layout is subject to micro siting requirements it is considered that a condition requiring the approval from the relevant aviation authorities is obtained prior to construction.</p> <p>f) Parsons Brinckerhoff have undertaken a Wind Farm Energy Yield Assessment, dated February 2011 in support of the development application. Wind modelling has been undertaken on site since 2009 and average wind speed at two monitoring locations average 8 m/s and</p>
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		<p>10m/s respectively, which confirms a sufficient wind resource at this location.</p> <p>Given the above, it is considered that the proposed wind farm complies with the identified location and site suitability criteria.</p>
<p>S3 Visual & Landscape Impacts</p> <p>a) Wind farms do not result in unacceptable visual impacts (including cumulative impacts) on locally, regionally and nationally significant view scapes.</p> <p>b) The material, finish and colour of wind turbines and associated facilities and infrastructure minimises visual impacts.</p> <p>c) Connections between wind turbines and substation/s are located underground within internal access roads, along with other collocated services where possible and desirable.</p>	<p>PS3 No probable solution provided.</p>	<p>A visual assessment report prepared by RPS accompanied the Development Application. Tablelands Regional Council requested further information in its Information Request dated April 2012 and the applicant, in its response to this information request dated April 2014 included a further Landscape and Visual Assessment prepared by Green Bean Design dated November 2013. This was supported by Trueview Photo simulations dated August 2012 and prepared by Transfield Services.</p> <p>The information request issued by the Minister dated 11 June 2014, included requests in respect of landscape Visual Amenity.</p> <p>An assessment of the common material comprising the development application has been undertaken and a summary of the assessment is provided in Section 5.2 above.</p> <p>The conclusions in that summary include the following.</p> <ul style="list-style-type: none"> The Mt Emerald – Walsh Bluff mountain range is a prominent and significant landscape feature both locally and in the Walkamin – Arriga – Rangeview district, as seen from the east (Kennedy Highway), north and west. It rises to 900 – 1,120m AHD (approximately 300m above the surrounding land) and the northern

		<p>8km (approximately) of the Great Dividing Range, as locally expressed.</p> <ul style="list-style-type: none"> The development of 63 wind turbines along the skyline, at elevations of 800 – 900m AHD and 80 – 130m in height (well above the treeline), in several linear array arrangements extending over 2 – 3km, will have unavoidable visual impacts. Cardno's assessment is that this number of wind turbines in previously undisturbed natural bush, and the extent of the turbine array on the skyline, meet Specific Outcome S3 by avoiding 'unacceptable visual impacts'. This assessment acknowledges that wind turbines have a form and character which is not 'natural', and which contrast markedly with that of the mountain. Although each wind turbine structure is relatively slender and unobtrusive in distant views, the rotating turbine blades attract attention. The proposed development will cause a change to the appearance and character of a significant landscape feature, over an extensive area. It is relevant that wind farms (both in Australia and overseas) are often located on prominent ridgelines, with turbine hubs and rotating blades visible above the tree canopies and on the skyline, so some visual impacts are unavoidable, even at background viewing distances. There
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		<p>is an expectation for wind farms in landscape / rural areas by the FNQRP and particularly in the Arriga locality by the TLPI – and it is expected that the wind farms would be in elevated locations. Opinions vary as to whether such visual impacts are adverse, or whether lines of wind turbines on the skyline present an attractive contrast.</p> <ul style="list-style-type: none">• The proposed wind farm does not have an unacceptable visual impact in the context of the planning framework or the site, which identifies the landscapes of Far North Queensland as being appropriate for renewable energy (as per the FNQRP) and the Arriga locality specifically as providing a particular opportunity for wind farms (by virtue of the level of assessment and mapping in the TLIP 01/11). This informs a community expectation for some wind farms in the rural landscape of Arriga, and likely on elevated sites.• In this regard the proposed wind farm has taken account of and is sensitive to the relevant landscape and scenic values, noting the expected siting requirements for wind farms, and the proposed wind farm will not result in unacceptable visual impacts on view scapes. Therefore, whilst not 'natural' and representing a change to the landscape, the visual impact is nonetheless acceptable. <p>A condition requiring the submission and agreement in</p>
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		<p>respect of the material, finish and colour of the wind turbine and associated structures is considered reasonable.</p> <p>The applicant has indicated that where possible cabling between turbines will generally be underground and overhead where traversing watercourses and other landscape features necessitating such design approach. It has also been identified that a Construction Environmental Management Plan will be prepared to avoid, minimise and manage any environmental impacts arising from the construction activities for the proposal. These matters are recommended to be imposed by conditions.</p> <p>Given the above it is considered that the proposed wind farm will not result in unacceptable visual impacts.</p>
<p>S4 Ecological Impact</p> <p>Wind farms do not have significant adverse impacts on ecological values and processes or on the sustainability of fauna populations in areas of state environmental significance.</p>	<p>PS4</p> <p>c) Where possible, wind farms should not be located in areas of state environmental significance.</p> <p>d) Where a wind farm or part of a wind farm is located in an area of state environmental significance, any significant adverse impacts on ecological values and processes or on the sustainability of fauna populations are minimised.</p>	<p>Probable solution S4 seeks that wind farms should not be located in areas of state environmental significance. Specific outcome S4 also refers to area of state environmental significance in terms of seeking that that wind farms do not have significant adverse impacts.</p> <p>The proposed wind farm is not located within areas of state environmental significance, as this is not a term defined by any applicable statutory planning instrument. As such, compliance with P4 and S4 is achieved.</p> <p>In any case, an assessment of 'Matters of State Environmental Significance' is addressed in Chapter 5, and 'Areas of Ecological Significance' (as per the FNQRP) is addressed in section 6.4.</p> <p>In terms of Matters of State Environmental Significance, an ecological assessment report prepared by RPS accompanied the development application, and it is identified that 33 species of fauna (10</p>

		<p>endangered, 9 vulnerable and 13 near-threatened) are listed under the <i>Queensland Nature Conservation Act 1992</i> (QNCA) Vegetation and flora species protected under the QNCA are also identified as Matters of Environmental Significance in the RPS report. The ecological assessment also identifies a number of fauna species protected under the EPBC Act 1999, for which a separate referral to the Commonwealth is applicable.</p> <p>The assessment of the ecological material is set out in Section 5.3 of this report and it is concluded that the development is not expected to have significant adverse impacts on ecological values and processes or the sustainability of fauna populations, as a result of management and mitigation measures proposed to be implemented (and as imposed via recommended conditions)..</p> <p>The specific outcome also identifies that wind farms do not have significant adverse impacts on ecological values and processes.</p>
<p>S5 Noise Impact</p> <p>a) Wind farm turbines and associated infrastructure are located, designed, constructed and operated in accordance with recognised standards with respect to noise emissions.</p> <p>b) Audible and inaudible noise emissions resulting from wind farms that potentially impact on existing urban and rural development does not result in unacceptable levels (including cumulative impacts) of:</p> <p>(i) nuisance</p>	<p>PS5 No probable solution provided.</p> <p>Editors Note-development should consider the Environment Protection (Noise) Policy 2008 and the New Zealand Standard Acoustics – Wind farm noise (NZS6808:2010).</p>	<p>An acoustic assessment report prepared by Noise Mapping Australia accompanied the development application which confirmed that the proposal would be able to comply with <i>Environmental Protection Policy (Noise) 2008</i>. An Information Request was issued by Tablelands Regional Council in April 2012 and the response to the information request prepared by the applicant, and dated April 2014, included a further Noise Impact Assessment prepared by Marshall Day Acoustics and dated 16 April 2014.</p> <p>The Information Request issued by the Minister on 11 June 2014 included a number of items relating to noise (item 4 – 19). The Information Request response submitted</p>

<p>(ii) risk to human health or wellbeing</p> <p>(iii) ability to sleep or relax.</p>		<p>by the applicant on 10 September 2014 included the following:</p> <ul style="list-style-type: none"> • Response to Ministerial Information Request (Summary) • Attachment C - Residence assessment report • Attachment D – Noise Impact assessment prepared by Marshall Day and dated 16 April 2014. • Attachment E – Review of High Amenity Criteria prepared by Marshall Day and dated 09 September 2014. • Attachment F – 2 Year Wind Data Verification Report prepared by Parsons Brinckerhoff • Attachment G – Construction and Ancillary Infrastructure Memo prepared by Marshall Day and dated 9 September 2014. • Attachment H - One Third Octave Band Tonality Assessment prepared by Marshall Day and dated 03 September 2014. <p>An assessment of the submitted noise information has been undertaken by an acoustic (noise) specialist.</p> <p>The assessment indicates that the wind farm noise emissions are likely to be compliant with the requirements of NS6808 and the 40 dB (A) in most cases.</p> <p>Notwithstanding the above, the raw data provided by the applicant indicates that predicted wind farm noise levels are likely to be occasionally up to 16 dB(A) above, and regularly up to 12dB(A) above the existing background noise levels at night at receivers R05 and R06. This will result in wind</p>
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		<p>farm noise being clearly audible at these receivers at night, and still has the potential to affect sleep and result in noise complaints.</p> <p>There are a standards which identify 35 dB (A) as an appropriate noise threshold in rural areas and high amenity areas, such as is the case in the South Australian Wind Farms – Environmental Noise Guideline and as contained in the New Zealand Standard NZS6808:2010. The Victorian “Policy and Planning Guidelines for development of Wind Energy Facilities in Victoria” similarly refers to the New Zealand Standard.</p> <p>Whilst it is recognised that the draft State Wind Farm Code is only draft this also refers to a 35 dB (A) noise limit.</p> <p>In circumstances where predicted wind farm noise levels are 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s it is considered reasonable to apply the lower threshold of 35 dB (A). At present the modelling identifies that this is likely to apply to noise sensitive receivers R05 and R06, however it is considered appropriate to apply this standard where the difference between background noise and the experienced noise level is 8 or more dB(A) above the existing background noise level at any wind speed between 6 and 12 m/s.</p> <p>A condition may be applied to ensure the development meets appropriate noise criteria of 35dB(A) in these circumstances and 40 dB(A) otherwise.</p> <p>The proposal satisfies the Specific Outcome as it is (or can be via conditions) located, designed, constructed and</p>
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		operated in accordance with recognised standards with respect to noise emissions, and noise emissions resulting from the wind farm are not expected to (including through management via conditions) result in unacceptable levels of nuisance, risk to human health or wellbeing, or ability to sleep or relax.
<p>S6 Blade Shadow Flicker Impact</p> <p>a) Wind farm turbines are located to comply with recognised standards in relation to blade shadow flicker impact.</p> <p>b) Blade shadow flicker from wind turbines that potentially impacts on an existing dwelling does not result in an unacceptable level of annoyance.</p>	<p>PS6</p> <p>a) The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.</p> <p>b) The measured blade shadow flicker at any existing dwelling does not exceed 10 hours per annum.</p>	<p>The development application is accompanied by a Shadow Flicker Report prepared by the applicant dated January 2012. Findings from the report confirm that of the 118 receptors modelled, only 4 were predicted to experience any shadow flicker. In response to the information request issued by Tablelands Regional Council in April 2012 the information response included a clearer representation of the shadow flicker mapping.</p> <p>It has been identified that vacant properties potentially experiencing more than 30 hours of shadow flicker are located to the west and south of the proposed wind farm and located on steep and rugged terrain and hence difficult to construction of a dwelling.</p> <p>Further information in respect of Shadow Flicker was requested in the Ministerial information request dated 11 June 2014. The applicant's information request response dated September 2014 identifies that only 3 receptors will experience shadow flicker (R05, R49 and R78).</p> <p>In the worst case scenario for all 3 properties the modelled blade shadow flicker impact on properties will be for considerably less than the 30 hours per annum (and less than 10 hours per annum) and 30 minutes per day. A condition requiring the <i>measured</i> blade flicker not to exceed 10 hours per annum is considered reasonable.</p> <p>Given the above it is</p>

		considered that the proposed wind farm will not result in an unacceptable level of annoyance to existing dwellings, in accordance with recognised standards in relation to blade shadow flicker.
<p>S7 Radio and Television Impact</p> <p>The wind farm has no adverse effect on pre existing television or radio reception or transmission.</p>	PS7 No probable solution provided.	<p>The applicant submitted an Electromagnetic Interference Assessment prepared by Parsons Brinckerhoff dated 28 July 2011. This report undertook initial investigation that concluded the electromagnetic interference is within reasonable levels, however it identifies that further assessment will be required to implement further electromagnetic interference mitigation strategies, once the final models of the turbines are known. This is recommended to be managed by way of conditions.</p> <p>The applicant has indicated in the Schedule of Commitments that the location of communications towers and requirements of licence holders will be confirmed and input into micro-siting of individual turbines to minimise for potential telecommunications interference.</p> <p>A condition requiring further monitoring of surrounding residential dwellings to determine any loss in television signal strength and possible mitigation is considered reasonable.</p>
<p>S8 Wind farm access</p> <p>a) The identified council-controlled external access route to the site is via roads that are of a suitable standard of construction for turbine transportation purposes.</p> <p>b) Identified council-controlled roads utilised during</p>	<p>PS8.1 Internal access gradients are no steeper than 1:5;</p> <p>or</p> <p>PS8.2 Internal accesses that are steeper than 1:5, or</p> <p>which cause nuisance or environmental degradation, are sealed.</p>	<p>Assessment has been prepared by Jacobs (dated 29 August 2014) in response to the Ministers information request.</p> <p>These reports contain detailed information in respect of access arrangements to the site. The latest report prepared by Jacobs identifies two possible access routes for oversized vehicles in their entirety from Cairns Port to the</p>

<p>construction and maintenance are of a suitable standard for the transportation of associated infrastructure and equipment, and are maintained to that standard during the life of the wind farm.</p> <p>c) Noise, safety and dust impacts on land uses adjacent to the external access route do not cause nuisance.</p> <p>d) Internal accesses are designed, located and constructed to avoid drainage lines and soil erosion.</p> <p>e) Internal accesses are designed located, constructed and rehabilitated post construction to a standard that ensures visual impact, earthworks, gradients, environmental impact and maintenance are minimised to acceptable levels.</p>	<p>PS8.3 Where located in environmentally or visually sensitive areas the cleared width of accesses does not exceed 7m.</p> <p>PS8.4 Construction of accesses does not significantly alter the existing natural drainage pattern.</p> <p>PS8.5 Services are co-located within accesses where possible and desirable.</p> <p>PS8.6 Access impacts are controlled and minimised by a Construction Management Plan.</p> <p>PS8.7 Ongoing access impacts are controlled and minimised by a Maintenance Management Plan.</p>	<p>development application site.</p> <p>The report includes a high level identification of constraints and measures, which may be required to be implemented for each of the identified routes. It is recommended that horizontal and vertical geometry checks occur, in addition to checking the vehicle envelope.</p> <p>The Traffic Impact information has been assessed and it is acknowledged that these issues may not be able to be assessed at the moment as the details of construction schedule etc. is likely subject to change prior to construction occurs.</p> <p>It is considered that the detailed assessment of each route can be conditioned, as part of the Traffic Management Plan, in consultation with the relevant stakeholders (including DTMR, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council) to ensure any issues are resolved prior to construction.</p> <p>The Statement of Commitments forming part of the material supporting the development application identifies that a Construction Dust Management Plan will be prepared as part of the Construction Environmental Management Plan. The Traffic Management Plan will also in form the detailed access design and should be secured by condition.</p> <p>Given the above, it is considered that a safe, functional and convenient access can be provided.</p>
<p>S9 Wind Farm Construction Management</p> <p>Wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried</p>	<p>PS9.1 Construction and maintenance impacts are controlled and minimised to acceptable levels, times and site conditions by a Construction Management Plan and a Maintenance Management Plan.</p>	<p>The development application was accompanied by a Statement of Commitments. The Statement of Commitments identifies that a Construction Environmental Management Plan (CEMP) will be prepared to ensure that all</p>

<p>out at acceptable times.</p>	<p>PS9.2 On-site construction activities that cause noise or nuisance are limited to 6:00 am to 6:00 pm, Monday to Saturday, with no construction activities on Sundays and Public Holidays.</p> <p>PS9.3 Transportation of infrastructure and equipment to the site on identified council controlled roads is controlled and impacts minimised to acceptable levels and times by a Management Plan.</p> <p>PS9.4 Filling and excavation does not result in cut or fill batters with heights or depths of more than 4 metres.</p> <p>PS9.5 Excavated material is not retained in stockpiles of more than 50 cubic metres for longer than one (1) month.</p>	<p>potential impacts will be controlled and maintained at acceptable levels. The CEMP will contain a suite of sub-plans to describe detailed management procedures for key environmental issues. The following list is not exhaustive but is indicative of the types of plans to be prepared:</p> <ul style="list-style-type: none"> • Threatened Species Management Plan • Rehabilitation Plan • Traffic Management Plan • Bushfire Risk Management • Ecological Fire Management • Erosion and Sediment Control Plan • Stormwater management Plan <p>A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered appropriate to ensure compliance.</p> <p>Given the above it is considered that the proposed wind farm construction is managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>
<p>S10 Wind Farm Operational and Maintenance Management</p> <p>Wind farm management, maintenance and operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels and carried out at acceptable times.</p>	<p>PS10 The following controls are developed and implemented:</p> <ul style="list-style-type: none"> (i) management plans based on condition-pressure response adaptive management techniques; (ii) specified ongoing 	<p>The development application was accompanied by a Statement of Commitment which outlines an Operational Management Plan which will be developed to ensure that operations are managed to ensure that all associated impacts are controlled and maintained at acceptable levels. This will include</p>

Escalating, adaptive management techniques and ongoing monitoring programs will be used to achieve this.	monitoring programs; (iii) a Maintenance Management Plan	management techniques and ongoing monitoring programs that will be used. A condition requiring the Operational Management Plan to be submitted to and approved and the development to be carried out in accordance with the agreed plan prior to the commencement of development on site is considered reasonable. Given the above, it is considered that the operation and management of the proposed wind farm will be controlled.
S11 Signage Signage and advertising devices are limited in scale and confined to site and development interpretation.	PS11 No probable solution provided.	The development is capable of complying with this requirement and can be conditioned to be included in the Construction Environmental Management Plan. Given the above it is considered that signs and devices associated with the proposed wind farm will be controlled.
S12 Decommissioning & Rehabilitation Comprehensive site decommissioning and rehabilitation is carried out when the use is discontinued to substantially restore the site to its pre-development state.	PS12 The site is rehabilitated such that: (i) it is suitable for other uses compatible with the locality and the site's designations in the planning scheme; and (ii) the visual amenity of the site is restored; (iii) the sustainable ecological functioning of the site is maintained or improved; (iv) any agricultural function is restored; (v) wind farm infrastructure is removed from the site.	The applicant advises that the project economics are based on a wind farm design life of 30 years, after which the mount Emerald Wind Farm will either continue, upgrade the turbines or remove the infrastructure and decommission the site. Decommissioning the site would involve: <ul style="list-style-type: none">• dismantling the turbines;• removing towers and replacing soil over foundations;• removing all material from site for recycling;• where tracks are of no use to the land owner, the land reinstated;• underground and above ground cabling removed;• the substation and associated buildings

		would be removed. It is considered reasonable to include a condition requiring a site restoration plan. Given the above it is considered that comprehensive site decommissioning and rehabilitation will be carried out to restore the site to its pre-development state.
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The proposed wind farm development demonstrates compliance with the overall outcomes and specific outcomes of the Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms), and therefore complies with the Wind Farm Code.

The Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms) represents a shift in planning thought from the Wind Farm Code in TLPI 01/11, and is therefore given weight in this assessment, to the extent of any differences to the Wind Farm Code of the TLPI 01/11. It is therefore particularly relevant that the proposed wind farm development complies with the Wind Farm Code contained in the Mareeba Planning Scheme (Incorporating Amendment 01/11 – Wind Farms).

7 Conclusions and Recommendations

The following recommendation is based on the information contained within this report, including the technical advice received from various entities.

7.1 Summary of Assessment

Section 426 of SPA provides for the Minister to reassess and re-decide the application in the place of the assessment manager and pursuant to section 427 of SPA, until the Minister gives a decision, a concurrence agency is taken to be an advice agency.

Section 324 of SPA provides that in deciding the development application, the assessment manager must:

- (a) Approve all or part of the application
- (b) Approve all or part of the application subject to conditions decided by the assessment manager, or
- (c) Refuse the application.

Section 326(1)(b) of the SPA states:

“The assessment manager’s decision must not conflict with a relevant instrument unless –

- a) The conflict is necessary to ensure the decision complies with a State planning regulatory provision; or*
- b) There are sufficient grounds to justify the decision, despite the conflict; or*
- c) The conflict arises because of a conflict between-*
 - i. 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or*
 - ii. 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.”*

Whether the decision conflicts with a relevant instrument

The development application is subject to Code Assessment.

An assessment has been undertaken against the Mareeba Shire Planning Scheme (Incorporating Amendment No 1 of 2007) which was the Planning Scheme in effect at the time the development application was properly made on 30 March 2012.

The TLPI 01/11 (Wind Farms) commenced on 05 October 2011 and therefore was also in effect at the time the development application was properly made. The TLPI applies to the area that the Mareeba Shire Planning Scheme applies to and overrides its provisions to the extent of matters identified in Sections 4-6 (Definitions, Levels of assessment and Wind Farm Code).

The TLPI identifies that the relevant assessment criteria for development is the Wind Farm Code included in the TLPI, the Rural Zone Code, Filling and Excavation Code, and Car Parking Code and relevant overlay codes identified in the Mareeba Shire Planning Scheme (Natural and Cultural Heritage Features Overlay, Natural Disaster Bushfire Overlay and Airport and Aviation Facilities Overlay).

The Mareeba Shire Planning Scheme was amended to incorporate the Wind Farm Code (Amendment No 01/11-Wind Farms) and commenced on 30 September 2013. Whilst the level of assessment for wind farms changed to Impact Assessable the relevant Rural Zone Code, Filling and Excavation and Car Parking Code and stated Overlay codes remained the same as that contained within Amendment No 1 of 2007 of the Mareeba Planning Scheme.

There were some changes to the intent, overall outcomes, specific outcomes and probable solutions of the Wind Farm Code incorporated into the Amendment 01/11 – Wind Farms of the Mareeba Shire Planning Scheme as compared to the provisions of the Wind Farm Code contained within the TLPI 01/12 – Wind Farms (TLPI 01/12 rolled forward the same provisions contained within TLPI 01/11).

Section 317 of the SPA enables the assessment manager to give weight to a later planning instrument, code, law or policy. As such, this report undertakes an assessment against the planning framework in place at the time the application was properly made (as per s313 of the SPA) and has given weight to later planning instruments, codes, laws or policies, including the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

In accordance with section 313 of the SPA, an assessment has been undertaken against the following matters or things in effect at the time the development application was properly made on 30 March 2012, including:

- the applicable State planning regulatory provisions;
- the Far North Queensland Regional Plan 2009 – 2031;
- the applicable State planning policies;
- the Mareeba Shire Planning Scheme (incorporating Amendment No 1 of 2007); and
- Temporary Local Planning Instrument 01/2011 (Wind Farms).

In accordance with Section 317 of the SPA the assessment of the proposed wind farm development application has also given weight to the following planning instruments, codes, laws or policies that came into effect after the application was made:

- the State Planning Policy; and
- the Wind Farm Code contained within the Mareeba Shire Planning Scheme (Incorporating Amendment No 01/11 – Wind Farms).

The assessment against the above planning instruments, codes, laws and policies, to the extent relevant for the application requiring Code Assessment (refer **Chapter 6**), identifies that the proposed wind farm is considered, subject to appropriate conditions, to:

- comply with the applicable State regulatory provisions;
- comply with relevant provisions of the Far North Queensland Regional Plan 2009 – 2031;
- comply with the relevant SPP's applicable at the time the application was properly made;
- comply with Part E - Interim development assessment requirements of the SPP, which took effect subsequent to the application being properly made;
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Wind Farm Code of the TLPI 01/11, noting potential conflicts below;
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Rural Zone Code, Filling and Excavation Code, Car Parking Code, Natural and Cultural Heritage Features Overlay Code, Natural Disaster Bushfire Overlay Code and Airport and Aviation Facilities Overlay Code of the Mareeba Shire Planning as in effect at the time the application was properly made (Planning Scheme incorporating Amendment No 1 of 2007) and in effect at the time the decision stage commenced (Planning Scheme Incorporating Amendment 1/11 – Wind Farms), noting potential conflicts below; and
- comply with the purpose, Overall Outcomes and Specific Outcomes of the Wind Farm Code of the Mareeba Planning Scheme (Incorporating Amendment 1/11 – Wind Farms), which took effect subsequent to the application being properly made.

There are two occasions where a potential conflict may arise with the applicable codes. These are Overall Outcome e) of the Wind Farm Code in TLPI 01/11 and Specific Outcome S1 of the Rural Zone Code. To the extent that there is a conflict with these provisions, the development is supported by sufficient grounds stated below. No other potential conflicts have been identified, but to the extent that any may exist, the following sufficient grounds apply equally.

In terms of the non-compliance with Specific Outcome S1 of the Rural Zone Code, pursuant to s326(c)(ii) of the SPA, the potential conflict arises because of a conflict between two or more aspects of the Planning Scheme, being the Rural Zone Code and the Wind Farm Code (which has been given weight and reflects the earlier TLPI), in that the Wind Farm Code anticipates wind farms in rural areas with considerable turbine height notwithstanding the height provisions stated in Specific Outcome S1 of the Rural Zone Code. In respect of this conflict, the Wind Farm Code would best achieve the purpose of the Planning Scheme when read as a whole, pursuant to section 326(1)(c)(ii).

Sufficient grounds for the proposed development are as follows.

- The TLPI 01/11 is out of date due to the shift in planning thought evidenced by an amendment to the planning scheme (Amendment 01/11 – Wind Farms), which recognises the importance of wind farms and supports their development. The changes to terminology in the Wind Farm Codes between the TLPI 01/11 and Planning Scheme Amendment 01/11 – Wind Farms enable a more appropriate assessment of wind farms.
- The TLPI 01/11 is out of date due to its changing circumstances, in terms of ecological matters and terminology, in particular that 'Matters of State Environmental Significance' pursuant to the State Planning Policy represent the basis for current environmental assessment, with potential for management and mitigation of potential impacts.
- The Far North Queensland Regional Plan recognises wind farms as a legitimate land use, including in rural areas, and emphasis is placed on promoting renewable energy. The Far North Queensland Regional Plan is not appropriately reflected in the Mareeba Planning Scheme and is a higher-order planning instrument.
- The proposed wind farm development involves significant and robust economic state interests, as identified by Foresight Partners.
- The proposed wind farm development is expected to contribute to renewable power generation, with resultant economic, ecological and social benefits.

7.2 Ecological Issues

In addition to this ecological assessment against State and local regulatory provisions, the proposed development is the subject of a separate EPBC Act assessment and approvals process that will determine whether the development may proceed (with management mechanisms) or may not proceed having regard to the protection of Matters of National Environmental Significance (MNES).

It is noted within the submitted ecological supporting material, and more specifically the EIS, that there is potential for significant adverse impact upon the Spectacled Flying Fox and the Northern Quoll, both of which are protected by the EPBC Act and are subject to a separate approval process by the Commonwealth. The EIS contains mitigation measures and ordinarily this would form part of condition in order to ensure that these measures are implemented in the interests of the identified species.

While it is concluded that the more general consideration of significant effect on the environment and species protected by the Commonwealth and EPBC Act does not form part of this assessment, when considering the applicable planning framework, these are environmental matters relevant to the operation of the wind farm but subject to separate assessments.

For this reason the recommended conditions relating to the Northern Quoll and Spectacled Flying Fox have not been included in the recommended conditions package but are reproduced below for the Minister's consideration and inclusion if considered necessary.

Flying Fox Management	
<p>1. Submit for approval by the Council a Flying Fox Management Plan that includes:</p> <p>(a) a statement of the objectives and overall strategy for managing and mitigating any significant bird and bat strike arising from the wind farm operations.</p> <p>(b) details of an ongoing a monitoring program of at least 2 years (including a pre and post construction radar utilisation study monitoring program, and regular surveys at least every three months) that;</p> <p>(i) requires surveys to be undertaken during breeding and migratory seasons to ascertain:</p> <ul style="list-style-type: none"> - impacts upon Spectacled Flying Fox - the species, number, age and sex (if possible) and date of any flying strike - the number and species of flying fox's struck at lit versus unlit turbines - any seasonal and yearly variation in the number of flying fox strikes - whether further detailed investigations of any potential impacts on the flying fox are warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council. <p>(c) procedures for the reporting of any flying fox strikes to the responsible authority within seven days of becoming aware of any strike, identifying where possible whether the strike was at a lit or unlit turbine</p> <p>(d) information on the efficacy of searches for carcasses of birds and bats, and, where practicable, information on the rate of removal of carcasses by scavengers, so that correction factors can be determined to enable calculations of the total number of mortalities</p> <p>(e) procedures for the regular removal of carcasses likely to attract raptors to areas near turbines</p> <p>(f) procedures for periodic reporting, within agreed timeframes, of the findings of the monitoring to the responsible authority,</p>	<p>Prior to the commencement of site / operational / building work</p>

<p>(g) recommendations in relation to a mortality rate for specified species which would trigger the requirement for responsive mitigation measures to be undertaken by the operator of the wind farm, to the satisfaction of the responsible authority and</p> <p>(h) procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, including:</p> <p>(i) turbine operation management , including automatic shut-down of turbines using a bird and bat radar/supervisory control and data acquisition system (SCADA) in response to high risk criteria</p> <p>(j) on-site or off-site habitat enhancement (including management or improvement of habitat or breeding sites).</p> <p>The development shall be carried out in accordance with the approved flying fox management plan. All surveys must be submitted to the Council immediately upon completion.</p>	
<p>2. Where surveys undertaken pursuant to condition 1 identify substantial mortality of flying fox populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, as approved by the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>
<p>Northern Quoll Management</p>	
<p>3. Submit for approval by the Council a Northern Quoll Management Plan that includes:</p> <p>(a) A statement of the objectives and overall strategy for managing and mitigating any significant impacts upon the Northern Quoll arising from the wind farm operations.</p> <p>(b) A monitoring program of additional utilisation studies prior to construction;</p> <p>(c) requires surveys to be undertaken during breeding seasons to ascertain:</p> <ul style="list-style-type: none"> - the potential preferential use of ridgeline areas for maternal denning; - whether further detailed investigations of any potential impacts on the Northern Quoll are 	<p>Prior to the commencement of site / operational / building work, and as indicated</p>

<p>warranted. Any further detailed investigations required are to be undertaken in consultation with and to the satisfaction of the Council.</p> <p>(d) details of an ongoing a monitoring program (including study monitoring program prior to, during and following construction, and regular surveys at least every three months);</p> <p>(e) Procedures for developing measures, in consultation with the responsible authority, to offset any impacts detected through the monitoring program, include (but not limited to):</p> <p>(ii) Construction Phase Management Procedures:</p> <ul style="list-style-type: none"> - preconstruction trapping and radio collaring of animals in areas of proposed bulk earthworks; - daily trapping and relocation of trapped males and non lactating females; - Identification of maternal dens through release and tracking of trapped lactating females; - Implementation of spotter catcher methodologies during clearing; <p>The development shall be carried out in accordance with the approved northern quoll management plan and identified surveys and mitigation measures.</p>	
<p>4. Where surveys undertaken pursuant to condition 3 identify substantial mortality of the northern quoll populations, in the opinion of the Council, any further construction of the development shall cease until alternative management and operational measures are identified and implemented, to the satisfaction of the Council, to reduce potential for mortality rates.</p>	<p>To be maintained</p>

7.3 Recommendation

Overall, this assessment concludes that the proposed development is acceptable in terms of the relevant planning framework, as set out within this assessment report. On this basis, it is recommended that the Minister may approve to issue a development permit, subject to the conditions described in **Attachment A**.

ATTACHMENT A – RECOMMENDED CONDITIONS

CONDITIONS

Condition		Timing																														
General / Planning Requirements																																
<p>1. Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, subject to the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-173 Issue 1</td><td>Mount Emerald Wind Farm Site Area</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue 1</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Locations and Development Footprint</td><td>18 November 2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29 August 2014</td></tr> <tr> <td>Version 6.0</td><td>Management of Easement Co-Use Requests Guideline</td><td>September 2010</td></tr> <tr> <td>Version 4</td><td>Mount Emerald Wind Farm Offset Plan prepared by Ecofund</td><td>May 2014</td></tr> </tbody> </table>		Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-173 Issue 1	Mount Emerald Wind Farm Site Area	18 November 2013	PR100246-170 Issue 1	Mount Emerald Wind Farm Turbine Location and Development Footprint	18 November 2013	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Locations and Development Footprint	18 November 2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29 August 2014	Version 6.0	Management of Easement Co-Use Requests Guideline	September 2010	Version 4	Mount Emerald Wind Farm Offset Plan prepared by Ecofund	May 2014	While site / operational / building work is occurring and then to be maintained
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Micro-siting of Turbines																																
<p>2. Subject to condition 3, micro-siting of turbines (as defined in this condition) is permitted with the approval of the Council.</p> <p>Micro-siting of turbines means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plans PR100246-170 Issue 1 and PR100246-170 Issue A.</p>		While site / operational / building work is occurring and then to be maintained																														

<p>3. Where micro-siting of turbine(s) is proposed, submit to the Council for approval:</p> <p>(a) details of the proposed micro-siting of the turbine(s), including plans identifying the precise location of each turbine; and</p> <p>(b) supporting evidence that the micro-siting of turbines will not give rise to an adverse change to assessed landscape, vegetation, cultural heritage, visual amenity, shadow flicker, noise, fire risk or aviation impacts when compared to the development shown on the approved plans.</p> <p>The Council will not approve the micro-siting of turbines unless the Council is satisfied that part (b) of this Condition is appropriately addressed.</p> <p>The development shall be carried out in accordance with the approved details and plans of the proposed micro-siting of turbines.</p>	<p>Prior to commencement of site / operational / building work</p>
<p>Specifications</p>	
<p>4. The wind farm must meet the following requirements:</p> <p>(a) The wind farm must comprise of no more than 63 turbines;</p> <p>(b) The overall maximum height of the turbines (to the tip of the rotor blade when vertical) must not exceed 1179.5 metres AHD;</p> <p>(c) The hub height of any turbine shall not exceed 90 metres;</p> <p>(d) The colours and finishes of all buildings and works (including turbines) must minimise the visual impact of the development on the surrounding area;</p> <p>(e) The turbines and blades must be constructed from non-reflective materials;</p> <p>(f) All cabling must be provided underground, except where crossing water courses or in environmentally sensitive locations.</p> <p>Submit to the Council for approval, further details of the turbines and buildings to be constructed, including details of the turbine height; turbine and building colours, materials and finishes; and cabling, roadways and other works.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>

<p>5. Operation and Maintenance Depot</p> <p>(a) Submit to the Council for approval details of the operation and maintenance depot's location, design and appearance.</p> <p>(b) Construct the operation and maintenance depot in accordance with the approved details pursuant to part a.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
<p>Noise – Performance Requirement</p>	
<p>6. The operation of the wind farm must comply with the following requirements.</p> <p>(a) The operator must ensure that at any wind speed, wind farm sound levels at noise sensitive locations do not exceed a noise limit of 40dB(A) LA90 ,10 min, provided that where the circumstances specified in condition 7(b) apply, the noise limit of 40dB LA90,10 min will be modified as specified in condition 6(b);</p> <p>(b) At the specified assessment positions referred to below, the noise limit of 40dB LA90 ,10 min referred to in condition 6(a) will be modified in the following way when the following circumstances exist:</p> <p>(i) where the background sound level is greater than 35 dB LA90 ,10 min the noise limit will be the background sound level LA90 ,10 min plus 5 dB;</p> <p>(ii) where special audible characteristics, including tonality, impulsive sound or amplitude modulation occur, the noise limit will be modified by applying a penalty of up to + 6 dB L90;</p> <p>(iii) where wind farm noise levels are 8 dB(A) or more above the background noise levels at any wind speed between 6 and 12 m/s, for specific locations, a reduced noise limit of 35 dB LA90 ,10 min applies.</p> <p><i>Guidance Note: Where the relevant noise criteria specified in this condition cannot be met at any sensitive receiver, turbine(s) output will be reduced in order to meet the applicable noise criteria.</i></p>	<p>To be maintained</p>
<p>7. Noise Compliance Assessment</p> <p>Acoustic compliance reports must be prepared by a suitability qualified and experienced independent acoustic engineer to demonstrate compliance with condition 6.</p> <p>The following requirements apply for the acoustic compliance</p>	<p>Prior to commencement of site / operational / building work, and as indicated</p>

<p>reports.</p> <ul style="list-style-type: none"> (i) Identify on a map all noise assessment positions. (ii) A minimum of 2000 data points or two weeks (whichever is the higher) of valid data must be collected to determine both background noise levels and wind farm operational noise levels to demonstrate compliance with condition 6(b) (iii) above. Data should be collected during periods of variable wind conditions (speed and direction) and include the worst case scenario as adopted for the noise assessment. <p>(a) Submit to the Council for approval an initial acoustic compliance report following completion of the first turbine, and at six monthly intervals thereafter until full operation (following completion of construction and commissioning).</p> <p>(b) Submit to the Council for approval a final compliance report after a 12 month period following full operation of the facility.</p>	
<p>8. Noise Complaints Management and Evaluation</p> <p>All complaints must be managed following procedures set out in a noise complaints management plan.</p> <p>(a) Submit to the Council for approval a noise complaints management plan. The plan must include, but is not limited to:</p> <ul style="list-style-type: none"> (i) how contact details will be communicated to the public; (ii) a toll free telephone number and email contact for complaints and queries; (iii) details of the appropriate council contact telephone number and email address (where available); (iv) a table outlining complaint information for each complaint received, including: <ul style="list-style-type: none"> a. the complainant's name; b. any applicable property reference number if connected to a background testing location; c. the complainant's address; d. a receipt number for each complaint which is to be 	<ul style="list-style-type: none"> (a) Following facility commissioning (b) On an annual basis (c) To be maintained

<p>communicated to the complainant;</p> <p>e. the time, prevailing conditions and description of the complainant's concerns including the potential incidence of special audible characteristics;</p> <p>f. the processes of investigation to resolve the complaint.</p> <p>(b) Submit to council for approval a report including a reference map of complaint locations, and outlining complaints, investigation and remediation actions</p> <p>(c) The register and complaints response process shall continue for the duration of the operation of the wind farm and must be made available to the Council on request.</p>	
Blade Shadow Flicker	
9. The measured shadow flicker from the wind farm must not exceed 10 hours per annum at any existing dwelling.	To be maintained
<p>10. Submit to the Council for approval a detailed shadow flicker complaint evaluation and response plan.</p> <p>The plan must include the following elements:</p> <p>(a) a toll free complaint telephone service;</p> <p>(b) a sign on site advising of the complaints telephone number;</p> <p>(c) procedures for assessing any alleged breach of condition 9.</p> <p>The operator of the wind farm must implement and comply with the approved shadow flicker complaint evaluation and response plan.</p>	Prior to commencement of operation of first turbine, and to be maintained
Blade Glint, Electromagnetic Radiation, Television and Radio Reception and Interference	
<p>11. Undertake a pre-construction survey to determine television and radio reception strength in the area within 5 km of the site and in which dwellings are located as at [insert date of approval], and submit for approval by the Council.</p> <p>The pre-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of</p>	Prior to commencement of site / operational / building work, and as indicated

<p>testing must be determined by an independent television and radio monitoring specialist, and must be submitted for approval by the Council.</p> <p>(a) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any dwelling within 5 km of the site which existed at [insert date of approval], a post-construction survey must be carried out at the dwelling.</p> <p>The post-construction survey must include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by an independent television and radio monitoring specialist.</p> <p>(b) If the post-construction survey establishes any increase in interference to reception as a result of the wind farm, the operator of the wind farm must undertake measures to mitigate the interference and return the affected reception to pre-construction quality. Submit for approval by the Council evidence that the appropriate measures have been completed.</p>	
Access Tracks and Roads	
<p>12. Access tracks and roads within the site must be sited and designed to minimise impacts on overland flows, soil erosion, the landscape value of the site and environmentally sensitive areas.</p> <p>(a) Submit for approval by the Council detailed design of the access tracks and road including (but not limited to) layout, location, dimensions (including cross sections), and details of vertical road grading.</p> <p>(b) Carry out the development in accordance with part (a) of this condition.</p>	<p>Prior to commencement of site / operational / building work, and to be maintained</p>
Lighting (including aviation obstacle lighting)	
<p>13. External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p>	<p>Prior to commencement of use, and to be</p>

<p>(b) aviation obstacle lighting in accordance with condition 14;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Submit for approval by the relevant authority the details of all external lighting, including location and intensity.</p>	<p>maintained</p>
<p>14. Where required, aviation obstacle lighting must meet the following requirements:</p> <p>(a) for each lit turbine, the lighting must consist of a pair of lights mounted above the nacelle so that at least one light is visible from an aircraft approaching from any direction;</p> <p>(b) each light must be a red, medium intensity, flashing light as required by the Civil Aviation Safety Authority (CASA);</p> <p>(c) each light must be shielded so as to restrict the vertical spread of light to not more than 3.0 degrees and light spread below the horizontal to not more than 1.0 degree;</p> <p>(d) all lights must flash in unison;</p> <p>(e) the duration of the light flash must be the minimum period recommended by CASA and the duration of the period between the flashes must be the maximum period recommended by CASA;</p> <p>(f) the lights are to switch on and off during ambient lighting conditions as recommended by CASA.</p>	<p>Prior to commencement of use, and to be maintained</p>
<p>15. Lighting maintenance plan</p> <p>(a) Prepare for approval by the Council a lighting maintenance plan. The lighting maintenance plan must:</p> <p>(i) identify the mechanisms for ensuring the lighting associated with Conditions 13 and 14 is maintained to the satisfaction of those Conditions; and</p> <p>(ii) identify the timeframes for regular review of lighting and for regular maintenance of lighting.</p> <p>(b) Carry out the development in accordance with the approved lighting maintenance plan specified in part (a) of this condition</p>	<p>Prior to commencement of use, and to be maintained</p>

Aviation Safety Clearances	
16. Pursuant to Conditions 2 and 3, submit to CASA and the Department of Defence for final approval the details of any proposed micro-siting of the turbine(s).	Prior to the commencement of site / operational / building work
<p>17. Copies of the final development plans approved pursuant to Conditions 2, 3 and 16 must be provided to the following entities, to enable details of the wind farm to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> (a) the Civil Aviation Safety Authority; (b) the Department of Defence (RAAF Aeronautical Information Service); (c) Airservices Australia; (d) any aerodrome operator within 15 km of the outside property boundaries of the site; (e) the Aerial Agriculture Association of Australia; (f) any organisation responsible for providing air ambulance services in the area. 	Prior to the commencement of site / operational / building work
Traffic Management	
<p>18. Submit for approval by the Council, a construction traffic management plan prepared in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The construction traffic management plan must relate to public roads in the vicinity of the wind farm, and must include:</p> <ul style="list-style-type: none"> (a) an existing conditions survey of Hansen Road ,Springmount Road and Kippen Drive (pre-construction or construction purposes) including details of the suitability, design, condition and construction standard of the relevant public roads; (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and 	Prior to the commencement of site / operational / building work, and as indicated

<p>located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c) the designation of appropriate pre-construction, construction and transport vehicle routes to and from the site;</p> <p>(d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <ul style="list-style-type: none"> (i) detailed engineering plans showing the required works; (ii) the timing of when the works are to be undertaken; (iii) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; <p>(f) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads, In general accordance with the following points suggested by Jacobs in page 9 of “Technical Note 2 – Traffic Impact Assessment Engineering Response”:</p> <ul style="list-style-type: none"> (i) the nominated construction contractor will provide a shuttle bus services for construction workers arriving and departing the project site; (ii) the shuttle bus will service the key townships where the construction workers live; <p>(g) a program to rehabilitate existing public roads of Hansen Road, Springmount Road and Kippen Drive to the condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>The development must be carried out in accordance with the approved construction traffic management plan.</p>	
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Environmental Management Plans

19. Submit for approval by the Council an environmental management plan.

The environmental management plan is required to be prepared and approved for the wind farm to ensure that environmental matters and impacts are addressed. The environmental management plan must include the following components (which are further detailed in Conditions 20 to 33):

- a construction and work site operational management plan
- a sediment, erosion and storm water management plan
- a hydrocarbon and hazardous substances plan
- a bushfire risk management plan and emergency evacuation plan
- a threatened species management plan
- a weed and pest management plan
- a rehabilitation plan
- a habitat clearing and management plan
- an ecological fire management plan
- a cultural heritage management plan
- an environmental management plan training program
- an environmental management plan reporting program

The environmental management plan must also address implementation and periodic review

The environmental management plan:

- (a) must be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within the RPS Report dated March 2012;
- (b) must be prepared in consultation with the Council specified in conditions 20 to 33 or any other agency as directed by the Council;
- (c) may be prepared in sections or stages;

Prior to the commencement of site / operational / building work

<p>(d) must meet the requirements of conditions 20 to 33.</p> <p>The development must be carried out in accordance with the approved environmental management plan.</p>	
<p>Construction and Work Site Operational Management Plan</p> <p>20. The construction and work site operational management plan must include:</p> <ul style="list-style-type: none"> (a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks; (b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control; (c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable; (d) procedures for managing noise emissions from construction-related activities; (e) appropriate sanitary facilities to be provided for construction and maintenance staff; (f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation; (g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse; (h) measures for dust mitigation, control and monitoring dust gauges; (i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation; (j) procedures for covering trenches and holes at night, and filling 	<p>Prior to the commencement of site / operational / building work</p>

<p>trenches as soon as practical after excavation, to protect native fauna;</p> <p>(k) the removal of works, buildings and staging areas on completion of the construction phase of the project.</p>	
<p>Sediment, erosion and storm water management plan</p> <p>21. The sediment, erosion and storm water management plan must include:</p> <ul style="list-style-type: none"> (a) identification of all construction and operational processes that could potentially lead to water contamination; (b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end: <ul style="list-style-type: none"> (i) all land disturbances must be confined to a minimum practical working area; (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence; (iii) stockpiles must be located away from drainage lines; (c) a sediment and erosion control plan for construction and operation; (d) a stormwater management plan, prepared in accordance with the Queensland Urban Drainage Manual, addressing matters of stormwater quantity and quality during construction and operation, and with specific reference to waterway crossings and stormwater outlets for all turbine pads and access tracks ; (e) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas; (f) procedures for waste water discharge management; (g) a process and plan for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes; (h) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters; (i) agreed program and appropriate capacity for annual inspection and 	<p>Prior to the commencement of site / operational / building work</p>

<p>regular maintenance of any on-site wastewater management system;</p> <p>(j) a program of inspection and remediation of localised erosion within a specified response time.</p>	
<p>Hydrocarbon and hazardous substances plan</p> <p>22. The hydrocarbon and hazardous substances plan must include:</p> <p>(a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;</p> <p>(b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Bushfire risk management plan and emergency evacuation plan</p> <p>23. The bushfire risk management plan and emergency evacuation plan must include:</p> <p>(a) criteria for the provision of static water supply tanks solely for fire fighting purposes, including minimum capacities, appropriate connections and signage;</p> <p>(b) procedures for vegetation management, fuel control and the provision of fire fighting equipment during declared fire danger periods;</p> <p>(c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;</p> <p>(d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Threatened species management plan</p> <p>24. The threatened species management plan must include:</p> <p>(a) measures to minimise the impacts on threatened species of flora and fauna, including (but not limited to) identification and marking of exclusion zones.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Weed and pest management plan</p> <p>25. The weed and pest management plan must include:</p>	<p>Prior to the commencement of</p>

<p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>	<p>site / operational / building work</p>
<p>Rehabilitation plan</p> <p>26. The rehabilitation must include:</p> <p>(a) guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Habitat clearing and management plan</p> <p>27. The habitat clearing and management plan must include:</p> <p>(a) management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Ecological fire management plan</p> <p>28. The ecological fire management plan must include:</p> <p>(a) management strategies to be implemented to in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Cultural heritage management plan</p> <p>29. The cultural heritage management plan must include:</p> <p>(a) the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan training program</p> <p>30. The environmental management plan must include a training program for construction workers and permanent employees or contractors at the wind farm site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
<p>Environmental management plan reporting program</p> <p>31. The environmental management plan must include a program for reporting environmental incidents, including:</p> <p>(a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;</p> <p>(b) identification of the person to whom reports of environmental</p>	<p>Prior to the commencement of site / operational / building work</p>

incidents, non-conformances and complaints should be made.	
<p>Implementation timetable</p> <p>32. The environmental management plan must include a timetable for implementation of all programs and works referred to in conditions 20 to 31 above. Thereafter the development shall be carried out in accordance with the approved environmental management plans.</p>	Prior to the commencement of site / operational / building work
<p>Review of the environmental management plan</p> <p>33. The environmental management plan must be reviewed and if necessary amended in consultation with the Council and other relevant authorities as directed by Council every five years, to reflect operational experience and changes in environmental management standards and techniques.</p> <p>(a) Submit for approval (re-endorsement) by Council the amended environmental management plan. Once re-endorsed, the amended environmental management plan will take the place of the earlier environmental management plan.</p>	As indicated
Vegetation Clearing and Offsets	
<p>34. Submit for approval by Council Significant Species Management Plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the Qld Nature Conservation Act that:</p> <p>(a) are currently known to occur within or periodically utilise the project site, including but not limited to, the Petrogale mareeba (Mareeba Rock-wallaby); or</p> <p>(b) are detected within the project site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>(c) are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>Each Significant Species Management Plans must set out key impact management strategies including:</p> <p>(a) further baseline programs;</p> <p>(b) management targets;</p> <p>(c) design, construction and operational impact avoidance and</p>	Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat

<p>mitigation measures and protocols;</p> <p>(d) quantitative performance indicators;</p> <p>(e) monitoring and reporting regimes;</p> <p>(f) corrective actions;</p> <p>(g) timeframes for identified actions; and</p> <p>(h) applicant and stakeholder responsibilities.</p>	
<p>35. Submit for approval by Council an Environmental Offset Plan. The Environmental Offset Plan must be:</p> <p>(a) in general accordance with the approved Mount Emerald Wind Farm Offset Plan; and</p> <p>(b) consistent with the requirements of the <i>Environmental Offsets Act 2014</i>.</p>	<p>Prior to the commencement of any works involving the clearing of native vegetation and wildlife habitat</p>
Landscaping	
<p>36. On-site landscaping plan</p> <p>(c) Submit for approval by the Council an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>The on-site landscaping plan must include:</p> <p>(i) landscaping to screen the substation, switchyard and associated buildings (other than the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(d) Carry out the development in accordance with the approved on-site landscaping plan specified in part (a) of this condition, and maintain the development in accordance with the approved on-site landscaping plan.</p>	<p>Prior to the commencement of site / operational / building work</p>
Site Security	
<p>37. All access points to the site and to individual turbines must be locked when not in use and made inaccessible to the general public.</p>	<p>To be maintained</p>

38. All electrical equipment, spare parts and other equipment and materials associated with the wind farm must be located in screened, locked storage areas that are inaccessible to the public.	To be maintained
39. Public safety warning signs must be located on all towers.	To be maintained
Decommissioning	
<p>40. Decommissioning and Rehabilitation Plan</p> <p>(a) The operator of the wind farm must submit for approval by the Council, a decommissioning and rehabilitation plan.</p> <p>The plan must require the operator of the wind farm to do the following where any or all turbines have permanently ceased to generate electricity:</p> <ul style="list-style-type: none"> (i) notify the Council in writing of the turbine(s) ceasing operation. Such notification must be given no later than two months after the turbine(s) cease operation (ii) undertake the following to the satisfaction of the Council within such timeframe as may be specified by the Council: <ul style="list-style-type: none"> a. remove all above ground non-operational equipment; b. remove and clean up any residual contamination; c. rehabilitate all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbine(s), if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; d. submit a decommissioning traffic management plan to the Council and, when approved by the Council, implement that plan; e. submit to the Council a post-decommissioning revegetation management plan, including a timetable of works, when approved by the Council, implement that plan. <p>(b) Undertake all decommissioning and rehabilitation works in accordance with part (a) of this condition.</p>	Within six months after completion of construction, and as indicated
Electrical Infrastructure	
41. Comply with easement terms and conditions as per Easement Dealing 701758510 and 713030213.	To be maintained
42. Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure	To be maintained

will have to be performed and must be submitted to Powerlink for approval.	
43. Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.	To be maintained
44. Lightning and Earthing System (a) Submit for approval by the Council details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines. The lightning and earthing system must be prepared by a suitably qualified expert. (b) Carry out the development in accordance with the approved lightning and earthing system.	(a) Prior to the commencement of site / operational / building work (b) To be maintained

GENERAL ADVICE

(a) *This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate submission, assessment and approval by Powerlink.*

(b) *Development shall comply with the Electrical Safety Act 2002 including any Code of Practice under the Act and the Electrical safety Regulation 2002 including any safety exclusion zones defined in the Regulation.*

In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.

Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the Electrical Safety Act 2002 to seek advice from Powerlink.

(c) *In the event of identification of an unexplored ordnance (UXO), the following procedure is recommended:*

- *Do not touch or disturb the object;*
- *Take action, where appropriate, to prevent it being disturbed by another person;*
- *Note its approximate dimensions and general appearance;*
- *Note the route to its location; and*
- *Advise the Police as soon as possible.*

DILGP – BRIEF FOR DECISION

18 DEC 2015

Date: 18 December 2015

SUBJECT: Request to change a development approval subject of a previous ministerial call in - Mount Emerald Wind Farm, Arriga (Mareeba Shire Council)

NOTED or APPROVED/NOT APPROVED

Hon. Jackie Trad MP

Deputy Premier, Minister for Infrastructure, Local Government and Planning and Minister for Trade and Investment

Date: 18/12/15

RECOMMENDATIONS:

That you:

- **note** that in a letter to you dated 25 August 2015, and as amended on 10, 11, 14, 15 and 18 December 2015, Mount Emerald Wind Farm Pty Ltd c/- Ratch-Australia Corporation (the applicant), requested a permissible change (the request) to a previous ministerial call in for the Mount Emerald Wind Farm, at Springmount Road and Kippin Drive, Arriga (**Attachment 1**)
- **consider** the attached Planning Assessment Report, prepared by the Department of Infrastructure, Local Government and Planning (the Department), which includes the matters you must have regard to when making your decision (**Attachment 2**)
- **agree** with the Department's recommendation that the request be approved
- **approve, date and sign** the attached decision notice (**Attachment 3**)
- **note** that a tracked changes copy of the conditions package (**Attachment 4**) will be provided to the applicant for information only
- **sign** the attached letters to the relevant entities advising them of your decision (**Attachment 5**) and enclose a copy of the notice of decision
- **note** that the date by which you have to decide the request is **24 December 2015** in accordance with section 375(5) of the *Sustainable Planning Act 2009* (the SPA).

BACKGROUND:

On 11 June 2014, the then Deputy Premier, Minister for State Development, Infrastructure and Planning exercised his ministerial powers to call in the development application for the proposed Mount Emerald Wind Farm development at Arriga on the Atherton Tablelands. On 24 April 2015, you approved the development application, subject to conditions.

On 25 August 2015, the applicant made the original request to you under section 369 of the SPA. It was deemed properly made on 31 August 2015, following the payment of the applicable fee. The applicant subsequently amended the request on 10, 11, 14, 15 and 18 December 2015. The request, which includes both the original request and the applicant's requested changes (**Attachment 1**), seeks to change a number of the conditions of the decision notice dated 24 April 2015.

Parts of the request relate to aspects included in the draft wind farm State code and the draft wind farm State code planning guideline (the draft code and guideline), which underwent public consultation for a period of eight weeks, closing on 11 December 2015. Although the draft code and guideline is not a relevant instrument in the assessment of the request, on 9 October 2015 you extended the decision period for the request until **24 December 2015**, with the applicant's agreement, so that you could have regard to submissions received about the draft code and guideline in the assessment of the request.

Author details: Daniela Walker Position: Senior Planner Telephone: 3452 7692	Endorsed by: Adam Yem Position: A/Executive Director Telephone: 3452 7679 Date: as per Source approval	Endorsed by: Greg Chemello DDG: Planning Group Telephone: 3452 7686 Date: as per Source approval	Endorsed by: Frankie Carroll Director-General Telephone: 3452 6767 Date: ____/____/____
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KEY ISSUES:

The request proposes changes to:

- conditions 3, 4, 5, 6 and 11 – to reference existing ‘and approved’ dwellings and sensitive land uses ‘at the date of this approval.’
- condition 4, to:
 - include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
 - delete reference to $L_{A90,10 \text{ minutes}}$ measurements from the 37dB(A) for the outdoor day-time equivalent noise level
 - require the assessment of equivalent noise levels at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades
 - include reference to the measuring of background noise or operational noise for the operation, to be in accordance with the *Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators* (AS4959-2010)
 - provide an option to utilise an alternative standard or guideline to AS4959-2010 for the assessment of Special Audible Characteristics, with reasons for the selection of the alternative to be provided
 - include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator.
- condition 5, to:
 - include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
 - require the assessment of equivalent noise levels at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades; and
 - include reference to the measuring of operational noise for the operation, to be in accordance with the AS4959-2010
 - include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator.
- condition 6, to:
 - replace acoustic ‘engineer’ with acoustic ‘consultant’
 - include requirements for noise modelling to include assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation
 - require the submission of a compliance noise assessment report within 12 months of the completion of construction and then to be maintained, which demonstrates that the wind farm meets the noise levels specified in conditions 4 and 5.
- condition 7, to amend the modelling of the shadow flicker to ‘30 hours per annum and 30 minutes per day.’
- condition 12, to amend an administrative error in the numbering within the condition.
- condition 14, to amend the timing for the submission of the Community Engagement Strategy from three months prior to ‘consultation’ to five months prior to ‘construction.’
- amend the advice statement in relation to the Significant Species Management Plan to remove specific reference to the Mareeba Rock Wallaby.

The Department has undertaken an assessment of the requested changes and considers they constitute a permissible change. The matters you must have regard to when making your decision, and a detailed assessment of the requested changes, are provided in the Planning Assessment Report (**Attachment 2**). Based on a preliminary review of the submissions to the draft code and guideline and without prejudice to the final decision on the draft code and guideline, the Department considers that the request is consistent with the intent of the draft code and guideline.

It is recommended that you approve the request and amend the conditions package as detailed in **Attachment 3**. The approved changes are shown in bold in the decision notice for the original application dated 24 April 2015, in accordance with section 376(2)(c) of the SPA. A tracked changes copy of the conditions package (**Attachment 4**) will be provided to the applicant for information only.

Under the SPA you, as the responsible entity, must provide written notice of your decision to the person who made the request, Mareeba Shire Council (the Council) and the Department in its capacity as the State Assessment and Referral Agency (SARA).

ELECTION COMMITMENT:

GEC108 - provide a stable and welcoming regulatory environment to encourage private sector investment in renewable energy.

RESULTS OF CONSULTATION:

In accordance with the requirements of the SPA, the request was referred to the Council and SARA as relevant entities for their comment. Both relevant entity responses were considered in the Department's assessment and are included as Schedule 6 and Schedule 7 to **Attachment 2**.

RIGHT TO INFORMATION: Contents/attachments suitable for publication? ☒ Yes ☐ No

MEDIA OPPORTUNITY: Is there a media opportunity for the DP's Office? ☐ Yes ☒ No

Attachment 1 to MBN15/1519

The original request, dated 25 August 2015;
and amended on 10, 11, 14, 15 and
18 December 2015

Attachment 2 –

Planning Assessment Report

Request to Change Development Approval – Mount Emerald Wind Farm

Springmount Road and Kippin Drive, Arriga

December 2015

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- Schedule 1 – The request for a permissible change
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- Schedule 4 – Acoustic advice from Savery and Associates Pty Ltd
- Schedule 5 – The Department's assessment of the request
- Schedule 6 – Mareeba Shire Council relevant entity response
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1.0 Introduction

This assessment report has been prepared to assist you, the Deputy Premier, Minister for Infrastructure, Local Government and Planning and Minister for Trade and Investment, in assessing a request made by Mount Emerald Wind Farm Pty Ltd c/- Ratch-Australia Corporation (the applicant), to change a development approval (the request) under section 369 of the *Sustainable Planning Act 2009* (the SPA). The original request was made on 25 August 2015 and deemed properly made on 31 August 2015, following the payment of the applicable fee, and amended by the applicant on 10, 11, 14, 15 and 16 [REDACTED]

The request relates to the development [REDACTED] 2015, subject to conditions, for a 63 turbine wind farm and ancillary infrastructure located at Arriga, in the Mareeba Shire Council area.

The final request seeks to amend some conditions of the approval within the original decision notice (MBN14/753), summarised as follows:

- conditions 3, 4, 5, 6 and 11 – to reference existing ‘and approved’ dwellings and sensitive land uses ‘at the date of this approval.’
- condition 4, to:
 - include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
 - delete reference to $L_{A90,10 \text{ minutes}}$ measurements from the 37dB(A) for the outdoor day-time equivalent noise level
 - require the assessment of equivalent noise levels at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades
 - include reference to the measuring of background noise or operational noise for the operation, to be in accordance with the *Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators* (AS4959-2010)
 - provide an option to utilise an alternative standard or guideline to AS4959-2010 for the assessment of Special Audible Characteristics, with reasons for the selection of the alternative to be provided
 - include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator.
- condition 5, to:
 - include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
 - require the assessment of equivalent noise levels at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades; and
 - include reference to the measuring of operational noise for the operation, to be in accordance with the AS4959-2010
 - include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator.
- condition 6, to:
 - replace acoustic ‘engineer’ with acoustic ‘consultant’
 - include requirements for noise modelling to include assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation
 - require the submission of a compliance noise assessment report within 12 months of the completion of construction and then to be maintained, which

- demonstrates that the wind farm meets the noise levels specified in conditions 4 and 5.
- condition 7, to amend the modelling of the shadow flicker to '30 hours per annum and 30 minutes per day.'
 - Condition 12, to amend an administrative error in the numbering within the condition
 - condition 14, to amend the timing for the submission of the Community Engagement Strategy from three months prior to 'consultation' to five months prior to 'construction.'
 - amend the advice statement [REDACTED]
 - the Significant Species Management Plan reference to the Mareeba Rock Wallaby [REDACTED]

Under section 369(1)(b) of the SPA, you are the responsible entity for the request. As the responsible entity, you must determine if the request can be considered a 'permissible change'. Based on your determination and assessment, you must decide to approve the request (with or without conditions) or refuse the request under section 375 of the SPA.

Pursuant to section 375(5) of the SPA, the Department of Infrastructure, Local Government and Planning (the Department) requested and obtained written agreement from the applicant to extend the decision stage to 24 December 2015. Therefore, as the responsible entity, you must decide the request on or before **24 December 2015**.

2.0 Particulars of the development

2.1 Application details

Our reference number:	MC15/4675
Name of applicant:	Mount Emerald Wind Farm Pty Ltd
Contact details:	c/- Ratch-Australia Corporation <div>Refused under section 47(3)(b) of the RTI Act.</div>
Ministerial call in reference:	MBN14/753
Date of ministerial call in:	11 June 2014
Date of ministerial decision on call in:	24 April 2015
Development approved by the Planning Minister:	Development permit for a material change of use for a wind farm comprising a maximum 63 turbines
Local Government Area:	Mareeba Shire Council
Applicable planning scheme at time of lodgement of original development application:	Mareeba Shire Planning Scheme 2004, Version 1/2007
Level of Assessment:	Code assessable
Date the request for the change to the development approval was properly made:	31 August 2015

2.2 Site details

Current owner of property:	Port Bajool Pty Ltd
Real property description:	Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Address:	Springmount Road and Kippin Drive, Arriga
Site area:	2,422 hectares (with an additional 2,000m ² identified as area to be opened as road)

3.0 Background

3.1 Site location and characteristics

The site of the approved Mount Emerald Wind Farm is located at Springmount Road and Kippin Drive, Arriga. The town centre of Mareeba is situated approximately 16.5 kilometres to the north of the site and Atherton approximately 11.5 kilometres south east of the site (**Figure 1**).

The site is zoned rural and is a privately owned plateau elevated 300 metres above the surrounding Tablelands plains. It is surrounded by a range of land uses, including the Springmount Waste Management Facility, a peanut shell storage facility, rural farm worker accommodation, the Tablelands sugar mill, an extractive industry, a nursery, Lotus Glen Prison, Mt Uncle Distillery and a number of traditional farming operations.

The site is more properly described as Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871. The site has a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

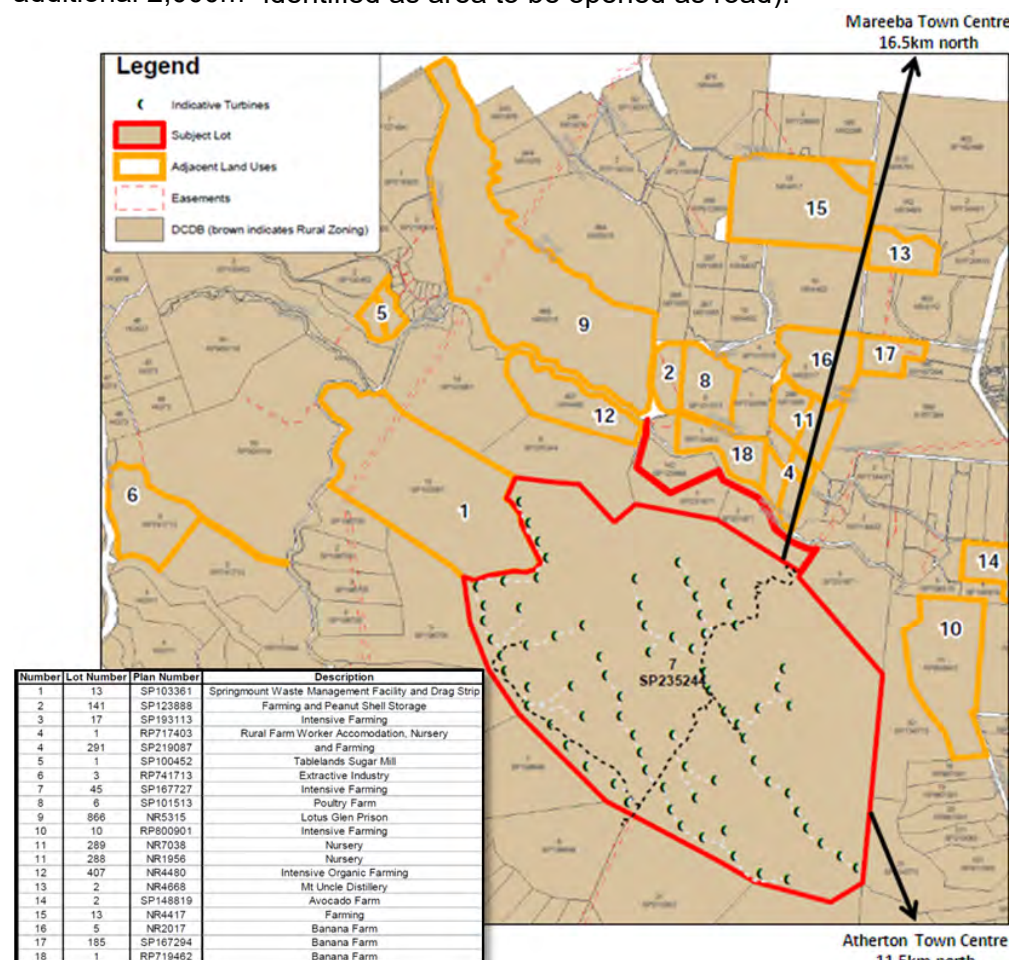


Figure 1: Site context and surrounding land uses

3.2 History of development

3.2.1 Development application

On 15 August 2011, RPS, on behalf of Mount Emerald Wind Farm Pty Ltd, lodged a code assessable development application with the Tablelands Regional Council for a wind farm, located at Springmount Road and Kippin Drive, Arriga. On 15 March 2012, the application was deemed 'properly made' after the applicant provided additional material.

On 1 January 2014, Tablelands Regional Council merged with the [REDACTED] Mareeba Shire Council. During the [REDACTED] Council) became the original assessment manager for the application.

The original application sought a development permit for a material change of use for a wind farm, comprising a maximum of 75 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation.

On 3 April 2012, the development application was referred to the then Department of Environment and Resource Management (DERM) as a concurrence agency and to Powerlink as an advice agency. Following machinery of Government changes, the referral triggers to the then DERM were transferred to the Department of Environment and Heritage Protection (contaminated land, material change of use in a wetland management area) and to the Department of Natural Resources and Mines (clearing vegetation).

The Council did not make a decision prior to the development application being called in by the then Deputy Premier, Minister for State Development, Infrastructure and Planning (the then Planning Minister).

3.2.2 Ministerial call in

On 10 September 2012, Mr Don Sheppard, a local constituent and the Co-Vice President of the Atherton Tablelands Chamber of Commerce, wrote to the then Planning Minister requesting that the application be called in. However, the then Planning Minister decided not to call in the development application at that time.

On 28 January 2014, Councillor Tom Gilmore, Mayor of Mareeba Shire Council, wrote to the then Planning Minister requesting that the development application be called in. On 10 April 2014, the then Planning Minister issued a proposed call in notice, seeking representations from affected parties. On 11 June 2014, after considering the representations received, the development application was called in. A copy of the call in notice is included in **Schedule 2**.

The development application was assessed and decided against the assessment and decision provisions under the SPA and you approved the development application, subject to conditions, on 24 April 2015. A copy of the decision notice, including conditions, is included in **Schedule 3**.

3.3 The request

On 25 August 2015, the applicant made the original request to you under section 369 of the SPA. It was deemed properly made on 31 August 2015, following the payment of the applicable fee. The applicant subsequently amended the request on 10, 11, 14, 15 and 18 December 2015. The request, which includes both the original request and the applicant's requested changes (**Schedule 1**), seeks to modify conditions of

the decision notice dated 24 April 2015 (**Schedule 3**), as detailed in section 4.0 of this report.



4.0 Assessment of the request

4.1 Responsible entity

Section 369 of the SPA provides that a person who wishes to make a permissible change to a development approval must, by written notice, ask the responsible entity for approval to make the change. As the approval was given by you, the Planning Minister, you are the responsible entity for administering section 369(1)(b) of the SPA for this request.

Section 369(2) of the SPA provides that if the responsible entity does not affect a state interest you may refer the request to the original assessment manager. As the request relates to changing conditions of a development application called in under section 424 of the SPA, which may potentially affect a state interest as identified in the call in notice, the Department recommends that this decision is not delegated to the original assessment manager.

4.2 Notice of request

The request was accompanied by the following relevant documents, as required under section 370 of the SPA, namely:

- the request, prepared by Mount Emerald Wind Farm Pty Ltd c/- Ratch-Australia Corporation, and amended by the applicant on 10, 11, 14 and 15 December 2015 following discussions with the Department
- a cheque made out to the Department to the value of the application fee received on 31 August 2015
- proof of lodgement with relevant entities (the Council and the State Assessment Referral Agency (SARA))
- evidence of owner's consent
- a copy of the Statement of Commitments dated 28 August 2014
- Integrated Development Assessment System form – request to change an existing approval
- a tracked changes copy of the decision notice.

All these documents, including the email correspondence from the applicant dated 10, 11, 14 and 15 December 2015 requesting changes to the request, are at **Schedule 1** and were all considered in the assessment of the request.

4.3 Relevant entities

Section 372 of the SPA requires that when a person makes a request to change a development approval, the person must give a copy of the request to the original assessment manager and any concurrence agencies for the original development application as the relevant entities. Responses were received from the Council and the Department, in its capacity as the SARA, as relevant entities.

The responses from the relevant entities are summarised at section 4.4.4 of this report.

4.4 Assessing the request

Section 374(1) of the SPA provides that you are to assess the request and, to the extent relevant, have regard to:

- (a) *the information the person making the request included with the request; and*
- (b) *the matters the responsible entity would have regard to if the request were a development application; and*
- (c) *if submissions were made about the original application—the submissions; and*
- (d) *any notice about the request* [REDACTED] *and*
- (e) *any pre-request response* [REDACTED] *.*

4.4.1 Information included within the request

The request included a number of documents for your consideration, as detailed in section 4.2 of this report.

4.4.2 Matters the responsible entity would have regard to if the request were a development application

Under section 374(2) of the SPA, when assessing the request, you must have regard to the planning instruments, plans, codes, laws or policies applying when the original development application was made on 29 March 2012. However, you may give the weight you consider appropriate to the planning instruments, plans, codes, laws or policies applying when the request was made.

The Department has assessed the request against relevant planning instruments, plans, codes, laws and policies. The Department sought a review of the request from Savery and Associates Pty Ltd, acoustic and vibration consultants, in relation to conditions 4, 5 and 6 to ensure that the request was acceptable from an acoustic perspective, and that the amended conditions were sound, reasonable and relevant. Savery and Associates Pty Ltd considered that the request could be supported (**Schedule 4**).

Following a detailed assessment of the request (**Schedule 5**), the Department supports the request and recommends that it be approved. The approved changes are shown in bold in the decision notice for the original application dated 24 April 2015, in accordance with section 376(2)(c) (**Attachment 3**). No other parts of the original decision notice are changed.

A summary of the Department's assessment is provided below:

Condition 1 and Condition 13

The applicant removed the changes to these conditions from the request on 14 December 2015. Therefore, no assessment of the amendments to these conditions was undertaken by the Department.

Condition 3 (a)(ii)

The applicant requests a change to condition 3(a)(ii) to require turbines to be setback 1,500 metres from any existing 'and approved' dwelling 'at the date of this approval'.

The Department supports the requested change as consistent with the intent of the draft wind farm state code and draft wind farm state planning guideline (draft code and guideline), discussed in section 4.7 of this report. The Department also considers

that it provides more certainty with regard to dwellings that might already be approved but do not yet exist.

Condition 4

The applicant requests changes to parts of condition 4 to:

- include reference to any 'approved' dwelling 'at the date of this approval'
- include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
- delete reference to $LA_{eq, 10 \text{ min}}$ the outdoor day-time equivalent noise level
- require the assessment of equivalent noise level at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades and
- include reference to the measuring of background noise or operational noise for the operation, to be in accordance with the *Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators* (Australian Standard AS4959-2010).

Both the Department and Savery and Associates Pty Ltd, the Department's acoustic consultant, support these requested changes, as detailed in **Schedule 5**.

Condition 5

The applicant requests changes to parts of condition 5 to:

- include reference to any 'approved' sensitive land uses 'at the date of this approval'
- include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
- require the assessment of equivalent noise levels (L_{ceq}) at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all existing and approved sensitive land uses
- include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator
- include reference to the measuring of operational noise for the operation, to be in accordance with the *Australian Standard AS4959-2010*.

Both the Department and Savery and Associates Pty Ltd, the Department's acoustic consultant, support these requested changes, as detailed in **Schedule 5**.

Condition 6

The applicant requests changes to parts of condition 6 to:

- replace acoustic 'engineer' with acoustic 'consultant'
- include that noise modelling is to include assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation
- require the submission of a compliance noise assessment report within 12 months of the completion of construction and then to be maintained, which demonstrates that the wind farm meets the noise levels specified in conditions 4 and 5.

Both the Department and Savery and Associates Pty Ltd, the Department's acoustic consultant, support these requested changes, as detailed in **Schedule 5**.

Condition 7

The applicant requests changes to condition 7 to read that shadow flicker does not exceed *'30 hours per annum and 30 minutes per day at any dwelling existing at the date of this approval'* as opposed to *'will not exceed 10 hours per annum'*.

The Department supports the requested change as consistent with the intent of the draft code and guideline, discussed in section 4.7 of this report.

Condition 11

The applicant requests a change [REDACTED] to any 'approved' dwelling 'at the date of this approval'.

The Department supports the requested change as consistent with the intent of the draft code and guideline, discussed in section 4.7 of this report. The Department also considers that it provides more certainty with regard to dwellings that might already be approved but do not yet exist.

Condition 12

The applicant requests a change to part of condition 12 to amend an administrative error in the numbering within the condition.

The Department supports the requested change as it was an administrative oversight and the change provides a consistent numbering system for the conditions.

Condition 14

The applicant requests a change to condition 14, to amend the words *'three (3) months prior to consultation commencing'* to *'five (5) months prior to construction commencing'*. The applicant justifies this change by stating that this *"will provide appropriate alignment with the construction program which is due to commence in June 2016"*. In addition, the timeframe for the Community Consultation Plan includes a consultation calendar that identifies activities that must be carried out at least on a quarterly basis and three months prior to construction commencing.

The Department supports the request as it ensures the alignment of relevant timeframes.

Change to advice statements

Attachment 1 – Significant species management plans

The applicant seeks to delete reference to 'Petrogale Mareeba' from the advice given that it is not listed as Endangered, Vulnerable or Near Threatened species under the provisions of the Nature Conservation (Wildlife) Regulation 2006.

The Department supports the request, given that 'Petrogale Mareeba' is not included in the provisions of the Nature Conservation (Wildlife) Regulation 2006.

4.4.3 If submissions were made about the original application—the submissions

The development application was code assessable. Consequently, there were no submissions for the original application.

4.4.4 Any notice about the request given under section 373 to the entity

As identified in section 4.3 of this report, relevant entity responses were received from the Council and the Department, in its capacity as SARA, in regard to the request.

Mareeba Shire Council (the Council)

The Council, as the original assessor of the application, is a relevant entity for this permission. In 2015, the Council provided its response to the request. It had no objections to the request.

The Department

Since the commencement of SARA, under section 944A of the SPA, the Chief Executive of the SPA, the Director-General of the Department, is the relevant entity for changes to development applications if there were any concurrence agencies to the original application.

On 17 September 2015, the Department, in its capacity as the SARA, provided its response to the request (**Schedule 7**), advising that it had no objections to the request.

The Department determined that, as the changes to the request related mainly to acoustic conditions, the changes were anticipated to have minimal impacts on the concurrence agencies jurisdiction and on the Council's provisions. Therefore, the amended request was not referred by the Department to either the SARA or to the Council.

4.5 Does the request constitute a permissible change

A change may only be made to a development approval if the change is a permissible change in accordance with section 367 of the SPA. Section 367(1) of the SPA states that *A permissible change, for a development approval, is a change to the approval that would not—*

- (a) *result in a substantially different development; or*
- (b) *if the application for the approval were remade including the change –*
 - (i) *require referral to additional concurrence agencies; or*
 - (ii) *for an approval for assessable development that previously did not require impact assessment – require impact assessment; or*
- (c) *for an approval for assessable development that previously required impact assessment—be likely, in the responsible entity's opinion, to cause a person to make a properly made submission objecting to the proposed change, if the circumstances allowed; or*
- (d) *cause development to which the approval relates to include any prohibited development.*

Statutory Guideline 06/09 – Substantially different development when changing applications and approvals (SG06/09) provides guidance in relation to paragraph (a) above.

Table 1 provides an assessment of the proposed changes against the definition of 'permissible change' in section 367(1) of the SPA, and the Department's response to these.

Table 1: Assessment against definition of permissible change

Section of the SPA	The Department's response
<p>Section 367(1)</p> <p><i>A permissible change, for a development approval, is a change to the approval that would not, because of the change –</i></p>	
<p>(a) <i>result in a substantially different development; or</i></p>	<p>The following matters identified in SG06/09 have been considered in assessing whether the request results in a substantially different development:</p> <p><i>A change may result in a substantially different development if the proposed change:</i></p> <ul style="list-style-type: none"> • <i>involves a new use with different or additional impacts</i> <p>The proposed changes do not involve a new use with different or additional impacts.</p> <ul style="list-style-type: none"> • <i>results in the application applying to a new parcel of land</i> <p>The proposed changes are not applying to a new parcel of land.</p> <ul style="list-style-type: none"> • <i>dramatically changes the built form in terms of scale, bulk and appearance</i> <p>The proposed changes do not change the built form in terms of scale, bulk and appearance.</p> <ul style="list-style-type: none"> • <i>changes the ability of the proposal to operate as intended</i> <p>The proposed changes do not change the ability of the proposal to operate as intended.</p> <ul style="list-style-type: none"> • <i>removes a component that is integral to the operation of the development</i> <p>No component that is integral to the operation of the development is proposed to be removed.</p> <ul style="list-style-type: none"> • <i>significantly impacts on traffic flow and the transport network, such as increasing traffic to the site</i> <p>The proposed changes do not result in any changes to traffic flow or the transport network.</p> <ul style="list-style-type: none"> • <i>introduces new impacts or increases the severity of known impacts</i> <p>The proposed changes do not introduce new impacts nor affect the severity of any known impacts.</p> <ul style="list-style-type: none"> • <i>removes an incentive or offset component that would have balanced a negative impact of the development</i>

	<p>The proposed changes do not remove an incentive or offset component.</p> <ul style="list-style-type: none"> • <i>impacts on infrastructure provision, location or demand</i> <p>The proposed changes do not impact on infrastructure provision, location or demand.</p>
Section 367(1)(b)(i) <i>if the application for the approval were remade including the change – require referral to additional concurrence agencies; or</i>	If the original development application was remade including the proposed changes, the development application would not require referral to additional referral agencies under the SPA.
Section 367(1)(b)(ii) <i>if the application for the approval were remade including the change for an approval for assessable development that previously did not require impact assessment – require impact assessment; or</i>	If the original development application was remade including the proposed changes, the development application would remain code assessable.
Section 367(1)(c) <i>for an approval for assessable development that previously required impact assessment – Would the proposed change be likely, in the responsible entity's opinion, to cause a person to make a properly made submission objecting to the proposed change, if the circumstances allowed; or</i>	The proposed change was code assessable.
Section 367(1)(d) <i>cause development to which the approval relates to include any prohibited development.</i>	The proposed change will not result in prohibited development prescribed under Schedule 1 of the SPA.


Based on the above assessment, the request is considered to be a permissible change in accordance with section 367 of the SPA.

4.6 Deciding the request

Under section 375(4) of the SPA you, as the responsible entity, have 30 business days to decide the permissible change request after receiving the request, but you must not decide the request until the first of the following happens –

- (i) *a written notice has been received under section 373 from each entity given a copy of the request*
- (ii) *the period of 25 business days after the responsible entity received the request ends.*

As a written notice has been received under section 373 of the SPA from each entity given a copy of the request, your decision can now be made. After assessing the request under section 374 of the SPA, you must decide to either approve the request (with or without conditions), or refuse the request under section 375 of the SPA. If you impose a condition, it must be relevant to the proposed change and be relevant or reasonably required as specified in section 345 of the SPA.

Under section 375(5) of the SPA, you, as the responsible entity, requested and obtained written agreement from the applicant to extend the decision stage to 24 December 2015. Therefore, y 
24 December 2015.

4.7 Other Matters

The draft code and guideline were released for a second round of public consultation, commencing on 6 October 2015 until 11 December 2015. The purpose of the draft code includes regulating the development of new wind farms or the expansion of existing wind farms in appropriate locations, and to ensure potential adverse impacts on the community and environment are avoided or mitigated during the construction and operation of wind farms.

Although the draft code is not a relevant instrument in the assessment of the request, the Department notes, based on a preliminary review of the submissions to the draft code and draft guideline, and without prejudice to the final decision on the draft code and draft guideline, that the request is consistent with the intent of the draft code and guideline.

5.0 Recommendation

Based on the above assessment, the Department considers that the request constitutes a permissible change under section 367(1) of the SPA.

The Department has assessed the request against relevant matters under section 374 of the SPA and recommends that you approve the request, as detailed in the decision notice (**Attachment 3**).



Schedule 1 to Attachment 2 (D15/131272)

The original request, dated 25 August 2015; and amended on 10, 11, 14, 15 and 18 December 2015.

Schedule 2 to Attachment 2 (D15/131272)

Copy of Call in notice

Schedule 3 to Attachment 2 (D15/131272)

Copy of Decision Notice

Schedule 4 to Attachment 2 (D15/131272)

Acoustic advice, prepared by Savery and Associates
Pty Ltd

From: [Chris Adamson](#)
To: [Morag Elliott](#); [Adam Yem](#); [Daniela Walker](#)
Subject: FW: Proposed amendments to conditions
Date: Friday, 11 December 2015 8:14:15 AM

Good morning all,

Please see below the final review from Savery and Associates (their amendments are in green).

Kind Regards,

Chris Adamson

Principal Planner

Development Assessment Division

Department of Infrastructure, Local Government and Planning

Level 6, 63 George St Brisbane QLD 4000

p. 07 3452 7661 | e. chris.adamson@dilgp.qld.gov.au

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From: [Refused under section 47(3)(b) of the RTI] savery.com.au
Sent: Thursday, 10 December 2015 5:52 PM
To: Chris Adamson
Cc: [Refused under section 47(3)(b) of the RTI] savery.com.au
Subject: RE: Proposed amendments to conditions

Chris,

Suggested changes shown below: the background noise level ($L_{A90,10\text{ minutes}}$) plus 5dB(A) – the level is not based on a single $L_{A90,10\text{ minutes}}$ measurement, but the group of measurements. The measured outdoor equivalent noise level will each be measured as 10 minute periods however.

Other suggestions are under condition 6, where revised is deleted. There does not seem to be a reason for it to be a revised noise assessment report rather than just a noise assessment report with the requirements listed.

It should also be noted that AS4959 does not actually prescribe how EAM is determined or what penalties may be attributed to special audible characteristics, so simply requiring assessment compliant with the AS4959 standard is not enough. Something like: "Assessment of Special Audible Characteristics should be carried out using an appropriate international standard or guideline. Reasons for selection of the standard or guideline are to be provided with the noise assessment report. The assessment should determine whether the Special Audible Characteristics are excessive and require an adverse character adjustment (adj) to specific measurement periods." (suggestions below also)

It is also suggested (in condition 6) that the broader term of consultant is used rather than engineer, as there are many acoustic consultants which would be qualified to do the work which are not engineers (often with physics or environmental science background), so the term in this case is unnecessarily limiting.

No doubt we will talk further tomorrow.

Best regards,

[Refused under section 47(3)(b) of the RTI Act]

ABN: 62 079 417 379

Acoustic
Vibration
Environmental
Engineers

Refused under section 47(3)(b) of the RTI Act.

Suite 4 The Gap Village, 1000 Waterworks Road

PO Box 265 The Gap QLD 4061

Refused under section 47(3)(b) www.savery.com.au

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From: Chris Adamson [<mailto:Chris.Adamson@dilgp.qld.gov.au>]

Sent: Thursday, 10 December 2015 2:37 PM

To: Refused under section 47(3)(b)

Cc: Refused under section 47(3)(b) www.savery.com.au

Subject: FW: Proposed amendments to conditions

Hi Matthew,

As discussed earlier, I was hoping you could undertake a final review of the below condition. The conditions incorporate previous recommendations and have been further amended to remove any ambiguity.

Any queries whatsoever do not hesitate to email or call.

4.	<p>(a) The wind farm development must be designed and operated to ensure that:</p> <p>(i) The outdoor equivalent noise level ($L_{Aeq,10}$ minutes) during the night-time (10pm to 6am) at existing and approved sensitive land uses, does not exceed the higher of:</p> <p>(a) 35dB(A); or</p> <p>(b) the background noise level ($L_{A90,10 \text{ minutes}}$) plus 5dB(A);</p> <p>and</p> <p>(ii) The outdoor equivalent noise level ($L_{Aeq,10}$ minutes) during the day-time (6am to 10pm) at existing and approved sensitive land uses, does not exceed the higher of:</p> <p>(a) 37dB(A); or</p> <p>(b) the background noise level ($L_{A90,10 \text{ minutes}}$) plus 5dB(A).</p>	Prior to the commencement of use and then to be maintained
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	<p>(b) The equivalent noise levels (L_{Aeq}) are to be assessed at all existing and approved sensitive land uses at the date of this approval, for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p> <p>(c) Measurements of background noise or operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 <i>Acoustics – Measurement, prediction and assessment of noise from wind turbine generators</i> at any existing and approved sensitive land uses at the date of this approval. If an alternative standard or guideline to AS4959 is to be followed for the assessment of Special Audible Characteristics, then reasons for the selection of the alternative are to be provided.</p>	
5.	<p>The wind farm development must be designed and operated to ensure that the low frequency noise level does not exceed:</p> <p>(a) 60dB(C) for the outdoor C-Weighted equivalent noise level (L_{Ceq}, 10 minutes) during the night-time (10pm to 6am); and</p> <p>(b) 65dB(C) for the outdoor C-Weighted equivalent noise level (L_{Ceq}, 10 minutes) during the day-time (6am to 10pm).</p> <p>The C-Weighted noise levels (L_{Ceq}) are to be assessed at all existing and approved sensitive land uses at the date of this approval for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p> <p>Measurements of background noise or operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 <i>Acoustics – Measurement, prediction and assessment of noise from wind turbine generators</i> at any existing and approved sensitive land uses at the date of this approval. If an alternative standard or guideline to AS4959 is to be followed, then reasons for the selection of the alternative are to be provided.</p>	Prior to the commencement of use and then to be maintained
6.	<p>(a) Submit to the chief executive administering SPA a revised noise assessment report, certified by a suitably qualified acoustic engineer consultant, demonstrating that the proposed wind farm can meet the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Model the acoustic impacts of the wind farm based on the revised Turbine Location and</p>	(a) Prior to commencement of site/operational/ building work

	<p>Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>The noise modelling should take into account the varied topography between the turbine locations and sensitive land use receptors and any impacts that may have on predicted noise levels.</p> <p>ii. Identify any design specifications or operational restrictions that may be necessary to ensure compliance with the noise levels specified in conditions 4 and 5, such as turbine types or limitations on hours of operation of specific turbines.</p> <p>(b) Submit to the chief executive administering SPA a compliance noise assessment report, certified by a suitably qualified acoustic engineer consultant, demonstrating that the proposed wind farm meets the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Measure the acoustic impacts of the wind farm based on the final Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>The noise measurements should take into account the turbine locations and sensitive land use receptors and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation.</p> <p>Assessment of Special Audible Characteristics should be carried out using an appropriate international standard or guideline. Reasons for selection of the standard or guideline are to be provided with the noise assessment report. The assessment should determine whether the Special Audible Characteristics are excessive and require an adverse character adjustment (adj) to specific measurement periods.</p>	<p>(b) Within twelve (12) months of the completion of construction and to be maintained</p>
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Kind Regards,

Chris Adamson

Principal Planner

Development Assessment Division

Department of Infrastructure, Local Government and Planning

Level 6, 63 George St Brisbane QLD 4000

p. 07 3452 7661 | e. chris.adamson@dilgp.qld.gov.au

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From: [Chris Adamson](#)
To: [Daniela Walker](#); [Adam Yem](#); [Morag Elliott](#)
Subject: FW: Changes to conditions to be reviewed by acoustic consultant
Date: Tuesday, 8 December 2015 12:21:47 PM
Attachments: [image001.jpg](#)

Hi all,

Please see the below comments and amendments from Savery and Associates. The main inclusion is the phrase in relation to special audible characteristics, which as they note, is a critical requirement for checking compliance for operational wind farms.

Will drop over to discuss.

Kind Regards,

Chris Adamson

Principal Planner

Development Assessment Division

Department of Infrastructure, Local Government and Planning

Level 6, 63 George St Brisbane QLD 4000

p. 07 3452 7661 | e. chris.adamson@dilgp.qld.gov.au

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From: [Refused under section 47(3)(b) of the R] savery.com.au

Sent: Tuesday, 8 December 2015 12:08 PM

To: Chris Adamson

Cc: [Refused] savery.com.au

Subject: RE: Changes to conditions to be reviewed by acoustic consultant

Chris,

Regarding the specific questions:

- 1) 10 minutes should be specified to describe the measurement length (for the L_{Aeq}), but when referring to the background it is referring to the regression curved determined from a large number of individual $L_{A90, 10min}$ measurements, so should only refer to L_{A90} .
- 2) "for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator" for the low frequency measurements is inferred, so it could be included.
- 3) Corrected some typos when referring to Australian Standard *AS4959 – 2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators*

I have slightly moved around the wording (changes and additions in green) so it is clear that the measurements are in 10 minute intervals during particular time periods (day and night) so it cannot be interpreted to mean some sort of 8 hour L_{Aeq} measurement. This does feed in well to a question for DSDIP and SARA: Will the wind farm be expected to comply with the noise limit for each and every 10 minute period during day and night?

It is relatively easy to carry out the noise modelling before construction and determine compliance with a noise limit for the general average with a safety factor built in, but in practice in real-world conditions, noise measurements are much messier, or at least less "black and white". There will be wind gusts, vegetation noise and other extraneous noise, so it is possible that the noise limits may have exceedances beyond the wind farm operator's control, but comply for the majority of the time. This query is bound to come up with consultation with Ratch, so thought that it would best be considered beforehand. Who will be managing this? DEHP?

We have added an additional paragraph in Condition 4 which addresses special audible

characteristics. This is a critical requirement for checking compliance for operational wind farms. As there is no internationally agreed standard it is suggested that the onus be placed on the applicant to select and demonstrate compliance using a suitable standard. For us to specify a particular standard would require further consideration which is not available to us in the current timeframe for this project approval. This may be best addressed as a separate condition.

Best regards,

Refused under section 47(3)(b) of the RTI

SaveryBanner



ABN: 62 079 417 379

Acoustic
Vibration
Environmental
Engineers

Refused under section 47(3)(b) of the RTI Act.

Suite 4 The Gap Village, 1000 Waterworks Road

PO Box 265 The Gap QLD 4061

Refused under section 47(3)(b) of the RTI Act. www.savery.com.au

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From: Chris Adamson [<mailto:Chris.Adamson@dilgp.qld.gov.au>]

Sent: Tuesday, 8 December 2015 9:24 AM

To: Refused under section 47(3)(b) of the RTI Act.

Cc: Adam Yem; Daniela Walker; Morag Elliott

Subject: FW: Changes to conditions to be reviewed by acoustic consultant

Hi Refused

As discussed over the phone, we are requiring an urgent review of the Mt Emerald conditions of approval which have been amended slightly following the Department's assessment of a permissible change request. Please refer to the email below with the draft condition. The condition addresses both design and operation.

Some queries to consider when reviewing the condition:

1. Given the condition addresses operation, the 10 minute intervals are included. Should this be the case for both the LAeq and LA90?
2. Should 'for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator' be included in relation to the low frequency noise condition? Is it the same assessment methodology?
3. Operational measurements are to be in accordance with Australian Standard AS4559-2010. Please confirm this standard is correct.

We are on a relatively tight timeframe with this sorry, thus a response by noon would be ideal, or alternatively ASAP.

Any queries whatsoever do not hesitate to email or call.

Kind Regards,

Chris Adamson

Principal Planner

Development Assessment Division

From: Daniela Walker

Sent: Tuesday, 8 December 2015 8:49 AM

To: Chris Adamson

Cc: Morag Elliott; Adam Yem

Subject: Changes to conditions to be reviewed by acoustic consultant

Hi Chris,

Further to our meeting, can you please urgently provide the below draft conditions (4 and 5) to the acoustic consultants for review before I draft an e-mail to Adam to send to the applicant. We want to ensure that our conditions are reasonable.

4.	<p>The wind farm development must be designed and operated to ensure that:</p> <p>(a) The outdoor equivalent noise level ($L_{Aeq,10 \text{ minutes}}$) during the night-time (10pm to 6am) at existing and approved sensitive land uses, does not exceed the higher of:</p> <p>(i) 35dB(A); or</p> <p>(ii) the background noise level ($L_{A90,10 \text{ minutes}}$) plus 5dB(A);</p> <p>and</p> <p>(b) The outdoor equivalent noise level ($L_{Aeq,10 \text{ minutes}}$) during the day-time (6am to 10pm) at existing and approved sensitive land uses, does not exceed the higher of:</p> <p>(i) 37dB(A) ($L_{A90,10 \text{ minutes}}$); or</p> <p>(ii) the background noise level ($L_{A90,10 \text{ minutes}}$) plus 5dB(A).</p> <p>The equivalent noise levels (L_{Aeq}) for the design are to be assessed one metre from all noise affected facades of existing and approved sensitive land uses for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p> <p>Measurements of background noise or operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 <i>Acoustics – Measurements, prediction and assessment</i></p>	Prior to the commencement of use and then to be maintained
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	<p><i>of noise from wind turbine generators at any existing and approved sensitive land uses at the date of this approval.</i></p> <p>The wind farm development must be designed and operated to ensure that that the wind farm does not exhibit excessive Special Audible Characteristics including tonality, impulsivity and amplitude modulation. Measurements of operational noise shall be conducted and assessed using an appropriate standard or guideline to demonstrate compliance with this requirement. Reasons for selection of the standard or guideline are to be provided with the compliance report.</p>	
5.	<p>The wind farm development must be designed and operated to ensure that that the low frequency noise level does not exceed:</p> <p>(a) 60dB(C) for the outdoor C-Weighted equivalent noise level (L_{Ceq}; 10 minutes) during the night-time (10pm to 6am); and</p> <p>(b) 65dB(C) for the outdoor C-Weighted equivalent noise level (L_{Ceq}; 10 minutes) during the day-time (6am to 10pm).</p> <p>The C-Weighted noise levels (L_{Ceq}) for the design are to be assessed one metre from all noise affected façades of existing and approved sensitive land uses for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p> <p><i>Measurements of background noise or noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 Acoustics – Measurements, prediction and assessment of noise from wind turbine generators at any existing and approved sensitive land uses at the date of this approval.</i></p>	<p>Prior to the commencement of use and then to be maintained</p>

This will ensure that the applicant can meet draft code and the Australian Standards for both design and operational requirements given that the current condition does not take into account the correct distance for operational requirements. Also can you please confirm if *'for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator'* should be included for the design aspects in condition 5

Can you please request that they provide feedback on the above conditions by **noon today**.

Thank you for all your help.

Cheers

Daniela Walker (nee Mantilla)
Senior Planner – SARA Brisbane Region
p. 07 3452 7692

Schedule 5 to Attachment 2 (D15/158298)

The Department's assessment of the request

Schedule 5 – Department’s assessment of the request

The following table provides an overview of the applicant’s requested changes, the applicant’s justification for the request and the Department’s response and recommendations regarding the requested changes. The table reflects the final request, being the original request dated 25 August 2015, as amended by the applicant on 10, 11 and 14 December 2015.

COND. #	APPLICANT’S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT’S JUSTIFICATION	DILGP RESPONSE
3	<p>General/Planning Requirements</p> <p>(a) The wind farm must be designed and constructed in accordance with the following:</p> <ul style="list-style-type: none">i. The maximum number of turbines must not exceed 63;ii. All turbines must be setback a minimum of 1,500 metres from any existing <u>and approved</u> dwelling <u>at the date of this approval</u>;iii. All turbines and the operations and maintenance depot are to be located in accordance with the revised Turbine Location and Development Footprint Plan required by condition 2 of this approval;iv. The overall maximum height of any turbine (measured to the tip of the rotor blade at their highest point above ground level) must not exceed 1179.5 metres AHD;v. The hub height of any turbine must not exceed 90 metres above ground level;vi. All cabling must be provided underground, except where the approved Environmental Management Plan recommends an alternative method in environmentally sensitive locations. <p>(b) Submit certification to the chief executive administering SPA from an Registered Professional Engineer Queensland (RPEQ) that the wind farm as constructed complies with the design specifications indicated in part (a) of this condition.</p>	<p>(a) Prior to the commencement of use and then to be maintained</p> <p>(b) Prior to the commencement of use</p>	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 3 to read as follows:</p> <p>“ii <i>All turbines must be setback a minimum of 1,500 metres from any non-participant dwelling existing at the date of this approval</i>”.</p> <p>The applicant justified this change by stating that “...<i>Condition 3 should take into consideration landholders that are participating as part of the overall project and their subject dwellings. As currently drafted, landholders that are participating with the project could not locate a dwelling or managers dwelling closer than 1,500 metres from a turbine.</i></p> <p><i>Further, to ensure compliance with this condition, it is recommended that Condition 3 be amended to provide finality and to remove any uncertainty regarding the date a dwelling, surrounding the wind farm, was established</i>”.</p> <p>Following discussions with the Department, the applicant amended the request, replacing reference to ‘non-participant’ dwelling with ‘approved’ dwelling, to read:</p> <p>“ii <i>All turbines must be setback a minimum of 1,500 metres from any existing and approved dwelling at the date of this approval</i>”.</p>	<p><u>SUPPORTED</u></p> <p>The Department supports the request, as amended, to include reference to any ‘approved’ dwelling ‘at the date of this approval’, as it provides a greater degree of certainty to the applicant about dwellings that might already be approved but do not yet exist.</p>
4	<p>Acoustic Amenity</p> <p>The wind farm development must be designed and operated to ensure that:</p> <p>(a) The outdoor night-time (10pm to 6am) equivalent noise level ($L_{Aeq, 10\text{ minutes night}}$) <u>during the night-time (10pm to 6am)</u> at existing <u>and approved</u> sensitive land uses <u>at the date of this approval</u>, does not exceed the higher of:</p> <ul style="list-style-type: none">(i) 35dB(A); or(ii) the background noise level ($L_{A90, 10\text{ minutes}}$) plus 5dB(A); <p>and</p> <p>(b) The outdoor day-time (6am to 10pm) equivalent noise level ($L_{Aeq, day 10\text{ minutes}}$) <u>during the day-time (6am to 10pm)</u> at existing <u>and approved</u> sensitive land uses <u>at the date of this approval</u>, does not exceed the higher of:</p> <ul style="list-style-type: none">(i) 37dB(A) ($L_{A90, 10\text{ minutes}}$); or(ii) the background noise level ($L_{A90, 10\text{ minutes}}$) plus 5dB(A). <p><u>(c)</u> The equivalent noise levels ($L_{Aeq, night}$ <u>and</u> $L_{Aeq, day}$) are to be assessed <u>one metre from all noise-affected facades at of existing all existing and approved</u> sensitive land uses <u>at the date of this approval</u> for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p>	<p>Prior to the commencement of use and then to be maintained</p>	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 4 by stating that “<i>In accordance with industry standards (such as AS4959-2010 Acoustics - Measurement, prediction and assessment of noise from wind turbine generators) the utilisation of an “equivalent noise level” (L_{Aeq}) is usually accompanied by an associated Time Averaging Period, normally set at 10 minutes. Thus, the descriptor should be $L_{Aeq, 10\text{ min}}$. The use of $L_{Aeq, night}$ or $L_{Aeq, day}$ would suggest the noise levels to be averaged across the full night-time (10pm to 6am) or day-time (6am to 10pm) periods which would not provide the level of condition intended.</i></p> <p><i>It is also our belief this condition contains a drafting error, as the Background A-weighted sound pressure level of ($L_{A90, 10\text{ minutes}}$) has been included in the description of the outdoor night-time limit of Condition 4, (b) part (i) and as a consequence is inconsistent with the remainder of the condition...</i></p>	<p><u>SUPPORTED</u></p> <p>The Department supports the request, as amended, for the following reasons:</p> <ul style="list-style-type: none">the inclusion of ‘and approved’ sensitive land uses ‘at the date of this approval’ provides a greater degree of certainty with regard to dwellings that might already be approved but do not yet existthe deletion of 10 minutes is supported by the Department’s acoustic consultant, Savery and Associates Pty Ltd, who stated that with regard to the background noise level ($L_{A90, 10\text{ minutes}}$) plus 5dB(A), “10 minutes should be specified to describe the measurement length (for the L_{Aeq}), but when referring to the background it is referring to the

COND. #	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
	<p><u>(d) Measurements of background noise or operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators (AS4959-2010) at any existing and approved sensitive land uses at the date of this approval. If an alternative standard or guideline to AS4959-2010 is to be followed for the assessment of Special Audible Characteristics, then reasons for the selection of the alternative are to be provided.</u></p>		<p><i>MEWF [the applicant] are concerned with the requirement to undertake measurements at a distance of 'one metre away from all affected facades' of existing dwellings. It is our belief that taking measurements in such close proximity ('one metre from all noise affected facades') will subject the measurements to reflected sound from the facades (walls and roof) of the existing dwellings. Consequently, having an adverse impact/influence on the measured sound levels at each dwelling for both measurements of background and wind farm noise levels by up to +/- 5dB.</i></p> <p><i>We note the draft Queensland Planning Guideline in support of the draft Queensland Wind Farm Code (April 2014) recommends that measurements should be taken between '1.2m- 1.5m above the ground and at least 5 metres from any reflecting surface (other than the ground).' This recommended procedure is in accordance with the Australian Standard AS4959-2010 Acoustics - Measurement, prediction and assessment of noise from wind turbine generators. AS4959-2010 recommends: 'measurement positions shall be more than 5m from any significant vertical reflecting surface to avoid reflections And where possible should also be at least 5m away from other structures or objects (such as tress and powerlines etc.).'</i></p> <p><i>MEWF, therefore recommend Condition 4 be amended, to make reference to the recognised Australian standard for noise measurement, AS4959-2010 Acoustics - Measurement, prediction and assessment of noise from wind turbine generators."</i></p> <p><i>In correspondence dated 10 December 2015 to the Department, the applicant further states that "By positioning the measuring point at 1m from a wall the microphone is subjected to not only the actual noise but also the reflection from the wall and thus will artificially increase the noise level recorded. This higher level is will only be felt in close proximity to the outside face of the wall. All best practice guidelines and standards recommend measurements be undertaken away from the reflecting surface."</i></p> <p>Following discussions with the Department, the applicant amended the request, separating the noise requirements for the design and for the operation of the wind farm. and requesting the amendment of the conditions as follows:</p> <ul style="list-style-type: none"> • to include existing 'and approved' sensitive land uses 'at the date of this approval'; • to remove L_{A90,10 minutes} measurements from the 37dB(A) as it was a drafting error; • to include an associated Time Averaging Period of 10 minutes for the equivalent noise level to bring the condition in line with operational requirements; • to require the assessment of the equivalent noise 	<p><i>regression curved determined from a large number of individual L_{A90, 10min} measurements, so should only refer to L_{A90})"</i></p> <ul style="list-style-type: none"> • the wording for this condition has also changed to clarify "that the measurements are in 10 minute intervals during particular time periods (day and night) so it cannot be interpreted to mean some sort of 8 hour L_{Aeq} measurement" as recommended by the Department's acoustic consultants, Savery and Associates Pty Ltd • the Department supports the modelling of the noise levels at the existing and approved sensitive land use at the date of this approval, as opposed to one metre from the facades, as it is acknowledged that it is only the measurement and monitoring of noise levels that need to take into account sound reflection off facades thus requiring a setback from facades • the amended condition better clarifies the acoustic requirements of the design aspect, and the acoustic requirement of the operation of the wind farm • the operational criteria requires the application to be in accordance with <i>Australian Standard AS4959-2010 Acoustics-Measurement, prediction and assessment of noise from wind turbine generators</i> which consistent with the intent of the draft wind farm state code and draft wind farm state planning guideline • the condition now provides an option to utilise an alternative standard or guideline to AS4959-2010 for the assessment of Special Audible Characteristics, with reasons for the selection of the alternative to be provided.

COND. #	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
			<p>levels (L_{Aeq}) at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all existing and approved sensitive land uses;</p> <ul style="list-style-type: none"> to include that the measuring of background or operational noise for the operation of the wind farm are in accordance with Australian Standard AS4959-2010 <i>Acoustics – Measurement, prediction and assessment of noise from wind turbine generators</i> at any existing and approved sensitive land uses at the date of this approval; and to provide the option to use an alternative standard or guideline to AS4959 for the assessment of Special Audible Characteristics. 	
5	<p>Acoustic Amenity</p> <p>The wind farm development must be designed and operated to ensure that that the low frequency noise level does not exceed:</p> <p>(a) 60dB(C) for the outdoor night-time (10pm to 6am) C-Weighted equivalent noise level ($L_{Ceq, \text{night}10 \text{ minutes}}$) <u>during the outdoor night-time (10pm to 6am)</u>; and</p> <p>(b) 65dB(C) for the outdoor day-time (6am to 10pm) C-Weighted equivalent noise level ($L_{Ceq, \text{day}10 \text{ minutes}}$) <u>during the day-time (6am to 10pm)</u>.</p> <p>The C-Weighted noise levels ($L_{Ceq, \text{day}}$ and $L_{Ceq, \text{night}}$) are to be assessed one metre from all noise affected façades of at all existing <u>and approved</u> sensitive land uses <u>at the date of this approval for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</u></p> <p><u>Measurements operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 <i>Acoustics – Measurement, prediction and assessment of noise from wind turbine generators</i> at any existing and approved sensitive land uses at the date of this approval.</u></p>	Prior to the commencement of use and then to be maintained	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 5 by stating that “<i>MEWF are concerned with the drafting of this condition in regard to:</i></p> <ul style="list-style-type: none"> <i>the correct use of the L_{Ceq} descriptor;</i> <i>the requirement to undertake measurements at a distance of 'one metre away from all affected façades' of existing dwellings; and</i> <i>the reference to the term 'existing sensitive land uses'.</i> <p><i>Both of these concerns have been addressed above in reference to Conditions 3 & 4.”</i></p> <p>Following discussions with the Department, the applicant amended the request, separating the noise requirements for the design and for the operation of the wind farm and requesting the amendment of the conditions as follows:</p> <ul style="list-style-type: none"> to include ‘approved’ sensitive land uses ‘at the date of this approval’; to include an associated Time Averaging Period of 10 minutes for the equivalent noise level to bring the condition in line with operational requirements; to include that the equivalent noise levels (L_{Ceq}) for the design of the wind farm are assessed at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all existing and approved sensitive land uses; and to include that the measuring of operational noise for the operation of the wind farm are in accordance with Australian Standard AS4959-2010 <i>Acoustics – Measurement, prediction and assessment of noise from wind turbine generators</i> at any existing and approved sensitive land uses at the date of this approval. 	<p><u>SUPPORTED</u></p> <p>The Department supports the request, as amended, for the following reasons:</p> <ul style="list-style-type: none"> the inclusion of ‘and approved’ sensitive land uses ‘at the date of this approval’ as it provides a greater degree of certainty with regard to dwellings that might already be approved but do not yet exist the wording for this condition has also changed to clarify “<i>that the measurements are in 10 minute intervals during particular time periods (day and night) so it cannot be interpreted to mean some sort of 8 hour L_{Ceq} measurement</i>” as recommended by the Department’s acoustic consultants, Savery and Associates Pty Ltd the Department supports the modelling of the noise levels at the existing and approved sensitive land use at the date of this approval, as opposed to one metre from the façades, as it is acknowledged that it is only the measurement and monitoring of noise levels that need to take into account sound reflection off façades thus requiring a setback from façades the Department’s acoustic consultants, Savery and Associates Pty Ltd, stated that inclusion of reference to all integer hub height wind speeds “for the low frequency measurements is

COND. #	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
				<p>inferred, so it could be included</p> <ul style="list-style-type: none"> the amended condition better clarifies the acoustic requirements of the design aspect, and the acoustic requirement of the operation of the wind farm the operational criteria requires the application to be in accordance <i>Australian Standard AS4959-2010 Acoustics - Measurement, prediction and assessment of noise from wind turbine generators</i> which is consistent with intent of the draft wind farm state code and draft wind farm state planning guideline.
6	<p>Acoustic Amenity</p> <p>(a) Submit to the chief executive administering SPA a revised noise assessment report, certified by a suitably qualified acoustic -consultantengineer, demonstrating that the proposed wind farm can meet the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Model the acoustic impacts of the wind farm based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>The noise modelling should take into account the varied topography between the turbine locations and <u>existing and approved</u> sensitive land use receptors <u>at the date of this approval</u> and any impacts that may have on predicted noise levels, <u>and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation</u>.</p> <p>ii. Identify any design specifications or operational restrictions that may be necessary to ensure compliance with the noise levels specified in conditions 4 and 5, such as turbine types or limitations on hours of operation of specific turbines.</p> <p><u>(b) Submit to the chief executive administering SPA a compliance noise assessment report, certified by a suitably qualified acoustic consultant, demonstrating that the proposed wind farm meets the noise levels specified in conditions 4 and 5 of this approval. The report is to:</u></p> <p>i. <u>Measure the acoustic impacts of the wind farm based on the final Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</u></p> <p><u>The noise measurements should take into account the turbine locations and any existing and approved sensitive land use receptors at the date of this approval; and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation. Assessment of Special Audible Characteristics should be carried out using an appropriate international standard or guideline. Reasons for selection of the standard or guideline are to be provided with the noise assessment report. The assessment should determine whether the Special Audible Characteristics are excessive and require an adverse character adjustment (adj) to specific measurement period.</u></p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p><u>(b) Within twelve (12) months of the completion of construction and then to be maintained</u></p>	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 6 to amend the wording 'sensitive land use receptors' to be replaced by 'from any non-participant dwelling existing at the date of this approval.'</p> <p>Following discussions with the Department, the applicant amended the request to expand on the wording 'sensitive land use receptors' to include 'existing and approved' and 'at the date of this approval.'</p> <p>On 10 and 11 December 2015, the applicant also requested that additional requirements in relation to compliance be included as part of the condition to provide more certainty about the operational requirements of the wind farm.</p>	<p>SUPPORTED</p> <p>The Department supports the request, as amended, for the following reasons:</p> <ul style="list-style-type: none"> the inclusion of these requirements will provide additional compliance provisions and address audible characteristics the inclusion of additional wording around sensitive land use receptors provides a greater degree of certainty to the applicant about sensitive land uses that might already be approved but do not yet exist and provides consistency through the request it was supported by the Department's acoustic consultant, Savery and Associates Pty Ltd it replaces acoustic 'engineer' with acoustic 'consultant' as it is considered that there are acoustic consultants who would be qualified to do the work (often with physics or environmental science background), so the term 'engineer' in this case is unnecessarily limiting.

COND. #	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
7	<p>Visual Amenity</p> <p>(a) Submit to the chief executive administering SPA a revised shadow flicker assessment report certified by a suitably qualified and experienced person demonstrating that the shadow flicker from the turbines will not exceed 10 hours per annum at any dwelling existing at the date of this approval.</p> <p>The report is to model the shadow flicker of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>(b) The wind farm is to be constructed and operated in accordance with the revised shadow flicker assessment report required in part (a) of this condition. In particular any design specifications or operational restrictions required to ensure that shadow flicker from the constructed turbines does not exceed 40-30 hours per annum <u>and 30 minutes per day</u> at any dwelling existing at the date of this approval.</p>	<p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) Prior to the commencement of use and then to be maintained</p>	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 7 by stating that <i>"MEWF are concerned that the imposed limit for modelling purposes conflicts with the National Wind Farm Development Guidelines, Wind Code and Guidelines for New South Wales and Victoria as well as the draft Queensland State Wind Farm Code which proposes an acceptable outcome of: 'A07.1 The modelled blade shadow flicker impact on any existing dwelling does not exceed 30 hours per annum and 30 minutes per day.'"</i></p>	<p><u>SUPPORTED</u></p> <p>The Department supports the requested change as it is consistent with the intent of the draft wind farm state code and draft wind farm state planning guideline.</p>
11	<p>Television and Radio Reception</p> <p>(a) Undertake an assessment of the television and radio reception strength in the area within 5 km of any proposed turbine and in which <u>any existing and approved</u> dwellings are located at the date of this approval.</p> <p>The pre-construction assessment must be undertaken by a television and radio monitoring specialist, and include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by a television and radio monitoring specialist.</p> <p>(b) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any <u>existing and approved</u> dwelling within 5 km of the site which existed at the date of this approval, a post-construction assessment of the television and radio reception strength must be carried out at or in close proximity to the any existing and approved dwelling <u>at the date of this approval</u> by a television and radio monitoring specialist.</p> <p>(c) If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, measures to restore the affected reception to pre-construction quality must be undertaken.</p> <p>(d) Provide to the chief executive administering SPA, on request, the results of the pre-construction assessment and any post-construction assessment carried out in response to a complaint and evidence that the appropriate restoration measures have been undertaken to address television and radio reception strength where required.</p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) Within one (1) month of receiving a complaint</p> <p>(c) Within two (2) months of the post-construction assessment</p> <p>(d) Within (2) months of the post-construction assessment</p>	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 11 by stating that <i>"to ensure consistency throughout the Decision Notice, it is recommended the term, "from any non-participant dwelling existing at the date of this approval", be utilised throughout Condition 11, parts (a) and (b)".</i></p> <p>Following discussions with the Department, the applicant amended their request to include existing 'and approved' dwelling and 'at the date of this approval.'</p>	<p><u>SUPPORTED</u></p> <p>The Department supports the requested change as it is consistent with the intent of the draft wind farm state code and draft wind farm state planning guideline.</p>
12	<p>(a) Submit to the chief executive administering SPA a Construction Traffic Management Plan (CTMP) prepared by an RPEQ and in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p>	<p>(a) Prior to the commencement of site / operational /</p>	<p>Following discussions with the Department, the applicant amended their request to change to part of condition 12 to amend an administrative error in the numbering within the condition'.</p>	<p>The Department supports the requested change as it was an administrative oversight and the change provides a consistent numbering system for the conditions.</p>

COND. #	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
	<p>The CTMP must relate to the roads proposed to be used in transporting material, personnel and equipment related to the construction and decommissioning of the wind farm.</p> <p>The CTMP must include but not limited to:</p> <ul style="list-style-type: none"> (i) (a) an existing conditions survey of Hansen Road, Springmount Road and Kippen Drive including details of the suitability, design, condition and construction standard of the relevant public roads; (ii) (b) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts; (iii) (c) the designation of appropriate pre-construction, construction/decommissioning and transport vehicle routes to and from the site; (iv) (d) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road; (v) (e) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include: <ul style="list-style-type: none"> (a) detailed engineering plans showing the required works; (b) the timing of when the works are to be undertaken; (c) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; (vi) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads. <p>This may include, as recommended in the "Technical Note 2 – Traffic Impact Assessment Engineering Response" prepared by Jacobs dated 29/08/14:</p> <ul style="list-style-type: none"> a) providing a 30 seat shuttle bus service for construction workers arriving and departing the site, servicing the key townships where the construction workers live; b) providing minimal or restricted on-site parking to discourage workers arriving to and departing the site via private vehicles <ul style="list-style-type: none"> (vii) a program to rehabilitate Hansen Road, Springmount Road and Kippen Drive to the pre-construction condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm. <p>(b) Carry out the development in accordance with the CTMP.</p>	<p>building work</p> <p>(b) In accordance</p>		

COND. #	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
	(c) Submit to the chief executive administering SPA certification from an RPEQ that all works identified in the CTMP have been carried out in accordance with the CTMP.	with the timeframes specified in the CTMP (c) Within three (3) months of the completion of construction		
14	<p>Community Engagement</p> <p>(a) Submit to the chief executive administering SPA a Community Engagement Strategy (CES) that includes at a minimum:</p> <p>(i) A Community Consultation Plan that demonstrates and includes:</p> <ol style="list-style-type: none"> consultation methods consultation calendar that identifies activities that must be carried out at least on a quarterly basis and during: <ul style="list-style-type: none"> three (3) months prior to construction commencing during construction once operational for at least one year from the commencement of stage 1 <p>(ii) A Complaints Management Plan / Register (CMPR) that demonstrates and includes:</p> <ol style="list-style-type: none"> how contact details will be communicated to the public a toll free telephone number and email contact for complaints and queries a register outlining complaint information for each complaint received the processes for investigation and actions undertaken to resolve the complaint <p>(b) All community consultation and complaints must be managed in accordance with the CES.</p> <p>(c) Provide to the chief executive administering SPA and Council, on request, a copy of the CMPR, in particular the processes of investigation and actions undertaken to resolve the complaint.</p>	<p>(a) Three <u>Five</u> (35) months prior to <u>construction</u> consultation commencing</p> <p>(b) – (c) Prior to construction / during construction and once operational</p>	<p>In the original request dated 25 August 2015, the applicant sought to change parts of condition 14 by stating that “Condition 14 of the Decision Notice requires a Community Engagement Strategy be prepared for project. The Decision Notice nominates a timeframe for the submission of the Community Engagement Strategy to be ‘three (3) months prior to consultation commencing’.</p> <p>MEWF recommend the submission of the Community Engagement Strategy ‘three (3) five (5) months prior to consultation construction commencing’, which would allow the community engagement strategy to be submitted and align with the construction program which is due to commence in June 2016”.</p>	<p><u>SUPPORTED</u></p> <p>The Department supports the request as it ensures the alignment of relevant timeframes.</p>

ADVICE	APPLICANT'S REQUESTED CHANGES (SHOWN AS TRACKED CHANGES)	TIMING	APPLICANT'S JUSTIFICATION	DILGP RESPONSE
Attachment 1 – Components of the Environmental Management Plans	<p>Significant species management plans</p> <p>Significant species management plans must:</p> <p>(a) include plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the <i>Nature Conservation Act 1992</i> that:</p> <ol style="list-style-type: none"> are currently known to occur within or periodically utilise the site, including but not limited to, the Petrogale Mareeba (Mareeba Rock- 	N/A	In the original request dated 25 August 2015, the applicant seeks to remove reference to ‘ <i>Petrogale Mareeba</i> ’ given that it is not listed as Endangered, Vulnerable or Near Threatened species under the provisions of the	<p><u>SUPPORTED</u></p> <p>The Department supports the request, as ‘<i>Petrogale Mareeba</i>’ is not included in the provisions of the Nature Conservation (Wildlife) Regulation 2006.</p>

	<p>wallaby); or</p> <p>ii. are detected within the site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and</p> <p>iii. are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth).</p> <p>(b) set out key impact management strategies including:</p> <p>i. further baseline programs;</p> <p>ii. management targets;</p> <p>iii. design, construction and operational impact avoidance and mitigation measures and protocols;</p> <p>iv. quantitative performance indicators;</p> <p>v. monitoring and reporting regimes;</p> <p>vi. corrective actions;</p> <p>vii. timeframes for identified actions; and</p> <p>viii. applicant and stakeholder responsibilities.</p>		Nature Conservation (Wildlife) Regulation 2006.	
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Schedule 6 to Attachment 2 (D15/131272)

Mareeba Shire Council relevant entity
response



Mareeba

SHIRE COUNCIL

65 Rankin Street
PO Box 154 MAREEBA QLD 4880

P: 07 4086 4657
F: 07 4086 4733

W: www.msc.qld.gov.au
E: info@msc.qld.gov.au

14 September 2015

Council Ref: MCU/11/0024
Our Ref: BM:nj
Your Ref: MBN14/753

RECEIVED

21 SEP 2015

The Hon Jackie Trad MP
Deputy Premier, Minister for Transport
Minister for Infrastructure, Local Government
and Planning and Minister for Trade
PO Box 15009
CITY EAST QLD 4002

Dear Deputy Premier

**NOTICE ABOUT REQUEST FOR PERMISSIBLE CHANGE - RELEVANT ENTITY
DEVELOPMENT PERMIT FOR MATERIAL CHANGE OF USE - MOUNT EMERALD WIND FARM,
ARRIGA**

Mareeba Shire Council received a copy of the request for a permissible change under section 372(1) of the *Sustainable Planning Act 2009* on 31 August 2015 advising Council of the request for a permissible change made to the responsible entity under section 369 of the *Sustainable Planning Act 2009*.

Council understands that the proposed changes are as follows:

- *General/Planning Requirements - Condition 1, Table 1*
- *Location and Design - Condition 3(a)(ii)*
- *Acoustic Amenity - Conditions 4, 5 and 6*
- *Visual Amenity - Condition 7*
- *Television and Radio Reception - Condition 11*
- *Environmental Management - Condition 13(a)(i)*
- *Community Engagement - Condition 14*
- *Attachment 1 - Construction and work site operational management plan (f)*
- *Attachment 1 - Significant species management plans (a)*

Council has considered the proposed changes to the development approval and advises that it has no objection to the change being made.

Should you require any further information, please contact Council's Senior Planner, Brian Millard on the above telephone number.

Yours faithfully

BRIAN MILLARD
SENIOR PLANNER

Schedule 7 to Attachment 2 (D15/131272)

SARA relevant entity response



Department of Infrastructure,
Local Government and Planning

Our reference: SPD-0815-020702
Your reference: MBN14/753

17 September 2015

Hon Jackie Trad, MP
Deputy Premier
Minister for Transport
Minister for Infrastructure, Local Government and Planning
Minister for Trade
PO Box 15009
CITY EAST QLD 4002

Attn: Morag Elliot

Dear Sir

Notice about request for permissible change—relevant entity

Springmount Road and Kippin Drive, Arriga on land more particularly known as Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871

(Given under section 373(1) of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning received a copy of the request for a permissible change under section 372(1) of the *Sustainable Planning Act 2009* on 31 August 2015 advising the department, as a relevant entity, of the request for a permissible change made to the responsible entity under section 369 of the *Sustainable Planning Act 2009*.

The department understands that the proposed changes are as follows:

- Condition 1 – make reference to the Statement of commitments included in the Environmental Impact Study of 2014 rather than the original Statement dated March 2012.
- Condition 3 – amend wording to identify those neighbouring landholders who are participating in the overall project and to establish the date a dwelling surrounding the wind farm was established.
- Condition 4 – amend the acoustic measurement to reflect current Australian standard for noise measurement standard and correct a drafting error
- Condition 5 – amend the wording to reflect the proposed changes identified in relation to Conditions 3 and 4.

- Condition 6 – amend the wording to reflect the proposed changes identified in relation to Conditions 4 and 5.
- Condition 7 – amend the wording to reflect the National Wind Farm Development Guidelines and the draft Queensland State Wind Farm code in relation to visual amenity (blade shadow flicker impact).
- Condition 11 – amend the wording to reflect the proposed changes identified in relation to Condition 3.
- Condition 13 – amend the wording to reflect the proposed changes identified in relation to Condition 1.
- Condition 14 – amend the wording to correct the typographical error in which the word 'consultation' was used instead of the word 'construction'.

In addition, it is understood that further advice is sought to clarify the meaning and impact of some aspects of the General advice provided.

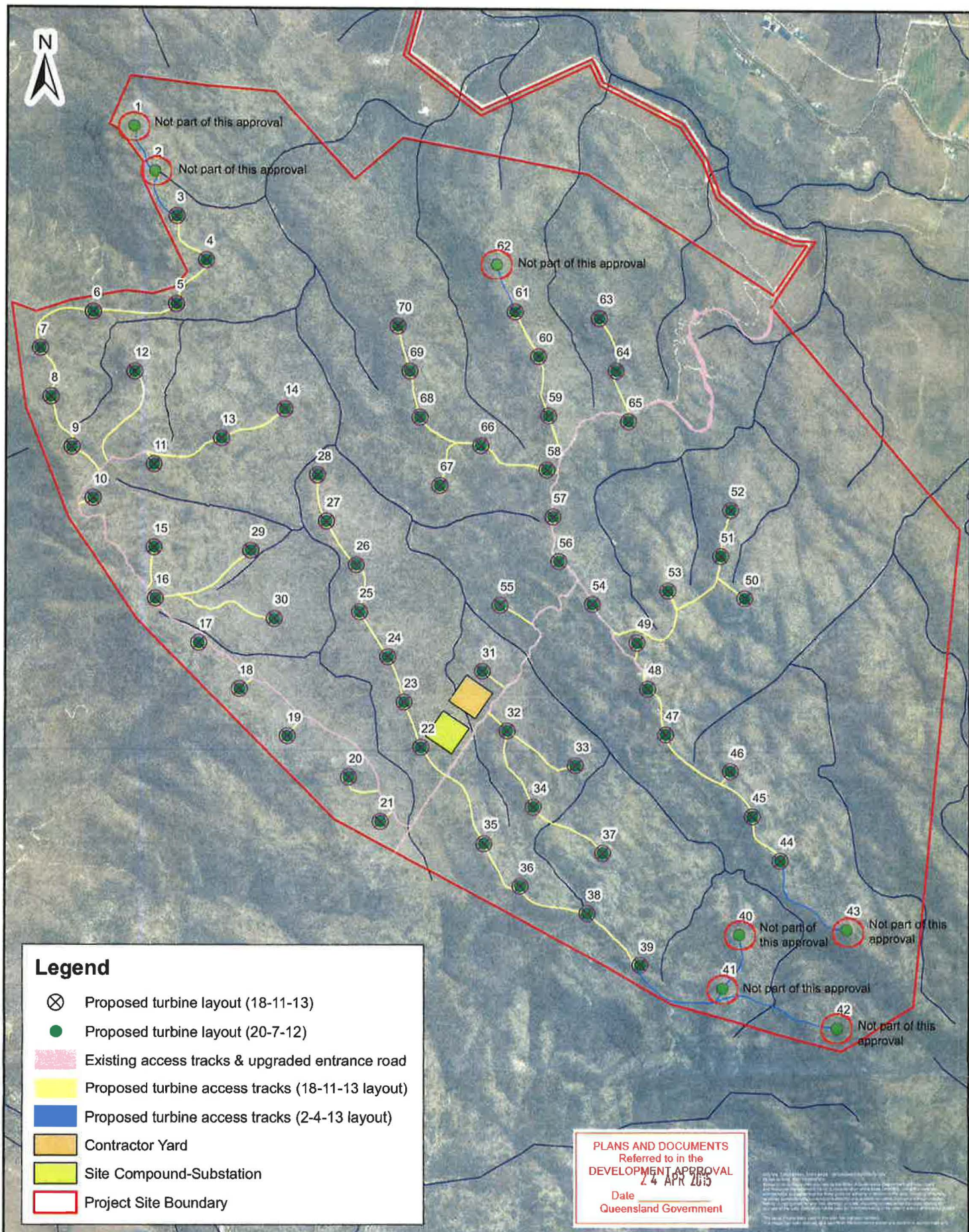
The department has considered the proposed changes to the development approval and advises that it has no objection to the change being made.

If you require any further information, please contact Michele Creecy, Senior Planning Officer, on 4037 3206, or via email michele.creecy@dilgp.qld.gov.au who will be able to assist.

Yours sincerely



Robin Clark
Manager (Planning)



0 250 500 750 1,000
Meters (A3)

Project Manager
M. Jess
Compiled by
J. Middleton
Map Projection
MGaz55
Map Datum
GDA94
File Reference
PR100246-170a.mxd
Sheet Number
1 of 1

Client
RACL

Title
**Mount Emerald Wind Farm
Turbine locations and development footprint**

	RPS Australia East Pty Ltd ACN 140 292 762 135 Abbott St PO Box 1949 CAIRNS QLD 4870 T +61 7 4031 1336 F +61 7 4031 2942 W rpsgroup.com.au		
	SCALE (A3) 1:22,000	DATE 18.11.2013	DRAWING NO PR100246-170

Schedule 1: Conditions of Approval
Development Permit for a Material Change of Use – Code Assessment

Condition		Timing																		
General / Planning Requirements																				
1.	<p>Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, as modified by the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29/08/2014</td></tr> </tbody> </table> <p>=</p>	Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014	While site / operational / building work is occurring and then to be maintained
Table 1: Approved Plans and Documents																				
Plan/Document number	Plan/Document name	Date																		
PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013																		
Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012																		
PR100246/R72893	Preliminary Environmental Management Plan	November 2013																		
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014																		

Location and Design		
2.	<p>Submit to the chief executive administering SPA, a revised Turbine Location and Development Footprint Plan identifying the final position of:</p> <ul style="list-style-type: none"> • all proposed turbines; and • the operations and maintenance depots <p><i>Note: Micro-siting of turbines, prior to the submission of the above mentioned reports, is permitted.</i></p> <p><i>Micro-siting means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plan Mount Emerald Wind Farm Turbine Location and Development Footprint PR100246-170 Issue A, dated 18-11-2013.</i></p>	Prior to seeking approval for any site, operational or building work
3.	<p>(a) The wind farm must be designed and constructed in accordance with the following:</p> <ol style="list-style-type: none"> The maximum number of turbines must not exceed 63; All turbines must be setback a minimum of 1,500 metres from any existing and approved dwelling at the date of this approval; All turbines and the operations and maintenance depot are to be located in accordance with the revised Turbine Location and Development Footprint Plan required by condition 2 of this approval; The overall maximum height of any turbine (measured to the tip of the rotor blade at their highest point above ground level) must not exceed 1179.5 metres AHD; The hub height of any turbine must not exceed 90 metres above ground level; All cabling must be provided underground, except where the approved Environmental Management Plan recommends an alternative method in environmentally sensitive locations. <p>(b) Submit certification to the chief executive administering SPA from an Registered Professional Engineer Queensland (RPEQ) that the wind farm as constructed complies with the design specifications</p>	<p>(a) Prior to the commencement of use and then to be maintained</p> <p>(b) Prior to the commencement of use</p>

	indicated in part (a) of this condition.	
Acoustic Amenity		
4.	<p>The wind farm development must be designed and operated to ensure that:</p> <p>(a) The outdoor night-time (10pm to 6am) equivalent noise level ($L_{Aeq,10\text{ minutes night}}$) at <u>during the night-time (10pm to 6am) at existing and approved</u> sensitive land uses <u>at the date of this approval</u>, does not exceed the higher of:</p> <p>(i) 35dB(A); or</p> <p>(ii) the background noise level ($L_{A90,10\text{ minutes}}$) plus 5dB(A);</p> <p>and</p> <p>(b) The outdoor day-time (6am to 10pm) equivalent noise level ($L_{Aeq,10\text{ minutes day}}$) at existing <u>and approved</u> sensitive land uses <u>at the date of this approval</u>, does not exceed the higher of:</p> <p>(i) 37dB(A) ($L_{A90,10\text{ minutes}}$); or</p> <p>(ii) the background noise level ($L_{A90,10\text{ minutes}}$) plus 5dB(A).</p> <p><u>(c) The equivalent noise levels ($L_{Aeq,night}$ and $L_{Aeq,day}$) are to be assessed one metre from all noise affected facades of at all existing <u>and approved</u> sensitive land uses <u>at the date of this approval</u> for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</u></p> <p><u>(d) Measurements of background noise or operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators (AS4959-2010) at any existing and approved sensitive land uses at the date of this approval. If an alternative standard or guideline to AS4959-2010 is to be followed for the assessment of Special Audible Characteristics, then reasons for the selection of the alternative are to be provided.</u></p>	<p>Prior to the commencement of use and then to be maintained</p>
5.	<p>The wind farm development must be designed and operated to ensure that that the low frequency noise level does not exceed:</p>	<p>Prior to the commencement of use</p>

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	<p>(a) 60dB(C) for the outdoor night-time (10pm to 6am) C-Weighted equivalent noise level ($L_{Ceq, \text{night}10 \text{ minutes}}$) <u>during the outdoor night-time (10pm to 6am);</u> and</p> <p>(b) 65dB(C) for the outdoor day-time (6am to 10pm) C-Weighted equivalent noise level ($L_{Ceq, \text{day}10 \text{ minutes}}$) <u>during the day-time (6am to 10pm).</u></p> <p>The C-Weighted noise levels ($L_{Ceq, \text{day}}$ and $L_{Ceq, \text{night}}$) are to be assessed <u>one metre from all noise-affected façades of at all existing and approved sensitive land uses at the date of this approval for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</u></p> <p><u>Measurements of operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators at any existing and approved sensitive land uses at the date of this approval.</u></p>	and then to be maintained
6.	<p>(a) Submit to the chief executive administering SPA a revised noise assessment report, certified by a suitably qualified acoustic consultant/engineer, demonstrating that the proposed wind farm can meet the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Model the acoustic impacts of the wind farm based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>The noise modelling should take into account the varied topography between the turbine locations and <u>existing and approved</u> sensitive land use receptors <u>at the date of this approval</u> and any impacts that may have on predicted noise levels, <u>and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation.</u></p> <p>ii. Identify any design specifications or operational restrictions that may be necessary to ensure compliance with the noise levels specified in conditions 4 and 5, such as turbine types or limitations on hours of operation of specific turbines.</p> <p><u>(b) Submit to the chief executive administering SPA a</u></p>	<p>(a) Prior to the commencement of site / operational / building work</p>

	<p><u>compliance noise assessment report, certified by a suitably qualified acoustic consultant, demonstrating that the proposed wind farm meets the noise levels specified in conditions 4 and 5 of this approval. The report is to:</u></p> <p>i. <u>Measure the acoustic impacts of the wind farm based on the final Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</u></p> <p><u>The noise measurements should take into account the turbine locations and any existing and approved sensitive land use receptors at the date of this approval; and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation. Assessment of Special Audible Characteristics should be carried out using an appropriate international standard or guideline. Reasons for selection of the standard or guideline are to be provided with the noise assessment report. The assessment should determine whether the Special Audible Characteristics are excessive and require an adverse character adjustment (adj) to specific measurement period.</u></p>	<p><u>(b) Within twelve (12) months of the completion of construction and then to be maintained</u></p>
Visual Amenity		
7.	<p>(a) Submit to the chief executive administering SPA a revised shadow flicker assessment report certified by a suitably qualified and experienced person demonstrating that the shadow flicker from the turbines will not exceed 10 hours per annum at any dwelling existing at the date of this approval.</p> <p>The report is to model the shadow flicker of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>(b) The wind farm is to be constructed and operated in accordance with the revised shadow flicker assessment report required in part (a) of this condition. In particular any design specifications or operational restrictions required to ensure that shadow flicker from the constructed turbines does not exceed <u>340</u> hours per annum <u>and 30 minutes per day</u> at any dwelling existing at the date of this</p>	<p>(a) Prior to seeking approval for any site, operational or building work</p> <p>(b) Prior to the commencement of use and then to be maintained</p>

	approval.	
8.	The turbines and blades must have a low reflectivity finish.	Prior to the commencement of use and to be maintained
9.	<p>External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <ul style="list-style-type: none"> (a) low-level, low-intensity security lighting; (b) aviation obstacle lighting where required by the Civil Aviation and Safety Authority; (c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times. <p>Any external lighting, excluding aviation obstacle lights, is to comply with Australian Standard AS 4282-1993 <i>Control of the obtrusive effects of outdoor lighting</i>.</p>	Prior to the commencement of use and to be maintained
10.	<ul style="list-style-type: none"> (a) Submit to the chief executive administering SPA an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale. (b) The on-site landscaping plan must include but not limited to: <ul style="list-style-type: none"> (i) landscaping to screen the substation, switchyard and maintenance depots and other associated buildings (excluding the turbines); (ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity; (iii) a timetable for implementation of all on-site landscaping works; (iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping. (c) Carry out and maintain the development in accordance with the submitted on-site landscaping plan prepared in accordance with part (a) of this condition. (d) Submit certification to the chief executive from a suitably qualified landscape architect that the works have been carried out in accordance with part (a) of this condition. 	<ul style="list-style-type: none"> (a) Prior to the commencement of site / operational / building work (b) Prior to the commencement of use and to be maintained at all times (c) Prior to the commencement of use (d) Prior to the commencement of use

Television and Radio Reception		
11.	<p>(a) Undertake an assessment of the television and radio reception strength in the area within 5 km of any proposed turbine and in which any existing and approved dwellings are located as at the date of this approval.</p> <p>The pre-construction assessment must be undertaken by a television and radio monitoring specialist, and include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by a television and radio monitoring specialist.</p> <p>(b) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any existing and approved dwelling within 5 km of the site which existed at the date of this approval, a post-construction assessment of the television and radio reception strength must be carried out at or in close proximity to theany existing and approved dwelling at the date of this approval by a television and radio monitoring specialist.</p> <p>(c) If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, measures to restore the affected reception to pre-construction quality must be undertaken.</p> <p>(d) Provide to the chief executive administering SPA, on request, the results of the pre-construction assessment and any post-construction assessment carried out in response to a complaint and evidence that the appropriate restoration measures have been undertaken to address television and radio reception strength where required.</p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) Within one (1) month of receiving a complaint</p> <p>(c) Within two (2) months of the post-construction assessment</p> <p>(d) Within (2) months of the post-construction assessment</p>
Traffic Management		
12.	<p>(a) Submit to the chief executive administering SPA a Construction Traffic Management Plan (CTMP) prepared by an RPEQ and in consultation with the Department of Transport and Main Roads, Cairns</p>	<p>(a) Prior to the commencement of site / operational / building work</p>

	<p>Regional Council, Tablelands Regional Council and Mareeba Shire Council.</p> <p>The CTMP must relate to the roads proposed to be used in transporting material, personnel and equipment related to the construction and decommissioning of the wind farm.</p> <p>The CTMP must include but not limited to:</p> <p>(a)(i) an existing conditions survey of Hansen Road, Springmount Road and Kippen Drive including details of the suitability, design, condition and construction standard of the relevant public roads;</p> <p>(b)(ii) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts;</p> <p>(c)(iii) the designation of appropriate pre-construction, construction/decommissioning and transport vehicle routes to and from the site;</p> <p>(d)(iv) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road;</p> <p>(e)(v) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include:</p> <p>(a) detailed engineering plans showing the required works;</p> <p>(b) the timing of when the works are to be undertaken;</p> <p>(c) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic;</p> <p>(vi) measures to be taken to manage traffic impacts associated with the ongoing operation of the</p>	
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	<p>wind farm on the traffic volumes and flows on surrounding roads.</p> <p>This may include, as recommended in the "Technical Note 2 – Traffic Impact Assessment Engineering Response" prepared by Jacobs dated 29/08/14:</p> <ul style="list-style-type: none"> a) providing a 30 seat shuttle bus service for construction workers arriving and departing the site, servicing the key townships where the construction workers live; b) providing minimal or restricted on-site parking to discourage workers arriving to and departing the site via private vehicles (vii) a program to rehabilitate Hansen Road, Springmount Road and Kippen Drive to the pre-construction condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm. <p>(b) Carry out the development in accordance with the CTMP.</p> <p>(c) Submit to the chief executive administering SPA certification from an RPEQ that all works identified in the CTMP have been carried out in accordance with the CTMP.</p>	<p>(b) In accordance with the timeframes specified in the CTMP</p> <p>(c) Within three (3) months of the completion of construction</p>
Environmental Management		
13.	<p>(a) Submit to the chief executive administering SPA an Environmental Management Plan (EMP) prepared by a suitably qualified person(s). The EMP must:</p> <ul style="list-style-type: none"> i. be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within Appendix A of the RPS Development Application Material Change of Use Report dated March 2012; ii. be based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval; 	<p>(a) Prior to seeking approval for any site, operational or building work</p>

	<p>iii. include the following components, as further detailed in Attachment 1:</p> <ul style="list-style-type: none"> • a construction and work site operational management plan • a sediment, erosion and storm water management plan • a hydrocarbon and hazardous substances plan • a bushfire risk management plan and emergency evacuation plan • a significant species management plan • a weed and pest management plan • a rehabilitation plan • a habitat clearing and management plan • an ecological fire management plan • a cultural heritage management plan • an environmental management plan training program • an environmental management plan reporting program • an implementation plan <p>(b) The development must be carried out in accordance with the EMP.</p>	<p>(b) During site / operational /building work and to be maintained</p>
Community Engagement		
14.	<p>(a) Submit to the chief executive administering SPA a Community Engagement Strategy (CES) that includes at a minimum:</p> <p>(i) A Community Consultation Plan that demonstrates and includes:</p> <ol style="list-style-type: none"> a. consultation methods b. consultation calendar that identifies activities that must be carried out at least on a quarterly basis and during: <ul style="list-style-type: none"> • three (3) months prior to construction commencing 	<p>(a) Three-Five (35) months prior to <u>consultation</u> <u>construction</u> commencing</p>

	<ul style="list-style-type: none"> during construction once operational for at least one year from the commencement of stage 1 <p>(ii) A Complaints Management Plan / Register (CMPR) that demonstrates and includes:</p> <ol style="list-style-type: none"> how contact details will be communicated to the public a toll free telephone number and email contact for complaints and queries a register outlining complaint information for each complaint received the processes for investigation and actions undertaken to resolve the complaint <p>(b) All community consultation and complaints must be managed in accordance with the CES.</p> <p>(c) Provide to the chief executive administering SPA and Council, on request, a copy of the CMPR, in particular the processes of investigation and actions undertaken to resolve the complaint.</p>	<p>(b) – (c) Prior to construction / during construction and once operational</p>
Decommissioning and Rehabilitation		
15.	<p>Submit to the chief executive administering SPA a decommissioning and rehabilitation plan prepared by a suitably qualified person(s).</p> <p>The decommissioning and rehabilitation plan must address the actions to be undertaken where any or all turbines have permanently ceased to generate electricity. The plan must include a program for:</p> <ol style="list-style-type: none"> removal of above ground non-operational equipment; removal and clean up any residual contamination; rehabilitation/revegetation of storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbines, if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; notification to the relevant authorities of the turbines ceasing operation. Such notification should be given no later than two months after the turbine(s) cease operation. 	Prior to decommissioning

General advice	
a.	This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate assessment and approval by Powerlink.
b.	Development must comply with the <i>Electrical Safety Act 2002</i> including any Code of Practice under that Act and the Electrical Safety Regulation 2002 including any safety exclusion zones defined in the Regulation.
c.	<p>In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.</p> <p>Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the <i>Electrical Safety Act 2002</i> to seek advice from Powerlink.</p>
d.	Any works must comply with the easement terms and conditions as per easement Dealing 701758510 and 713030213
e.	Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.
f.	Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.
g.	<p>The site has slight residual risk of unexploded ordnance (UXO). In the event of identification of UXO, the Department of Defence recommends the following procedure:</p> <ul style="list-style-type: none"> • do not touch or disturb the object; • take action, where appropriate, to prevent it being disturbed by another person; • note its approximate dimensions and general appearance; • note the route to its location; and • advise the Police as soon as possible.
h.	Copies of the final development plans must be provided to the following entities, to enable details of the development to be shown on aeronautical charts of the area:

- the Civil Aviation Safety Authority;
- the Department of Defence (RAAF Aeronautical Information Service);
- Airservices Australia;
- any aerodrome operator within 15 km of the outside property boundaries of the site;
- the Aerial Agriculture Association of Australia;
- any organisation responsible for providing air ambulance services in the area.

Attachment 1 - Components of the Environmental Management Plan

Construction and work site operational management plan

The environmental management plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- d) procedures for managing noise emissions from construction-related activities;
- e) appropriate sanitary facilities to be provided for construction and maintenance staff;
- f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilisation;
- g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- h) measures for dust mitigation, control and monitoring dust gauges;
- i) procedures to ensure that construction vehicles and equipment use designated

tracks and works areas to avoid impacts on native vegetation;

- j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

The environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- a) identification of all construction and operational processes that could potentially lead to water contamination;
- b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- d) procedures for waste water discharge management;
- e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;
- f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.

Bushfire risk management plan and emergency evacuation plan

The bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for firefighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of firefighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires;
- (e) details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines.

Significant species management plans

Significant species management plans must:

- (a) include plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the *Nature Conservation Act 1992* that:
 - i. are currently known to occur within or periodically utilise the site, ~~including but not limited to, the Petrogale Mareeba (Mareeba Rock-wallaby)~~; or
 - ii. are detected within the site during the conduct of further baseline, construction or operational monitoring pursuant to other conditions; and
 - iii. are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).
- (b) set out key impact management strategies including:

<ul style="list-style-type: none"> i. further baseline programs; ii. management targets; iii. design, construction and operational impact avoidance and mitigation measures and protocols; iv. quantitative performance indicators; v. monitoring and reporting regimes; vi. corrective actions; vii. timeframes for identified actions; and viii. applicant and stakeholder responsibilities.
<p>Weed and pest management plan</p> <p>The weed and pest management plan must include:</p> <p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>
<p>Rehabilitation plan</p> <p>The rehabilitation plan must include guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>
<p>Habitat clearing and management plan</p> <p>The habitat clearing and management plan must include management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>
<p>Ecological fire management plan</p> <p>The ecological fire management plan must include management strategies to be implemented in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>
<p>Cultural heritage management plan</p> <p>The cultural heritage management plan must include the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>
<p>Environmental management plan training program</p> <p>The environmental management plan must include a training program for construction workers and permanent employees or contractors at the site, including a site induction program relating to the range of issues addressed by the environmental management plan.</p>

Environmental management plan reporting program

The environmental management plan must include a program for reporting environmental incidents, including:

- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;
- (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation plan

The environmental management plan must include a timetable for implementation of all programs and works referred to in sections above.



Deputy Premier
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment

Our ref: MC15/4675

Your ref: SPD-0815-020702

Level 12 Executive Building
100 George Street
PO Box 15009 City East
Queensland 4002 Australia
Telephone +61 7 3719 7100
Email deputy.premier@ministerial.qld.gov.au

18 DEC 2015

Mr Frankie Carroll
Director-General
State Assessment and Referral Agency
Department of Infrastructure, Local Government and Planning
PO Box 15009
CITY EAST QLD 4002

Dear Mr Carroll

Frankie's,

**Notice of Decision on Permissible Change Request
Changed approval (responsible entity) under Section 369 of the
*Sustainable Planning Act 2009***

I am writing to advise you that I have made a decision on a request for a permissible change to a development approval for the Mount Emerald Wind Farm, subject to a previous ministerial call in, at Springmount Road and Kippin Drive, Arriga.

In accordance with section 376 of the *Sustainable Planning Act 2009*, I hereby enclose a copy of my decision.

If you require any further information, I encourage you to contact Mr Adam Yem, Acting Executive Director, Planning Group, Department of Infrastructure, Local Government and Planning, on 3452 7679 or by email at adam.yem@dilgp.qld.gov.au.

Yours sincerely

**JACKIE TRAD MP
DEPUTY PREMIER
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment**

Enc



Deputy Premier
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment

Our ref: MC15/4675

Your ref: BM:nj, MCU/11/0024

Level 12 Executive Building
100 George Street
PO Box 15009 City East
Queensland 4002 Australia
Telephone +61 7 3719 7100
Email deputy.premier@ministerial.qld.gov.au

18 DEC 2015

Mr Peter Franks
Chief Executive Officer
Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880

Dear Mr Franks

**Notice of Decision on Permissible Change Request
Changed approval (responsible entity) under Section 369 of the
*Sustainable Planning Act 2009***

I am writing to advise you that I have made a decision on a request for a permissible change to a development approval for the Mount Emerald Wind Farm, subject to a previous ministerial call in, at Springmount Road and Kippin Drive, Arriga.

In accordance with section 376 of the *Sustainable Planning Act 2009*, I hereby enclose a copy of my decision.

If you require any further information, I encourage you to contact Mr Adam Yem, Acting Executive Director, Planning Group, Department of Infrastructure, Local Government and Planning, on 3452 7679 or by email at adam.yem@dilgp.qld.gov.au.

Yours sincerely

**JACKIE TRAD MP
DEPUTY PREMIER
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment**

Enc

From: [Adam Yem](#)
To: [Morag Elliott](#)
Cc: [Chris Lee](#)
Subject: RE: HP Records Manager Ministerial Incoming Correspondence : MC15/4675 : Request to change development approval pursuant to section 369 of SPA. Mount Emerald Wind Farm. - [Refused under s
Date: Tuesday, 1 September 2015 12:28:10 PM

That is my take on things. Given we're only prepared to set conditions as per whatever the requirements will be within draft Wind Farm State Code.

Adam Yem
Acting Director
Department of Infrastructure, Local Government and Planning
p. 07 3452 7679 | m. [Refused under s] e. Adam.Yem@dilgp.qld.gov.au

-----Original Message-----

From: Morag Elliott
Sent: Tuesday, 1 September 2015 12:27 PM
To: Adam Yem
Cc: Chris Lee
Subject: RE: HP Records Manager Ministerial Incoming Correspondence : MC15/4675 : Request to change development approval pursuant to section 369 of SPA. Mount Emerald Wind Farm. - [Refused under s]

Following today's meeting, it sounds like you have enough background info on this not to need a consultant.

Morag Elliott
Manager
tel: 07 3452 7653

-----Original Message-----

From: Adam Yem
Sent: Tuesday, 1 September 2015 12:25 PM
To: Morag Elliott
Subject: RE: HP Records Manager Ministerial Incoming Correspondence : MC15/4675 : Request to change development approval pursuant to section 369 of SPA. Mount Emerald Wind Farm. - [Refused under s]

Noted - Undertake sieve process as instructed by Steve and then we can decide best way to deal with request.

Adam Yem
Acting Director
Department of Infrastructure, Local Government and Planning p. 07 3452 7679 | m. [Refused under s] e. Adam.Yem@dilgp.qld.gov.au

-----Original Message-----

From: Morag Elliott
Sent: Tuesday, 1 September 2015 8:36 AM
To: Adam Yem
Cc: Chris Lee
Subject: RE: HP Records Manager Ministerial Incoming Correspondence : MC15/4675 : Request to change development approval pursuant to section 369 of SPA. Mount Emerald Wind Farm. - [Refused under s]

We might need an acoustic consultant to consider some of these proposed changes.

Morag Elliott
Manager
tel: 07 3452 7653

-----Original Message-----

From: Adam Yem

Sent: Monday, 31 August 2015 5:03 PM

To: Morag Elliott

Subject: HP Records Manager Ministerial Incoming Correspondence : MC15/4675 : Request to change development approval pursuant to section 369 of SPA. Mount Emerald Wind Farm. - Refused under s

Hello Morag.

I've reassigned to you and am happy for you to reassign to either Chris / Dean.

Cheers,
Adam

-----< HP Records Manager Record Information >-----

Record Number : MC15/4675

Title : Request to change development approval pursuant to section 369 of SPA. Mount Emerald Wind Farm. - Refused under s

DILGP – BRIEF FOR DECISION

Date: 20 January 2017


SUBJECT: Request to change a development approval subject of a previous ministerial call in - Mount Emerald Wind Farm, Arriga (Mareeba Shire Council)

RECOMMENDATIONS:

That you:

- **note** on 9 December 2016, RATCH-Australia Corporation on behalf of Mount Emerald Wind Farm Pty Ltd (the applicant) submitted a request to change the development approval to a previous ministerial call in for the Mount Emerald Wind Farm, at Springmount Road and Kippin Drive, Arriga (**Attachment 1**)
- **approve** the recommendations contained in the attached Planning Assessment Report, prepared by the Department of Infrastructure, Local Government and Planning (the department) (**Attachment 2**)
- **approve, date** and **sign** the attached notice of decision (**Attachment 3**)
- **note** that a tracked changes copy of the conditions package (**Attachment 4**) will be provided to the applicant for information only
- **sign** the attached letters to the relevant entities advising them of your decision (**Attachment 5**) and enclose a copy of the notice of decision
- **note** that a decision is required by **31 January 2017** in accordance with section 375(4) of the *Sustainable Planning Act 2009* (SPA)
- **note** that following your approval the notice of decision will be placed on the department's website and a Report to Parliament regarding your decision will be tabled in the Legislative Assembly.

NOTED or APPROVED/NOT APPROVED


 Hon. Jackie Trad MP
 Deputy Premier
 Minister for Infrastructure,
 Local Government and Planning
 and Minister for Trade and Investment

Date: 31/01/17

BACKGROUND:

On 11 June 2014, the then Deputy Premier, Minister for State Development, Infrastructure and Planning, exercised ministerial powers to call in the development application for the proposed Mount Emerald Wind Farm development at Arriga. On 24 April 2015, you approved the development application, subject to conditions.

On 18 December 2015, you approved a change to the development approval under section 369 of SPA.

On 9 December 2016, the applicant submitted a properly made request to make another change to the approval under section 369 of SPA. The applicant subsequently amended the request on 9 January 2017 and 16 January 2017. The request, which includes the original request and the amended request, is at **Attachment 1**.

KEY ISSUES:

The request, as amended, proposes changes to:

- condition 5 – to be deleted to remove the requirement relating to low frequency noise emission, in line with the released Wind Farm State Code and Guideline dated 22 July 2016
- condition 6 – to remove references to condition 5
- condition 7 – to ensure that the shadow flicker requirements are consistent within the condition and are consistent with the requirements of the Wind Farm State Code and Guideline

Author details: Daniela Walker Position: Senior Planner Telephone: 3452 7692 Date completed: 11 January 2017	Endorsed by: Steve Conner Position: Executive Director Telephone: 3452 7662 Date approved: 19 January 2017	Endorsed by: Stuart Moseley DDG: Planning Group Telephone: 3452 7909 Date approved: unavailable	Endorsed by: Frankie Carroll Director-General Telephone: 3452 6767 Date approved: 20/1/17
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- condition 10 – to be deleted to remove the requirement relating to on-site landscaping plan
- condition 11 – to be modified to remove the requirement for it to be prepared by a Registered Professional Engineer of Queensland (RPEQ) and replaced with a suitably qualified expert.

The department has undertaken an assessment of the requested changes and considers they constitute a permissible change. The matters you must have regard to when making your decision, and a detailed assessment of the requested changes, are provided in the Planning Assessment Report (**Attachment 2**).

It is recommended that you approve the request and sign the amended notice of decision (**Attachment 3**). A tracked changes copy of the notice of decision and conditions package is also attached for your information and will be provided to the applicant for information only (**Attachment 4**).

Under SPA you, as the responsible entity, must decide the request within 30 business days after receiving the request. Your decision date for the request is **31 January 2017**. You must then give written notice of the decision to the applicant, the Mareeba Shire Council (council), and the department as the concurrence agency (**Attachments 3 and 5**).

ELECTION COMMITMENTS:

GEC108 - provide a stable and welcoming regulatory environment to encourage private sector investment in renewable energy.

RESULTS OF CONSULTATION:

In accordance with the requirements of SPA, the request was referred to the council and the department as relevant entities for their comment. Both relevant entity responses had no objections to the change. The responses were considered in the department's assessment responses and are included as Schedule 6 and Schedule 7 to **Attachment 2**.

RIGHT TO INFORMATION: Contents/attachments suitable for publication? ☒ Yes ☐ No

MEDIA OPPORTUNITY: Is there a media opportunity for the DP's Office? ☐ Yes ☒ No

Planning Assessment Report

Mount Emerald Wind Farm

(Mareeba Shire Council)

Site:

Springmount Road and Kippin Drive, Arriga

Proposal:

Request to change development approval

January 2017



Queensland
Government

Executive Summary

Name of applicant:	Mount Emerald Wind Farm Pty Ltd c/- Ratch-Australia Corporation
Owners consent provided:	Port Bajool Pty Ltd
Location:	Springmount Road and Kippin Drive, Arriga
Assessment Manager:	Mareeba Shire Council
Call in notice issued:	11 June 2014
Call in decided:	24 April 2015
Development approval sought to be changed:	Development permit for a material change of use for a wind farm comprising a maximum 63 turbines
Submission considerations:	The development application was code assessable. Consequently, there were no submissions for the original application.
Requested changes:	The request seeks to amend condition 5, 6, 7, 10 & 11(a) of the development approval.
Fee paid:	\$1,511 paid in accordance with Section 2M (2)(b) of Part 3 of the Sustainable Planning Regulation 2009.
Relevant entities:	There were two relevant entities to this request: 1. Mareeba Shire Council 2. Department of Infrastructure, Local Government and Planning (the department) as the concurrence agency
Objections to the permissible change request:	No objections were received from the relevant entities.
Constitutes a permissible change:	The department considers that the request constitutes a permissible change.
Recommendation:	The department has assessed the request against relevant matters under section 374 of the <i>Sustainable Planning Act 2009</i> (SPA) and recommends that you approve the request.
Decision date:	You must make your decision on or before 31 January 2017

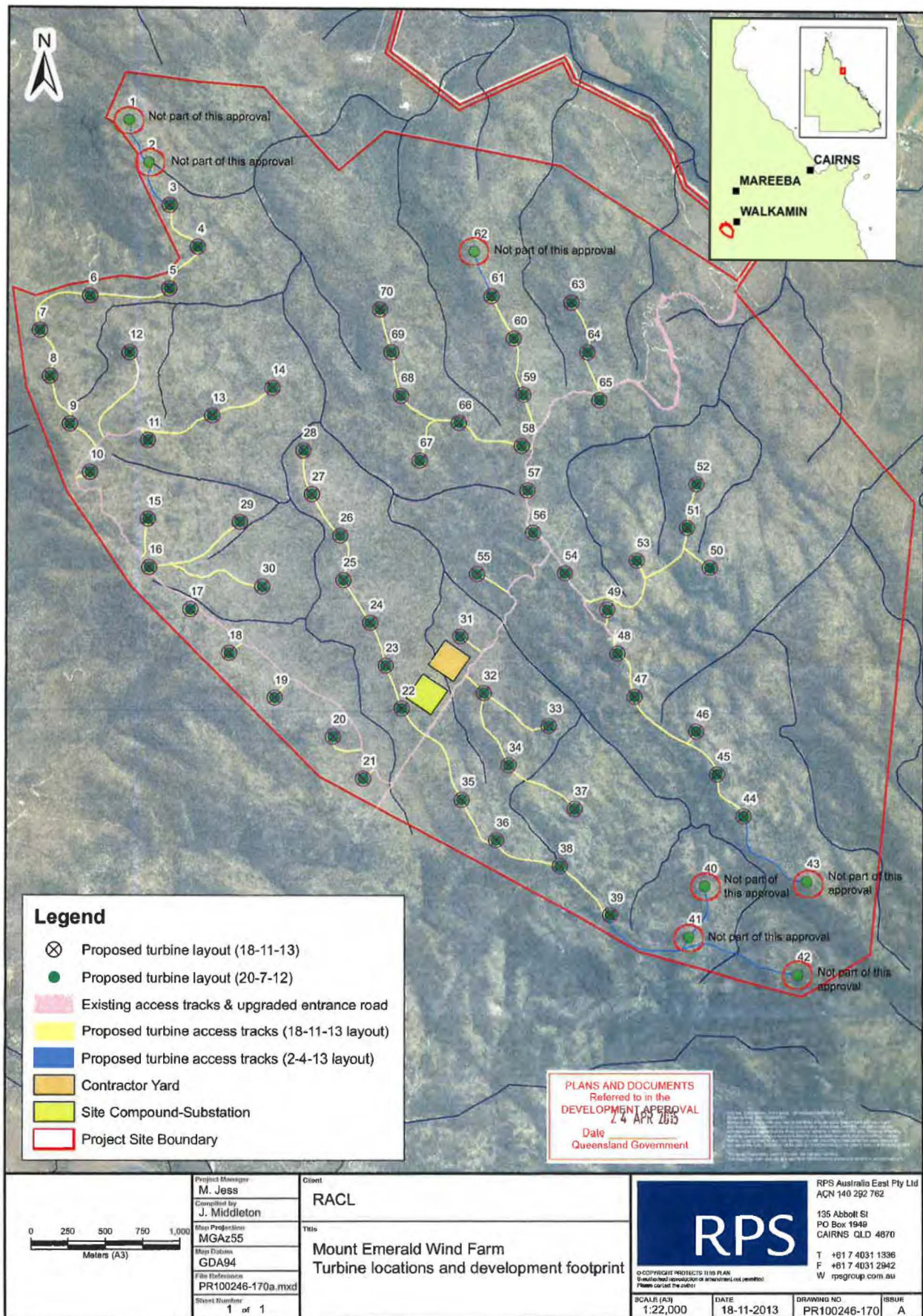


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Schedule 2 – Copy of Call in Notice
Schedule 3 – Copy of Decision Notice
Schedule 4 – Copy of Amended Decision Notice
Schedule 5 – Copy of Native Title Assessment
Schedule 6 – Mareeba Shire Council relevant entity response
Schedule 7 – Concurrence agency relevant entity response

1.0 Introduction

This planning assessment report has been prepared to assist you, the Deputy Premier, Minister for Infrastructure, Local Government and Planning and Minister for Trade and Investment (the Planning Minister), in assessing a request made by Mount Emerald Wind Farm Pty Ltd c/- Ratch-Australia Corporation (the applicant), to change a development approval (the request) under section 369 of the *Sustainable Planning Act 2009* (SPA). The original request was made on 9 December 2016 and amended by the applicant on 9 January 2017 and 16 January 2017 (**Schedule 1**).

The request relates to the development of [REDACTED] 2015, and changed on 18 December 2015, [REDACTED] wind farm and ancillary infrastructure located at Arnga.


The request seeks to amend a number of conditions of the approval, as summarised below:

- condition 5 – to be deleted to remove the requirement relating to low frequency noise emission, in line with the recently released Wind Farm State Code and Guideline
- condition 6 – to remove references to condition 5
- condition 7 – to ensure that the shadow flicker requirements are consistent within the condition and are consistent with the requirements of the Wind Farm State Code and Guideline
- condition 10 – to be deleted to remove the requirement relating to on-site landscaping plan
- condition 11(a) – to be modified to remove the requirement for it to be prepared by a RPEQ and replaced with suitably qualified expert.

Under section 369(1)(e) of SPA, you are the responsible entity for the request. As the responsible entity, you must determine if the request constitutes a 'permissible change'. Based on your determination and assessment, you must decide to approve the request (with or without conditions) or refuse the request, on or before **31 January 2017**.

2.0 Particulars of the development

2.1 Application details

Our reference number:	MC16/5324
Name of applicant:	Mount Emerald Wind Farm Pty Ltd
Contact details:	c/- Ratch-Australia Corporation 
Ministerial call in reference:	MBN16/1831
Date of ministerial call in:	11 June 2014
Date of ministerial decision on call in:	24 April 2015
Development approved by the Planning Minister:	Development permit for a material change of use for a wind farm comprising a maximum 63 turbines
Local Government Area:	Mareeba Shire Council
Applicable planning scheme at time of lodgement of original development application:	Mareeba Shire Planning Scheme 2004, Version 1/2007
Level of Assessment:	Code assessable
Date the request for the change to the development approval was properly made:	9 December 2016

2.2 Site details

Current owner of property:	Port Bajool Pty Ltd
Real property description:	Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871
Address:	Springmount Road and Kippin Drive, Arriga
Site area:	2,422 hectares (with an additional 2,000m ² identified as area to be opened as road)

3.0 Background

3.1 Site location and characteristics

The Mount Emerald Wind Farm is located at Springmount Road and Kippin Drive, Arriga (the site). The town centre of Mareeba is situated approximately 16.5 kilometres to the north of the site, and Atherton approximately 11.5 kilometres south east of the site (**Figure 1**).

The site is zoned rural and is a privately owned plateau elevated 300 metres above the surrounding plains. It is surrounded by a range of land uses, including the Springmount Waste Management Facility, various rural uses including worker accommodation, the Tablelands sugar mill, extractive industry, commercial nursery, the Lotus Glen Prison and the Mt Uncle Distillery.

The site is described as Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871. It comprises a total area of approximately 2,422 hectares (with an additional 2,000m² identified as area to be opened as road).

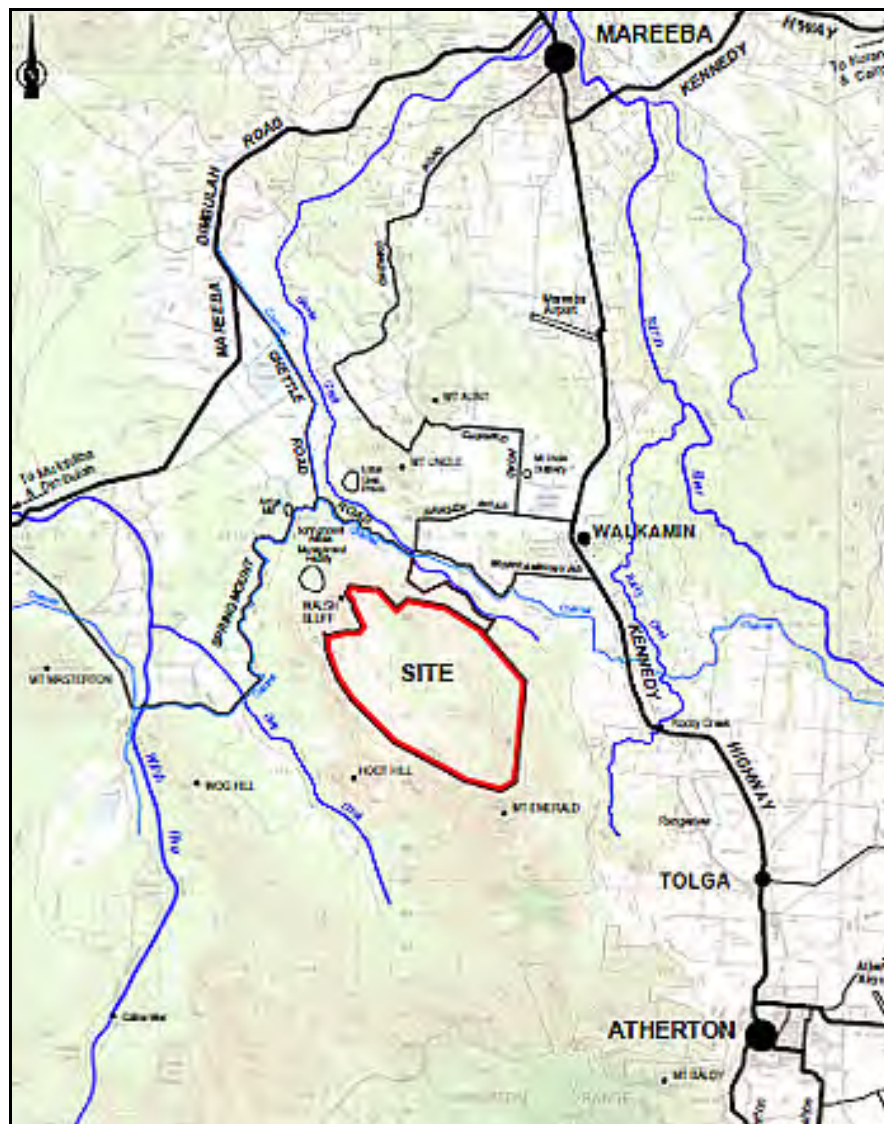


Figure 1- Site context and surrounding land uses

3.2 History of development

3.2.1 Development application

On 15 August 2011, RPS, on behalf of Mount Emerald Wind Farm Pty Ltd, lodged a code assessable development application with the Tablelands Regional Council for a wind farm, located at Springmount Road and Kippin Drive, Arriga. On 15 March 2012, the application was deemed 'properly made' after the applicant provided additional material.

On 1 January 2014, Tablelands [REDACTED] the Mareeba Shire Council. During the [REDACTED] (Council) became the original assessment [REDACTED]

The original application sought a development permit for a material change of use for a wind farm, comprising a maximum of 75 wind turbines together with ancillary infrastructure including access, transformers, depots, cabling and a substation.

On 3 April 2012, the development application was referred to the then Department of Environment and Resource Management (DERM) as a concurrence agency and to Powerlink as an advice agency. Following Machinery of Government changes, the referral triggers to the then DERM were transferred to the Department of Environment and Heritage Protection (contaminated land, material change of use in a wetland management area) and to the Department of Natural Resources and Mines (clearing vegetation).

Council did not make a decision prior to the development application being called in by the then Deputy Premier, Minister for State Development, Infrastructure and Planning (the then Planning Minister).

3.2.2 Ministerial call in

On 10 September 2012, Mr Don Sheppard, a local constituent and the Co-Vice President of the Atherton Tablelands Chamber of Commerce, wrote to the then Planning Minister requesting that the application be called in. However, the then Planning Minister decided not to call in the development application at that time.

On 28 January 2014, Councillor Tom Gilmore, council's mayor, wrote to the then Planning Minister requesting that the development application be called in. On 10 April 2014, the then Planning Minister issued a proposed call in notice, seeking representations from affected parties. On 11 June 2014, after considering the representations received, the development application was called in. A copy of the call in notice is included in **Schedule 2**.

The development application was considered in line with the assessment and decision provisions under SPA. On 24 April 2015 you approved the development application, subject to conditions. A copy of the decision notice, including conditions, is incorporated in **Schedule 3**.

3.2.3 First request to change the development approval

On 31 August 2015, the applicant requested a change to the development approval under SPA.

The change request related to amendments to:

- conditions 3, 4, 5, 6 and 11 – to reference existing ‘and approved’ dwellings and sensitive land uses ‘at the date of this approval.’
- condition 4, to:
 - include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
 - delete reference to $L_{A90,10 \text{ minutes}}$ measurements from the 37dB(A) for the outdoor day-time equivalent noise level
 - require the assessment of equivalent noise levels at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades
 - include reference to the measuring of operational noise for the operation, to be in accordance with the AS4959-2010 *Acoustics – Measurement, prediction and assessment of noise from wind turbine generators* (AS4959-2010)
 - provide an option to utilise an alternative standard or guideline to AS4959-2010 for the assessment of Special Audible Characteristics, with reasons for the selection of the alternative to be provided
 - include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator.
- condition 5, to:
 - include an associated Time Averaging Period of 10 minutes for the outdoor night-time and outdoor day-time equivalent noise levels
 - require the assessment of equivalent noise levels at all existing and approved sensitive land uses at the date of this approval, rather than one metre from all noise affected facades; and
 - include reference to the measuring of operational noise for the operation, to be in accordance with the AS4959-2010
 - include reference to all integer hub wind speeds from cut-in to rated power of the wind turbine generator.
- condition 6, to:
 - replace acoustic ‘engineer’ with acoustic ‘consultant’
 - include requirements for noise modelling to include assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation
 - require the submission of a compliance noise assessment report within 12 months of the completion of construction and then to be maintained, which demonstrates that the wind farm meets the noise levels specified in conditions 4 and 5.
- condition 7, to amend the modelling of the shadow flicker of part of the condition to ‘30 hours per annum and 30 minutes per day.’
- Condition 12, to amend an administrative error in the numbering within the condition
- condition 14, to amend the timing for the submission of the Community Engagement Strategy from three months prior to ‘consultation’ to five months prior to ‘construction.’
- amend the advice statement in relation to:
 - the Significant Species Management Plans to remove specific reference to the Mareeba Rock Wallaby.

The change request was deemed to be a permissible change and was subsequently approved by you on 18 December 2015 (**Schedule 4**).

3.3 The request

On 9 December 2016, the applicant requested to change the development approval under section 369 of SPA. This request was subsequently amended by the applicant on 9 January 2017 and 16 January 2017.

As noted in the introduction, this request (**Schedule 1**), seeks to:

- condition 5 – to be deleted to remove the requirement relating to low frequency noise emission, in line with the recently released Wind Farm State Code and Guideline
- condition 6 – to remove reference to [REDACTED]
- condition 7 – to ensure that [REDACTED] is consistent with the condition and are consistent with the Wind Farm State Code and Guideline
- condition 10 – to be deleted to remove the requirement relating to on-site landscaping plan
- condition 11(a) – to be modified to remove the requirement for it to be prepared by a RPEQ and replaced with suitably qualified expert.

4.0 Assessment of the request

4.1 Responsible entity

Section 369 of SPA provides that a person who wishes to make a permissible change to a development approval must, by written notice, ask the responsible entity for approval to make the change. As the approval was given by you, the Planning Minister, you are the responsible entity for administering section 369(1)(b) of SPA for this request.

Section 369(2) of SPA states that if you are satisfied the change does not affect a state interest you may refer the request to the original assessment manager. As the proposed change relates to changing conditions of a development application called in under section 424 of SPA, the Department of Infrastructure, Local Government and Planning (the department) recommends that this decision is not referred to the original assessment manager.

4.2 Notice of request

The request was accompanied by the following relevant documents, as required under section 370 of SPA, namely:

- the request as amended, prepared by Mount Emerald Wind Farm Pty Ltd c/- Ratch-Australia Corporation
- owners consent from Port Bajool Pty Ltd
- proof of payment of the application fee
- proof of lodgement with relevant entities (council and the concurrence agency).

All these documents, including the email correspondence from the applicant dated 9 January 2017 and 16 January 2017 amending to the request, are at **Schedule 1** and were all considered in the assessment of the request.

4.3 Relevant entities

Section 372 of SPA requires that when a person makes a request to change a development approval, the person must give a copy of the request to the original assessment manager and any concurrence agencies for the original development application. These entities are described as relevant entities.

The relevant entity responses received from council and the department are detailed in section 4.5.4 of this report.

4.4 Does the request constitute a permissible change

A change may only be made to a development approval if the change is a permissible change in accordance with section 367 of SPA. Section 367(1) of SPA states that *'A permissible change, for a development approval, is a change to the approval that would not—*

- (a) result in a substantially different development; or*
- (b) if the application for the approval were remade including the change –*
 - (i) require referral to additional concurrence agencies; or*
 - (ii) for an approval for assessable development that previously did not require impact assessment – require impact assessment; or*
- (c) for an approval for assessable development that previously required impact assessment—be likely, in the responsible entity's opinion, to cause a person to make a properly made submission objecting to the proposed change, if the circumstances allowed; or*
- (d) cause development to which the approval relates to include any prohibited development.'*

Statutory Guideline 06/09 – Substantially different development when changing applications and approvals (SG06/09) provides guidance in relation to paragraph (a) above.

Table 1 provides an assessment of the proposed changes against the definition of 'permissible change' in section 367(1) of SPA, and the department's response to these.

Table 1 - Assessment against definition of permissible change

Section of SPA	The department's response
Section 367(1) <i>A permissible change, for a development approval, is a change to the approval that would not, because of the change –</i>	
<i>(a) result in a substantially different development; or</i>	<p>The following matters identified in SG06/09 have been considered in assessing whether the request results in a substantially different development:</p> <p><i>A change may result in a substantially different development if the proposed change:</i></p> <ul style="list-style-type: none"> • <i>involves a new use with different or additional impacts</i> <p>The proposed changes do not involve a new use with different or additional impacts.</p> <ul style="list-style-type: none"> • <i>results in the application applying to a new parcel of land</i> <p>The proposed changes are not applying to a new</p>

	<p>parcel of land.</p> <ul style="list-style-type: none"> <i>dramatically changes the built form in terms of scale, bulk and appearance</i> <p>The proposed changes do not change the built form in terms of scale, bulk and appearance.</p> <ul style="list-style-type: none"> <i>changes the ability of the proposal to operate as intended</i> <p>The proposed changes do not change the ability of the proposal to operate as intended.</p> <ul style="list-style-type: none"> <i>removes a component that is integral to the operation of the development</i> <p>No component that is integral to the operation of the development is proposed to be removed.</p> <ul style="list-style-type: none"> <i>significantly impacts on traffic flow and the transport network, such as increasing traffic to the site</i> <p>The proposed changes do not result in any changes to traffic flow or the transport network.</p> <ul style="list-style-type: none"> <i>introduces new impacts or increases the severity of known impacts</i> <p>The proposed changes do not introduce new impacts or affect the severity of any known impacts were not already considered during the reassessment of the development application, and your approval of the application.</p> <ul style="list-style-type: none"> <i>removes an incentive or offset component that would have balanced a negative impact of the development</i> <p>The proposed changes do not remove an incentive or offset component.</p> <ul style="list-style-type: none"> <i>impacts on infrastructure provision, location or demand</i> <p>The proposed changes do not impact on infrastructure provision, location or demand.</p>
Section 367(1)(b)(i) <i>if the application for the approval were remade including the change – require referral to additional concurrence agencies; or</i>	If the original development application was remade including the proposed changes, the development application would not require referral to additional referral agencies under SPA.
Section 367(1)(b)(ii) <i>if the application for the approval were remade including the change for an approval for assessable development that previously did not require impact assessment – require impact assessment; or</i>	If the original development application was remade including the proposed changes, the development application would remain code assessable.

Section 367(1)(c) <i>for an approval for assessable development that previously required impact assessment – Would the proposed change be likely, in the responsible entity's opinion, to cause a person to make a properly made submission objecting to the proposed change, if the circumstances allowed; or</i>	The development application was code assessable. Consequently, there were no submissions for the original application.
Section 367(1)(d) <i>cause development to which the approval relates to include any prohibited development.</i>	The proposed change will not result in prohibited development prescribed under Schedule 1 of SPA.

Based on the above assessment, the request is considered to be a permissible change in accordance with section 367 of SPA.

Native Title Assessment

On 11 January 2017, the department undertook a Native Title Assessment for the request (**Schedule 5**) and it was satisfied that the proposed change will have no further effect on Native Title as it is deemed to be a minor change. Therefore, there are no procedural rights (notification) required to Native Title parties under the *Native Title Act 1993 (Cth)*.

4.5 Assessing the request

Section 374(1) of SPA provides that you are to assess the request and, to the extent relevant, have regard to:

- (a) *the information the person making the request included with the request; and*
- (b) *the matters the responsible entity would have regard to if the request were a development application; and*
- (c) *if submissions were made about the original application—the submissions; and*
- (d) *any notice about the request given under section 373 to the entity; and*
- (e) *any pre-request response notice about the request given to the entity.*

4.5.1 Information included within the request

The request included a number of documents for your consideration, as detailed in section 4.2 of this report.

4.5.2 Matters the responsible entity would have regard to if the request were a development application

Under section 374(2) of SPA, when assessing the request, you must have regard to the planning instruments, plans, codes, laws or policies applying when the original development application was made on 29 March 2012. However, you may give the weight you consider appropriate to the planning instruments, plans, codes, laws or policies applying when the request was made.

Wind Farm State Code

The department has assessed the request against relevant planning instruments, plans, codes, laws and policies and considers that it is consistent with all the relevant requirements. In particular, the department has given the weight it considers appropriate to the Wind Farm State Code (the code) as part of the State Development Assessment Provisions (version 1.9) which came into effect on 22 July 2016. *'The purpose of the code is to protect individuals, communities and the environment from adverse impacts as a result of the construction, operation and decommissioning of wind farm development.'* The request is consistent with the noise emissions, shadow flicker, and other values provisions of the code and guide

4.5.3 If submissions were made about the original application—the submissions

The development application was code assessable. Consequently, there were no submissions for the original application.

4.5.4 Any notice about the request given under section 373 to the entity

As identified in section 4.3 of this report, relevant entity responses were received from council and the department in regard to the request.

Council

Council, as the original assessment manager of the development application, is a relevant entity for this permissible change request.

On 22 December 2016, council provided its response to the request, advising that it had no objections to the request.

Following amendment to the request in relation to condition 7, on 11 January 2017, council informed that it had no objections to the amended request.

Following additional amendment to the request in relation to condition 10 and 12, on 17 January 2017, council informed that it had concerns about the deletion of condition 10 and stated that *'Whilst it is agreed that the substation and ancillary structures will be screened from sensitive view locations, the landscaping plan should also be addressing all other on site landscaping requirements. This would obviously include the landscaping treatment of the access road up the side of the mountain and any disturbed areas around the visible wind turbine towers. Council would support the amendment of Condition 10 to remove the need to screen the substation, but the overall landscaping of the wind farm development still needs an appropriate plan. The deletion of Condition 10 in its entirety is not supported'*.

After the clarification of the requirements of the condition which reads as follow:

- (a) *'Submit to the chief executive administering the SPA an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.'*
- (b) *The on-site landscaping plan must include but not limited to:*
 - (i) *landscaping to screen the substation, switchyard and maintenance depots and other associated buildings (excluding the turbines);*
 - (ii) *details of plant species proposed to be used in the landscaping, including height and spread at maturity;*
 - (iii) *a timetable for implementation of all on-site landscaping works;*

(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.'

As detailed above, the condition does not specify any requirements for screening of roads and it states that the on-site landscaping is not exclude the turbine. Nonetheless, the department understands that the construction environment management plan will address the concerns raised by council.

On 17 January 2017, council amended it response and informed that it no objections to the amended request.

All the relevant entity correspondence received from council is at **Schedule 6**.

The department

Under section 944A of SPA, the Chief Executive of SPA, the Director-General of the department, is the relevant entity for changes to development applications if there were any concurrence agencies to the original application.

On 10 January 2017, the department, provided its relevant entity response to the request (**Schedule 7**), advising that it had no objections to the request.

Following amendment to the request, on 9 January 2017 and on 16 January 2017, the department informed that it had no objections to the amended request.

All the relevant entity correspondence received from the department is at **Schedule 7**.

4.5.5 Department's assessment

The department considers that the request constitutes a permissible change under section 367(1) of SPA as detailed in **Table 1**. The department's assessment of the request is provided in Table 2 below:

Table 2 - Department's assessment

Proposed change	Department's response
Condition 5 The applicant requests the deletion of this condition to remove the requirement relating to low frequency noise emissions given that the code <i>'does not retain the C-weighted criteria and therefore also does not provide guidance for predicting or measuring C-weighted levels. Given this, and in the absence of C-weighted policies in other states and international jurisdictions, there is limited reference information on suitable assessment practices. In particular, C-weighted noise predictions and measurements are subject to high levels of uncertainty.'</i>	Both the department and Savery and Associates Pty Ltd, the department's acoustic consultant, support these requested changes. While the draft Wind Farm State Code (the draft code) originally had provisions about low frequency noise emissions resulting from development, these provisions were removed from the code following the expert review and recommended amendments by Savery and Associates which stated that <i>'Suggest deletion of PO10 entirely as it is redundant. At planning stage the compliance with A-weighted noise level criteria will effectively address community response.'</i> This change is consistent with the endorsed Wind Farm State Code and

	Guideline.
<p>Condition 6</p> <p>The applicant requests changes to parts of condition 6 to remove references to condition 5, as the condition requires the applicant to submit a revised noise assessment report, demonstrating compliance with the noise limits specified in conditions 4 and 5.</p>	<p>The department supports the requested change, as it is a consequential change to the removal of condition 5 above.</p>
<p>Condition 7 (a)</p> <p>The applicant requests changes to parts of condition 7 to ensure consistency by referring only to the requirement that the shadow flicker from the turbines does not exceed <i>'30 hours per annum and 30 minutes per day at any dwelling existing at the date of this approval'</i> and not <i>'10 hours per annum'</i>.</p>	<p>The department supports the requested change as it consistent with the code which states that <i>'The modelled blade shadow flicker impact on any existing adjoining sensitive land use(s) does not exceed 30 hours per annum and 30 minutes per day.'</i> This change is consistent with the endorsed Wind Farm State Code and Guideline.</p>
<p>Condition 10</p> <p>The applicant requests the deletion of this condition to remove the requirement relating to on-site landscaping plan as the substation and ancillary structures will be screened from all sensitive view locations by the existing land form and tree cover.</p>	<p>The department supports the requested change as it consistent with the advice provided by Andrew Homewood, Green Bean Design, a registered landscape architect on 30 November 2016 which states that <i>'In our professional opinion we consider that views toward the substation and ancillary structures will be screened from all sensitive view locations located beyond and below the approved Mount Emerald Wind Farm site boundary. Given this conclusion, there is no need to prepare any form of landscape plan as required by Condition 10, as the approved Mount Emerald Wind Farm infrastructure (i.e. substation, switchyard, maintenance buildings and other associated buildings (excluding the wind turbines)) will already be screened by the existing land form and tree cover.'</i></p>
<p>Condition 11(a)</p> <p>The applicant requests changes to parts of condition 12 (a) to remove the requirement for it to be prepared by a RPEQ and replaced with suitably qualified expert.</p>	<p>The department supports the requested change due to the nature of this report being a compilation of information from various sources which do not require engineering certification and the advice provided by Cardno HRP during the reassessment of the application did not require this condition to be prepared by an RPEQ.</p>

Based on the above assessment of the request, the department considers that the request is consistent with the provisions of the code and guideline.

5.0 Recommendation

Under section 375(4) of SPA you, as the responsible entity, have 30 business days to decide the permissible change request after receiving the request, but you must not decide the request until the first of the following happens –

- i. *a written notice has been received under section 373 from each entity given a copy of the request*
- ii. *the period of 25 business days from the date the request ends.*

As a written notice has been received under section 373 of SPA from each entity given a copy of the request, your decision can now be made.

Pursuant to section 374 of SPA, after assessing the request, you must decide to:

- (a) *approve the request, with or without conditions; or*
- (b) *refuse the request.*

If you impose a condition, it must be relevant to the proposed change and be relevant or reasonably required as specified in section 345 of SPA.

The department has assessed the request against relevant matters under section 374 of SPA and recommends that you approve the request, as detailed in the decision notice (**Attachment 3**). The approved changes are shown in bold in the decision notice dated 24 April 2015, in accordance with section 376(2)(c). No other parts of the decision notice are changed.

Annexure 7.1

Native Title Assessment Form

This annexure provides a template Native Title Assessment Form to record your native title assessment for a proposed dealing.

To help you complete this Native Title Assessment Form, some of the Modules (eg. Module BA) contain example extracts of this form.

If you have any queries in relation to using this form, please contact your NTCO. If your NTCO is unsure how to proceed, Aboriginal and Torres Strait Islander Land Services should be contacted for advice.



QNTIME

Remember to –

- record your tenure and use findings as **research items** in the research layer in QNTIME; and
- request a **conclusion** be published in QNTIME for any research item you have assessed to be a previous exclusive possession act (PEPA).

Native Title Assessment Form

Information about this Form –

1. This form is mainly based upon the *Path through Native Title Assessment*.
2. To correctly complete this form, you will need to have read the relevant Modules of the Procedures.
3. Complete each part of the **Assessment Section** until you reach a **Go to Reason for Decision**, and then complete the **Decision Section** at the end of this form.
4. Where there is a check box, make your selection by clicking on the box. Insert all relevant information in the appropriate table field.
5. Where a Module only applies to part of your proposed dealing area, ensure you have ticked the "Part of the proposed dealing area" box. Proceed through the form for the balance of your proposed dealing area. In this instance, a diagram should be attached to identify and to distinguish between the different areas.



Please ensure this assessment is still correct at the time you do the dealing.

Assessment Section

Proposed Change

A request to change an existing approval under the *Sustainable Planning Act 2009*, has been lodged by RATCH-Australia Corporation on behalf of Mont Emerald Wind Farm Pty Ltd for changes to DILGP conditions 5, 6 and 7 of the Mt Emerald Wind Farm approval. The requested changes seek to modify:

- condition 5 – to remove the requirement of c-weighted noise level considerations in line with the requirements of the Wind Farm State Code and Guideline;
- condition 6 – to remove references to condition 5; and
- condition 7 – to ensure that the shadow flicker modelling requirements are consistent within the condition and in line with the requirements of the Wind Farm State Code and Guideline by not exceeding 30 hour per annum and 30 minutes per day.

Proposed Dealing Area

Lot(s)/Plan(s): Lot 7 on SP235244, Lot 905 on CP896501 and Lots 1-3 on SP231871

Parish: Culgar **County:** Hodgkinson
Dynes

Current Status: Freehold and Lands Lease

Locality Description: Springmount Road and Kippin Drive, Arriga

Attached Plan/Map: As per submitted application

Decision Section

Reason for Decision

A request to change an existing approval under the *Sustainable Planning Act 2009*, has been lodged by RATCH-Australia Corporation on behalf of Mont Emerald Wind Farm Pty Ltd for changes to DILGP conditions 5, 6 and 7 of the Mt Emerald Wind Farm approval. The requested changes seek to modify:

- condition 5 – to remove the requirement of c-weighted noise level considerations in line with the requirements of the Wind Farm State Code and Guideline;
- condition 6 – to remove references to condition 5; and
- condition 7 – to ensure that the shadow flicker modelling requirements are consistent within the condition and in line with the requirements of the Wind Farm State Code and Guideline by not exceeding 30 hour per annum and 30 minutes per day.

The proposed change is considered to have no further effect on native title, as the change relates to amending conditions relating to noise and shadow flicker requirements. The changes do not relate to any physical change from the approved development footprint and are considered to be administrative therefore having no material effect on native title.

The Department is satisfied that the proposed change will have no further effect on native title as it is deemed to be a minor change.

Native Title Parties & Procedural Rights (if relevant)

Types of native title parties	Names of native title parties	Procedural rights to be provided to the native title parties
Registered Native Title Claimants	NA	No
Native Title Representative Body	North Queensland Land Council Native Title Representative Body Aboriginal Corporation	No



Proceed (first providing any relevant procedural rights)



Send to NTCO



Send to Aboriginal and Torres Strait Islander Land Services through NTCO

Name, title and signature of officer making this assessment –

Name: Sophie Smith
Title: Native Title Officer
Department/Agency: DILGP– DA Projects
Signature: 
Date: 11 January 2017

Don't forget to:

- 1) Enter your research into QNTIME.
RB /
RI /
- 2) Request a conclusion be published where you found a PEPA.



Mareeba

SHIRE COUNCIL

65 Rankin Street
PO Box 154 MAREEBA QLD 4880

P: 07 4086 4657
F: 07 4086 4733

W: www.msc.qld.gov.au
E: info@msc.qld.gov.au

22 December 2016

Council Ref: MCU/11/0024

Our Ref: BM:nj

Your Ref: MBN14/753

The Hon Jackie Trad MP
Deputy Premier
Minister for Infrastructure, Local Government and Planning
Minister for Trade and Investment
PO Box 15009
CITY EAST QLD 4002

Dear Deputy Premier

**NOTICE ABOUT REQUEST FOR PERMISSIBLE CHANGE - RELEVANT ENTITY
DEVELOPMENT PERMIT FOR MATERIAL CHANGE OF USE - MOUNT EMERALD WIND FARM,
ARRIGA**

Mareeba Shire Council received a copy of the request for a permissible change under section 372(1) of the *Sustainable Planning Act 2009* on 9 December 2016 advising Council of the request for a permissible change made to the responsible entity under section 369 of the *Sustainable Planning Act 2009*.

Council understands that the proposed changes are as follows:

- *Acoustic Amenity - Condition 5 - delete condition 5 to align with State wind farm code;*
- *Acoustic Amenity - Condition 6 - to remove reference to Condition 5.*

Council has considered the proposed changes to the development approval and advises that it has no objection to the change being made.

Should you require any further information, please contact Council's Senior Planner, Brian Millard on the above telephone number.

Yours faithfully

BRIAN MILLARD
SENIOR PLANNER

Daniela Walker

From: Brian Millard <BrianM@msc.qld.gov.au>
Sent: Wednesday, 11 January 2017 10:19 AM
To: Daniela Walker
Subject: RE: Permissible Change Request - Development Approval - Mt Emerald wind farm

Hi Daniela,

I confirm that there is no objection to the proposed change to Condition 7.

Regards

Brian Millard
Senior Planner
Mareeba Shire Council

Phone: 1300 308 461 | Direct: 07 4086 4657 | Fax: 07 4092 3323

Email: brianm@msc.qld.gov.au | Website:

<https://apac01.safelinks.protection.outlook.com/?url=www.msc.qld.gov.au&data=01%7C01%7CDaniela.Walker%40dilgp.qld.gov.au%7C18655619e0f74c2a2fbf08d439b787d3%7C7db2bee6535c4748bf78c30733511bcd%7C0&sdata=6UJ7V6KDsny%2Ff8SOiZOkntZ8y2%2FbS5eF%2F1nRfwIRv84%3D&reserved=0>

65 Rankin Street, Mareeba | PO Box 154, Mareeba, Queensland, Australia, 4880

Go green, keep it on screen - think before you print -----Original Message-----

From: Daniela Walker [<mailto:Daniela.Walker@dilgp.qld.gov.au>]

Sent: Wednesday, 11 January 2017 10:12 AM

To: Brian Millard

Subject: Permissible Change Request - Development Approval - Mt Emerald wind farm

Hi Brian,

As discussed, please find amendments to the request below.

Thank you

Daniela Walker
Senior Planner
p. 07 3452 7692 | e. daniela.walker@dilgp.qld.gov.au

-----Original Message-----

From: [Refused under section 47(3)(b) of the RTI Act. ratchaustalia.com]

Sent: Monday, 9 January 2017 4:08 PM

To: Morag Elliott

Cc: Daniela Walker

Subject: Re: Permissible Change Request - Development Approval - Mt Emerald wind farm

Morag/Daniella

In addition to the below request we would also like to amend condition 7.

Condition 7 relates to Shadow Flicker and as the condition currently stands there is some discontinuity where one part allows for 30 hours/annum and another allows for 10 hours/annum.

It is requested for both parts of this condition to use the 30 hours/annum limit. It is noted the QLD wind farm code and guidelines also recommend the 30 hours/annum, thus this amendment will align the Permit Conditions with the current code.

Should you have any questions regarding this amendment please feel free to contact me.

Regards

Refused under section

> On 9 Dec 2016, at 2:19 pm, Refused under section 47(3)(b) of the RTI Act. ratchaustralia.com> wrote:
>
> To whom it may concern,
>
> On behalf of RATCH-Australia, please find attached correspondence associated with a request to make a Permissible Change to the Decision Notice for the Mount Emerald Wind Farm.
>
> Regards
>
> Refused under section 4
>
> RATCH-Australia
> Level 4, 231 George St
> Brisbane Q 4000
> Refused under section 47(3)(b) of the RTI Act.
>
> <20161209 Request for Permissible Change.pdf>

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We recommend that you scan this e-mail and any attachments for viruses before opening. This Council does not accept liability for any loss or damage incurred either directly or indirectly from opening this e-mail or any attachments to it.

From: [Brian Millard](#)
To: [Patrick Atkinson](#)
Cc: [Daniela Walker](#)
Subject: FW: Amendment to Permissible Change Request - Development Approval - Mt Emerald wind farm
Date: Tuesday, 17 January 2017 2:55:57 PM
Attachments: [image001.png](#)

Hi Patrick and Daniela,

Thank you for contacting me to discuss this matter and for forwarding the extract from the Rehabilitation Plan & Guidelines.

On the basis that my previous concerns will be appropriately addressed under the Rehabilitation Plan & Guidelines, I confirm that Council no longer has an objection to the deletion of Condition 10.

Regards

Brian Millard
Senior Planner

Phone: 1300 308 461 | **Direct:** 07 4086 4657 | **Fax:** 07 4092 3323
Email: brianm@msc.qld.gov.au | **Website:** www.msc.qld.gov.au
65 Rankin Street, Mareeba | PO Box 154, Mareeba, Queensland, Australia, 4880

 Go green, keep it on screen - think before you print

From: Brian Millard
Sent: Tuesday, 17 January 2017 9:05 AM
To: 'Daniela Walker'; 'Michele Creecy'
Cc: Carl Ewin
Subject: RE: Amendment to Permissible Change Request - Development Approval - Mt Emerald wind farm

Hi Daniela,

In relation to Condition 10, I still have concerns about the deletion of this entire condition.

I would be agreeable to an amendment of the condition timing (10(a)) to prior to the commencement of the use, but a landscaping plan should still be required.

Regards

Brian Millard
Senior Planner

Phone: 1300 308 461 | **Direct:** 07 4086 4657 | **Fax:** 07 4092 3323
Email: brianm@msc.qld.gov.au | **Website:** www.msc.qld.gov.au
65 Rankin Street, Mareeba | PO Box 154, Mareeba, Queensland, Australia, 4880

 Go green, keep it on screen - think before you print

From: Brian Millard
Sent: Monday, 16 January 2017 1:50 PM

To: 'Daniela Walker'; Michele Creecy
Cc: Carl Ewin
Subject: RE: Amendment to Permissible Change Request - Development Approval - Mt Emerald wind farm

Hi Daniela,

I provide the following comments:

Condition 10 - Whilst it is agreed that the substation and ancillary structures will be screened from sensitive view locations, the landscaping plan should also be addressing all other on site landscaping requirements. This would obviously include the landscaping treatment of the access road up the side of the mountain and any disturbed areas around the visible wind turbine towers. Council would support the amendment of Condition 10 to remove the need to screen the substation, but the overall landscaping of the wind farm development still needs an appropriate plan. The deletion of Condition 10 in its entirety is not supported.

Condition 12 - There is no objection to the amendment of Condition 12(a) to remove "RPEQ" and insert "suitably qualified expert". The amended wording would be consistent with the requirement of Acceptable Outcome AO10 of the Parking and Access Code of the Mareeba Shire Council Planning Scheme - July 2016.

Regards

Brian Millard
Senior Planner

Phone: 1300 308 461 | **Direct:** 07 4086 4657 | **Fax:** 07 4092 3323
Email: brianm@msc.qld.gov.au | **Website:** www.msc.qld.gov.au
65 Rankin Street, Mareeba | PO Box 154, Mareeba, Queensland, Australia, 4880

 Go green, keep it on screen - think before you print

From: Daniela Walker [<mailto:Daniela.Walker@dilgp.qld.gov.au>]
Sent: Monday, 16 January 2017 12:58 PM
To: Michele Creecy; Brian Millard
Subject: Amendment to Permissible Change Request - Development Approval - Mt Emerald wind farm

Hi Michele and Brian,

I have just received an additional amendment to the permissible change request previously sent to you.

Can you please advise if you have any objections to the below changes.

If you have any questions, please do not hesitate to call me.

Thank you
Daniela Walker
Senior Planner
p. 07 3452 7692 | e. daniela.walker@dilgp.qld.gov.au

From: [Refused under section 47(3)(b) of the RTI Act. _____@ratchaustalia.com]
Sent: Monday, 16 January 2017 12:02 PM

To: Morag Elliott
Cc: Daniela Walker
Subject: RE: Permissible Change Request - Development Approval - Mt Emerald wind farm

Morag/Daniella

Further to my previous email, we have reviewed documentation submitted to the department and have identified some other aspects that can be tidied up with amendments to the permit conditions.

Condition 10 - On-site Landscaping Plan

We have previously submitted the document *MEWF response to on-site landscape condition 30 Nov 2016*, in response to this condition.

This assessment was undertaken by a suitably qualified landscape architect and concluded that;

In our professional opinion we consider that views toward the substation and ancillary structures will be screened from all sensitive view locations located beyond and below the approved Mount Emerald Wind Farm site boundary. Given this conclusion, there is no need to prepare any form of landscape plan as required by Condition 10, as the approved Mount Emerald Wind Farm infrastructure (i.e. substation, switchyard, maintenance buildings and other associated buildings (excluding the wind turbines)) will already be screened by the existing land form and tree cover.

Given the conclusions of this report it is requested for Permit Condition 10 to be removed.

Condition 12 – Traffic Management

We have previously submitted the document *MEWF response to on-site landscape condition 30 Nov 2016*, in response to this condition.

This report was completed by a suitably qualified and experience engineering firm and was prepared in accordance with applicable standards, guidelines, procedures and practices at the date of issue.

It is noted that;

Due to the nature of this report being a compilation of information from various sources which do not require engineering certification, therefore there has been no requirement for involvement or approval by a Registered Professional Engineer of Queensland (RPEQ).

It is requested for Permit Condition 12 (a) to be modified to remove the requirement for it to be prepared by a RPEQ and replaced with "suitably qualified expert".

The condition would then become;

Submit to the chief executive administering the SPA a Construction Traffic Management Plan (CTMP) prepared by a suitably qualified expert and in consultation with the Department of

Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire Council.

Should you have any questions regarding these proposed amendment please feel free to contact me.

Regards

Refused under section 4

RATCH-Australia
Level 4, 231 George St
Brisbane Q 4000

Refused under section 47(3)(b) of the RTI Act.

-----Original Message-----

From: Refused under section

Sent: Monday, 9 January 2017 4:08 PM

To: Morag Elliott <Morag.Elliott@dilgp.qld.gov.au>

Cc: Daniela Walker <daniela.walker@dilgp.qld.gov.au>

Subject: Re: Permissible Change Request - Development Approval - Mt Emerald wind farm

Morag/Daniella

In addition to the below request we would also like to amend condition 7.

Condition 7 relates to Shadow Flicker and as the condition currently stands there is some discontinuity where one part allows for 30 hours/annum and another allows for 10 hours/annum.

It is requested for both parts of this condition to use the 30 hours/annum limit. It is noted the QLD wind farm code and guidelines also recommend the 30 hours/annum, thus this amendment will align the Permit Conditions with the current code.

Should you have any questions regarding this amendment please feel free to contact me.

Regards

Refused under section

> On 9 Dec 2016, at 2:19 pm, Refused under section 47(3)(b) of the RTI Act. ratchaustralia.com> wrote:

>

> To whom it may concern,

>

> On behalf of RATCH-Australia, please find attached correspondence associated with a request to make a Permissible Change to the Decision Notice for the Mount Emerald Wind Farm.

>
> Regards
>
> Refused under section
>
>
> RATCH-Australia
> Level 4, 231 George St
> Brisbane Q 4000
> Refused under section 47(3)(b) of the RTI Act.
>
> <20161209 Request for Permissible Change.pdf>

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Department of Infrastructure,
Local Government and Planning

Our reference: SPD-1216-032720
Your reference: MBN14/753

10 January 2017

Hon Jackie Trad, MP
Deputy Premier
Minister for Infrastructure, Local Government and Planning
Minister for Trade and Investment
PO Box 15009
CITY EAST QLD 4002

By email: deputy.premier@ministerial.qld.gov.au

Dear Sir / Madam

Notice about request for permissible change—relevant entity

Springmount Road and Kippin Drive Arriga described as Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871

(Given under section 373(1) of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning (the department) received a copy of the request for a permissible change under section 372(1) of the *Sustainable Planning Act 2009* on 9 December 2016 advising the department, as a relevant entity, of the request for a permissible change made to the responsible entity under section 369 of the *Sustainable Planning Act 2009*.

The department understands that the proposed changes are as follows:

- Condition 5 – remove Condition 5 from the Conditions of Approval to bring the conditions into line with the current State Development Assessment Provisions
- Condition 6 – if Condition 5 is removed from the Conditions of Approval, remove reference to Condition 5 from Condition 6 (a) ii and 6 (b).

The department has considered the proposed changes to the development approval and advises that it has no objection to the change being made.

If you require any further information, please contact Michele Creecy, Senior Planning Officer, on 4037 3206, or via email michele.creecy@dilgp.qld.gov.au who will be able to assist.

Yours sincerely



Brett Nancarrow
Manager (Planning)

cc. DILGP – chris.lee@dilgp.qld.gov.au
RATCH-Australia Corporation – Refused under section 47(1) ratchasustralia.com
Refused under section 47(1) ratchaustralia.com



Department of Infrastructure,
Local Government and Planning

12 January 2017

Hon Jackie Trad, MP
Deputy Premier
Minister for Infrastructure, Local Government and Planning
Minister for Trade and Investment
PO Box 15009
CITY EAST QLD 4002

By email: deputy.premier@ministerial.qld.gov.au

Dear Deputy Premier

Notice about request for permissible change—relevant entity

Springmount Road and Kippin Drive Arriga described as Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871

(Given under section 373(1) of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning, as a relevant entity, responded to the request for a permissible change under section 373(1) of the *Sustainable Planning Act 2009* on 10 January 2017 advising that it has no objection to the requested changes to Conditions 5 and 6 of the original Conditions of Approval.

Since that time, a further request has been made to the responsible entity to correct a discontinuity in Condition 7 of the Conditions of Approval relating to Shadow flicker. One part of Condition 7 allows for 30 hours/annum and another allows for 10 hours/annum; the latter reference needs to be corrected to align with the Queensland Wind farm state code (AO4.1).

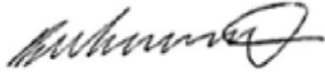
The department has considered the proposed further change to the development approval and advises that it has no objection to the change being made.

Cairns Port Authority
Grafton and Hartley Streets
PO Box 2358
Cairns QLD 4870

Telephone +61 7 40373209
Website www.dilgp.qld.gov.au
ABN 25 166 523 889

If you require any further information, please contact Michele Creecy, Senior Planning Officer, on 4037 3206, or via email michele.creecy@dilgp.qld.gov.au who will be able to assist.

Yours sincerely



Brett Nancarrow
Manager (Planning)

cc. DILGP – morag.elliott@dilgp.qld.gov.au Daniela.walker@dilgp.qld.gov.au
RATCH-Australia Corporation Refused under section 36(2)(b) of the RTI Act ratchaustralia.com

From: [Michele Creecy](#)
To: deputy.premier@ministerial.qld.gov.au
Cc: [Morag Elliott](#); [Daniela Walker](#); [Brett Nancarrow](#)
Subject: HPRM: Request for permissible change by RATCH-Australia Corporation - Mount Emerald Wind Farm
Date: Thursday, 12 January 2017 10:01:06 AM
Attachments: [SPD-1216-032720 - N66-T66-s373 Response to permissible change \(relevant entity\) - Mount Emerald Wind Farm V2.pdf](#)
[Further correspondence regarding permissible change \(relevant entity\) - RATCH - SPD-1216-032720 - signed.pdf](#)

Good morning

Attached please find a copy of the letter to the Minister's office which was to have been sent on 10 January but was not sent due to the request for a further amendment to the original Conditions of Approval of Mount Emerald Wind Farm on 24 April 2015. This letter advises that the Cairns office of DILPG, as relevant entity, has no objection to the changes requested by RATCH on 9 December 2016 to Conditions 5 and 6 of the original Conditions of Approval.

Also, a second letter is attached advising that the Cairns office of DILGP, as relevant entity, has no objection to the correction being made in Condition 7 of the original Conditions of Approval. The request to make this change was made by RATCH-Australia on 10 January 2017.

We trust this information is of assistance.

Kind regards

Michele Creecy

A/ Senior Planning Officer

Planning and Development Services | Far North Queensland
Department of Infrastructure, Local Government and Planning

PO Box 2358 Cairns Q 4870

Ground Floor, Cairns Port Authority Building, Cnr Grafton and Hartley Streets, Cairns

p. 07 4037 3206 | e. michele.creecy@dilgp.qld.gov.au

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Department of Infrastructure,
Local Government and Planning

SARA reference: SPD-1216-032720

17 January 2016

Hon Jackie Trad, MP
Deputy Premier
Minister for Infrastructure, Local Government and Planning
Minister for Trade and Investment
PO Box 15009
CITY EAST QLD 4002

By email: deputy.premier@ministerial.qld.gov.au

Dear Deputy Premier

Notice about request for permissible change—relevant entity

Springmount Road and Kippin Drive, Arriga described as Lot 7 on SP235244, part of Lot 905 on CP896501 and Easement A in Lot 1, Easement C in Lot 2 and Easement E in Lot 3 on SP231871

(Given under section 373(1) of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning, as a relevant entity, responded to the request for a permissible change under section 373(1) of the Sustainable Planning Act 2009 on 10 January 2017 advising that it has no objection to the requested changes to Conditions 5 and 6 of the original Conditions of Approval. Following the receipt of correspondence from the applicant requesting an additional change, further correspondence was issued by the department on 12 January 2017 advising that it has no objection to a correction to Condition 7 of the Conditions of Approval.

Since that time, an additional further request has been made to the responsible entity to remove Condition 10 and amend Condition 12 of the Conditions of Approval to remove 'an RPEQ' and insert 'a suitably qualified expert'.

The department has considered the proposed additional further changes to the development approval and advises that it has **no objection** to the change being made.

If you require any further information, please contact Bec Turner, A/ Planning Officer, SARA Far North QLD on 4037 3208, or via email bec.turner@dilgp.qld.gov.au who will be able to assist.

Yours sincerely



Brett Nancarrow
Manager (Planning)

cc: DILGP – morag.elliott@dilgp.qld.gov.au Daniela.walker@dilgp.qld.gov.au
RATCH-Australia Corporation – Refused under secti ratchaustralia.com

Schedule 1: Conditions of Approval
Development Permit for a Material Change of Use – Code Assessment

Condition		Timing																		
General / Planning Requirements																				
1.	<p>Undertake the development generally in accordance with the approved plans and documents referred to in Table 1, as modified by the conditions of this approval.</p> <table border="1"> <thead> <tr> <th colspan="3">Table 1: Approved Plans and Documents</th></tr> <tr> <th>Plan/Document number</th><th>Plan/Document name</th><th>Date</th></tr> </thead> <tbody> <tr> <td>PR100246-170 Issue A</td><td>Mount Emerald Wind Farm Turbine Location and Development Footprint</td><td>18-11-2013</td></tr> <tr> <td>Appendix A</td><td>Statement of Commitments in RPS Development Application Material Change of Use Report</td><td>March 2012</td></tr> <tr> <td>PR100246/R72893</td><td>Preliminary Environmental Management Plan</td><td>November 2013</td></tr> <tr> <td>CB24504 Rev 1</td><td>Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs</td><td>29/08/2014</td></tr> </tbody> </table>	Table 1: Approved Plans and Documents			Plan/Document number	Plan/Document name	Date	PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013	Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012	PR100246/R72893	Preliminary Environmental Management Plan	November 2013	CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014	While site / operational / building work is occurring and then to be maintained
Table 1: Approved Plans and Documents																				
Plan/Document number	Plan/Document name	Date																		
PR100246-170 Issue A	Mount Emerald Wind Farm Turbine Location and Development Footprint	18-11-2013																		
Appendix A	Statement of Commitments in RPS Development Application Material Change of Use Report	March 2012																		
PR100246/R72893	Preliminary Environmental Management Plan	November 2013																		
CB24504 Rev 1	Technical Note 2 – Traffic Impact Assessment Engineering Response prepared by Jacobs	29/08/2014																		
Location and Design																				
2.	<p>Submit to the chief executive administering SPA, a revised Turbine Location and Development Footprint Plan identifying the final position of:</p> <ul style="list-style-type: none"> all proposed turbines; and the operations and maintenance depots <p><i>Note: Micro-siting of turbines, prior to the submission of the above mentioned reports, is permitted.</i></p> <p><i>Micro-siting means an alteration to the siting of a turbine by not more than 100 metres beyond the siting of turbines identified in approved plan Mount Emerald Wind Farm Turbine Location and Development Footprint PR100246-170 Issue A, dated 18-11-2013.</i></p>	Prior to seeking approval for any site, operational or building work																		

3.	<p>(a) The wind farm must be designed and constructed in accordance with the following:</p> <ul style="list-style-type: none"> i. The maximum number of turbines must not exceed 63; ii. All turbines must be setback a minimum of 1,500 metres from any existing and approved dwelling at the date of this approval; iii. All turbines and the operations and maintenance depot are to be located in accordance with the revised Turbine Location and Development Footprint Plan required by condition 2 of this approval; iv. The overall maximum height of any turbine (measured to the tip of the rotor blade at their highest point above ground level) must not exceed 1179.5 metres AHD; v. The hub height of any turbine must not exceed 90 metres above ground level; vi. All cabling must be provided underground, except where the approved Environmental Management Plan recommends an alternative method in environmentally sensitive locations. <p>(b) Submit certification to the chief executive administering SPA from an Registered Professional Engineer Queensland (RPEQ) that the wind farm as constructed complies with the design specifications indicated in part (a) of this condition.</p>	<p>(a) Prior to the commencement of use and then to be maintained</p> <p>(b) Prior to the commencement of use</p>
Acoustic Amenity		
4.	<p>The wind farm development must be designed and operated to ensure that:</p> <p>(a) The outdoor night-time (10pm to 6am) equivalent noise level ($L_{Aeq,10 \text{ minutes}}$) at existing and approved sensitive land uses at the date of this approval, does not exceed the higher of:</p> <ul style="list-style-type: none"> (i) 35dB(A); or (ii) the background noise level (L_{A90}) plus 5dB(A); and <p>(b) The outdoor day-time equivalent noise level ($L_{Aeq,10 \text{ minutes}}$) at existing and approved sensitive land uses at the date of this approval, does not exceed the higher of:</p> <ul style="list-style-type: none"> (i) 37dB(A) ; or 	<p>Prior to the commencement of use and then to be maintained</p>

	<p>(ii) the background noise level (L_{A90}) plus 5dB(A).</p> <p>(c) The equivalent noise levels (L_{Aeq}) are to be assessed at all existing and approved sensitive land uses at the date of this approval for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p> <p>(d) Measurements of background noise or operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard <i>AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators</i> (AS4959-2010) at any existing and approved sensitive land uses at the date of this approval. If an alternative standard or guideline to AS4959-2010 is to be followed for the assessment of Special Audible Characteristics, then reasons for the selection of the alternative are to be provided.</p>	
5.	<p>The wind farm development must be designed and operated to ensure that the low frequency noise level does not exceed:</p> <p>(a) 60dB(C) for the outdoor C-Weighted equivalent noise level ($L_{Ceq, 10\text{ minutes}}$) during the outdoor night time (10pm to 6am); and</p> <p>(b) 65dB(C) for the outdoor C-Weighted equivalent noise level ($L_{Ceq, 10\text{ minutes}}$) during the day time (6am to 10pm).</p> <p>The C-Weighted noise levels (L_{Ceq}) are to be assessed at all existing and approved sensitive land uses at the date of this approval for all integer hub height wind speeds from cut-in to rated power of the wind turbine generator.</p> <p>Measurements of operational noise from wind turbine generators for the operation shall be in accordance with Australian Standard AS4959-2010 Acoustics – Measurement, prediction and assessment of noise from wind turbine generators at any existing and approved sensitive land uses at the date of this approval.</p>	<p>Prior to the commencement of use and then to be maintained</p>
5.	<p>(a) Submit to the chief executive administering the SPA a revised noise assessment report, certified by a suitably qualified acoustic consultant, demonstrating that the proposed wind farm can meet the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Model the acoustic impacts of the wind farm based on the revised Turbine Location and Development Footprint Plan submitted in</p>	<p>(a) Prior to the commencement of site / operational / building work</p>

	<p>accordance with condition 2 of this approval.</p> <p>The noise modelling should take into account the varied topography between the turbine locations and existing and approved sensitive land use receptors at the date of this approval and any impacts that may have on predicted noise levels, and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation.</p> <p>ii. Identify any design specifications or operational restrictions that may be necessary to ensure compliance with the noise levels specified in conditions 4 and 5, such as turbine types or limitations on hours of operation of specific turbines.</p> <p>(b) Submit to the chief executive administering the SPA a compliance noise assessment report, certified by a suitably qualified acoustic consultant, demonstrating that the proposed wind farm meets the noise levels specified in conditions 4 and 5 of this approval. The report is to:</p> <p>i. Measure the acoustic impacts of the wind farm based on the final Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>The noise measurements should take into account the turbine locations and any existing and approved sensitive land use receptors at the date of this approval; and include an assessment of Special Audible Characteristics including tonality, impulsivity and amplitude modulation. Assessment of Special Audible Characteristics should be carried out using an appropriate international standard or guideline. Reasons for selection of the standard or guideline are to be provided with the noise assessment report. The assessment should determine whether the Special Audible Characteristics are excessive and require an adverse character adjustment (adj) to specific measurement period.</p>	<p>(b) Within twelve (12) months of the completion of construction and then to be maintained</p>
Visual Amenity		
6.	<p>(a) Submit to the chief executive administering SPA a revised shadow flicker assessment report certified by a suitably qualified and experienced person demonstrating that the shadow flicker from the turbines will not exceed 340 hours per annum and 30 minutes per day at any dwelling existing at the date of this approval.</p>	<p>(a) Prior to seeking approval for any site, operational or building work</p>

	<p>The report is to model the shadow flicker of the wind farm, based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval.</p> <p>(b) The wind farm is to be constructed and operated in accordance with the revised shadow flicker assessment report required in part (a) of this condition. In particular, any design specifications or operational restrictions required to ensure that shadow flicker from the constructed turbines does not exceed 30 hours per annum and 30 minutes per day at any dwelling existing at the date of this approval.</p>	<p>(b) Prior to the commencement of use and then to be maintained</p>
7.	<p>The turbines and blades must have a low reflectivity finish.</p>	<p>Prior to the commencement of use and to be maintained</p>
8.	<p>External lighting of infrastructure associated with the wind farm is not permitted other than:</p> <p>(a) low-level, low-intensity security lighting;</p> <p>(b) aviation obstacle lighting where required by the Civil Aviation and Safety Authority;</p> <p>(c) lighting necessary in the case of an emergency or for operational call-outs at reasonable times.</p> <p>Any external lighting, excluding aviation obstacle lights, is to comply with Australian Standard AS 4282-1993 <i>Control of the obtrusive effects of outdoor lighting</i>.</p>	<p>Prior to the commencement of use and to be maintained</p>
9.	<p>(a) Submit to the chief executive administering the SPA an on-site landscaping plan prepared by a suitably qualified landscape architect. The plans must be fully dimensioned and drawn to a recognised scale.</p> <p>(b) The on-site landscaping plan must include but not limited to:</p> <p>(i) landscaping to screen the substation, switchyard and maintenance depots and other associated buildings (excluding the turbines);</p> <p>(ii) details of plant species proposed to be used in the landscaping, including height and spread at maturity;</p> <p>(iii) a timetable for implementation of all on-site landscaping works;</p> <p>(iv) a maintenance and monitoring program to ensure the ongoing health of the landscaping.</p> <p>(c) Carry out and maintain the development in accordance with the submitted on-site landscaping plan prepared in accordance with part (a) of this condition.</p> <p>(d) Submit certification to the chief executive from a</p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) Prior to the commencement of use and to be maintained at all times</p> <p>(c) Prior to the commencement of use</p> <p>(d) Prior to the</p>

	suitably qualified landscape architect that the works have been carried out in accordance with part (a) of this condition.	commencement of use
Television and Radio Reception		
9.	<p>(a) Undertake an assessment of the television and radio reception strength in the area within 5 km of any proposed turbine and in which any existing and approved dwellings are located as at the date of this approval. The pre-construction assessment must be undertaken by a television and radio monitoring specialist, and include testing at selected locations to enable the average television and radio reception strength in the area within 5 km of the site to be determined. The specific locations of testing must be determined by a television and radio monitoring specialist.</p> <p>(b) If, following commencement of the operation of the wind farm, a complaint is received regarding the wind farm having an adverse effect on television or radio reception at any existing and approved dwelling within 5 km of the site which existed at the date of this approval, a post-construction assessment of the television and radio reception strength must be carried out at, or in close proximity to, any existing and approved dwelling at the date of this approval by a television and radio monitoring specialist.</p> <p>(c) If the post-construction assessment establishes an unacceptable increase in interference to reception as a result of the wind farm, measures to restore the affected reception to pre-construction quality must be undertaken.</p> <p>(d) Provide to the chief executive administering the SPA, on request, the results of the pre-construction assessment and any post-construction assessment carried out in response to a complaint and evidence that the appropriate restoration measures have been undertaken to address television and radio reception strength where required.</p>	<p>(a) Prior to the commencement of site / operational / building work</p> <p>(b) Within one (1) month of receiving a complaint</p> <p>(c) Within two (2) months of the post-construction assessment</p> <p>(d) Within (2) months of the post-construction assessment</p>
Traffic Management		
10.	<p>(a) Submit to the chief executive administering the SPA a Construction Traffic Management Plan (CTMP) prepared by an RPEQ suitably qualified expert and in consultation with the Department of Transport and Main Roads, Cairns Regional Council, Tablelands Regional Council and Mareeba Shire</p>	<p>(a) Prior to the commencement of site / operational / building work</p>

	<p>Council.</p> <p>The CTMP must relate to the roads proposed to be used in transporting material, personnel and equipment related to the construction and decommissioning of the wind farm.</p> <p>The CTMP must include but not limited to:</p> <ul style="list-style-type: none"> (i) an existing conditions survey of Hansen Road, Springmount Road and Kippen Drive including details of the suitability, design, condition and construction standard of the relevant public roads; (ii) the designation of all vehicle access points to the site from surrounding roads. Vehicle access points must be designed and located to ensure safe sight distances, turning movements, and avoid potential through traffic conflicts; (iii) the designation of appropriate pre-construction, construction/decommissioning and transport vehicle routes to and from the site; (iv) engineering plans demonstrating whether, and if so how, truck movements to and from the site can be accommodated on sealed roadways and turned without encroaching onto the incorrect side of the road; (v) recommendations regarding the need for road and intersection upgrades to accommodate any additional traffic or site access requirements (whether temporary or ongoing). Where upgrades are required, the traffic management plan must include: <ul style="list-style-type: none"> (a) detailed engineering plans showing the required works; (b) the timing of when the works are to be undertaken; (c) a program of regular inspections to be carried out during the construction of the wind farm to identify maintenance works necessary as a result of construction traffic; (vi) measures to be taken to manage traffic impacts associated with the ongoing operation of the wind farm on the traffic volumes and flows on surrounding roads. <p>This may include, as recommended in the "Technical Note 2 – Traffic Impact Assessment Engineering Response" prepared by Jacobs dated 29/08/14:</p> <ul style="list-style-type: none"> a) providing a 30 seat shuttle bus service for construction workers arriving and departing 	
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	<p>the site, servicing the key townships where the construction workers live;</p> <p>b) providing minimal or restricted on-site parking to discourage workers arriving to and departing the site via private vehicles</p> <p>(vii) a program to rehabilitate Hansen Road, Springmount Road and Kippen Drive to the pre-construction condition identified by the surveys required under sub-section (a) of this condition, at the conclusion of the construction of the wind farm.</p> <p>(b) Carry out the development in accordance with the CTMP.</p> <p>(c) Submit to the chief executive administering SPA certification from an RPEQ that all works identified in the CTMP have been carried out in accordance with the CTMP.</p>	<p>(b) In accordance with the timeframes specified in the CTMP</p> <p>(c) Within three (3) months of the completion of construction</p>
Environmental Management		
11.	<p>(a) Submit to the chief executive administering the SPA an Environmental Management Plan (EMP) prepared by a suitably qualified person(s). The EMP must:</p> <ol style="list-style-type: none"> i. be generally in accordance with the Preliminary Environmental Management Plan prepared by RPS and dated November 2013 and the draft Statement of Commitments contained within Appendix A of the RPS Development Application Material Change of Use Report dated March 2012; ii. be based on the revised Turbine Location and Development Footprint Plan submitted in accordance with condition 2 of this approval; iii. include the following components, as further detailed in Attachment 1: <ul style="list-style-type: none"> • a construction and work site operational management plan • a sediment, erosion and storm water management plan • a hydrocarbon and hazardous substances plan • a bushfire risk management plan and emergency evacuation plan • a significant species management plan • a weed and pest management plan • a rehabilitation plan • a habitat clearing and management plan • an ecological fire management plan 	<p>(a) Prior to seeking approval for any site, operational or building work</p>

	<ul style="list-style-type: none"> • a cultural heritage management plan • an environmental management plan training program • an environmental management plan reporting program • an implementation plan <p>(b) The development must be carried out in accordance with the EMP.</p>	(b) During site / operational /building work and to be maintained
Community Engagement		
12.	<p>(a) Submit to the chief executive administering SPA a Community Engagement Strategy (CES) that includes at a minimum:</p> <p>(i) A Community Consultation Plan that demonstrates and includes:</p> <ol style="list-style-type: none"> a. consultation methods b. consultation calendar that identifies activities that must be carried out at least on a quarterly basis and during: <ul style="list-style-type: none"> • three (3) months prior to construction commencing • during construction • once operational for at least one year from the commencement of stage 1 <p>(ii) A Complaints Management Plan / Register (CMPR) that demonstrates and includes:</p> <ol style="list-style-type: none"> a. how contact details will be communicated to the public b. a toll free telephone number and email contact for complaints and queries c. a register outlining complaint information for each complaint received d. the processes for investigation and actions undertaken to resolve the complaint <p>(b) All community consultation and complaints must be managed in accordance with the CES.</p> <p>(c) Provide to the chief executive administering SPA and Council, on request, a copy of the CMPR, in particular the processes of investigation and actions undertaken to resolve the complaint.</p>	<p>(a) Five (5) months prior to construction commencing</p> <p>(b) – (c) Prior to construction / during construction and once operational</p>
Decommissioning and Rehabilitation		
13.	<p>Submit to the chief executive administering SPA a decommissioning and rehabilitation plan prepared by a suitably qualified person(s).</p> <p>The decommissioning and rehabilitation plan must address the actions to be undertaken where any or all turbines have permanently ceased to generate</p>	Prior to decommissioning

	<p>electricity. The plan must include a program for:</p> <ul style="list-style-type: none"> (a) removal of above ground non-operational equipment; (b) removal and clean up any residual contamination; (c) rehabilitation/revegetation of storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbines, if those areas are not otherwise useful to the on-going use or decommissioning of the wind farm; (d) notification to the relevant authorities of the turbines ceasing operation. Such notification should be given no later than two months after the turbine(s) cease operation. 	
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General advice

a.	<p>This development permit does not constitute an approval to commence operational works within Powerlink easements. Prior written approval is required from Powerlink before any additional operational work is undertaken within the easement areas. All additional operational works within the easements will require separate assessment and approval by Powerlink.</p>
b.	<p>Development must comply with the <i>Electrical Safety Act 2002</i> including any Code of Practice under that Act and the Electrical Safety Regulation 2002 including any safety exclusion zones defined in the Regulation.</p>
c.	<p>In respect to this application the exclusion zone for untrained persons and for operating plant operated by untrained persons is 6 metres from the 275,000 volt wires and exposed electrical parts.</p> <p>Should any doubt exist in maintaining the prescribed clearance to the conductors and electrical infrastructure, then the applicant is obliged under the <i>Electrical Safety Act 2002</i> to seek advice from Powerlink.</p>
d.	<p>Any works must comply with the easement terms and conditions as per easement Dealing 701758510 and 713030213</p>
e.	<p>Engagement must occur with Powerlink with regards to a connection to Powerlink's transmission line network. Further technical assessments regarding safe clearance between turbines and Powerlink infrastructure will have to be performed and must be submitted to Powerlink for approval.</p>
f.	<p>Works in the vicinity of Powerlink infrastructure must comply with the Management of Easement Co-Use Requests Guideline.</p>
g.	<p>The site has slight residual risk of unexploded ordnance (UXO). In the event of identification of UXO, the Department of Defence recommends the following procedure:</p>

	<ul style="list-style-type: none"> • do not touch or disturb the object; • take action, where appropriate, to prevent it being disturbed by another person; • note its approximate dimensions and general appearance; • note the route to its location; and • advise the Police as soon as possible.
h.	<p>Copies of the final development plans must be provided to the following entities, to enable details of the development to be shown on aeronautical charts of the area:</p> <ul style="list-style-type: none"> • the Civil Aviation Safety Authority; • the Department of Defence (RAAF Aeronautical Information Service); • Airservices Australia; • any aerodrome operator within 15 km of the outside property boundaries of the site; • the Aerial Agriculture Association of Australia; • any organisation responsible for providing air ambulance services in the area.

Attachment 1 – Components of the Environmental Management Plan

Construction and work site operational management plan

The environmental management plan must include a construction and work site operational management plan.

The construction and work site operational management plan must include:

- a) the identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind farm, and appropriate storage, construction and operational methods to control any identified contamination risks;
- b) procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control;
- c) procedures to suppress dust emissions from construction-related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable;
- d) procedures for managing noise emissions from construction-related activities;
- e) appropriate sanitary facilities to be provided for construction and maintenance

staff;

- f) a timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilization;
- g) measures to minimise waste generation on site and maximising opportunities for recycling and reuse;
- h) measures for dust mitigation, control and monitoring dust gauges;
- i) procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation;
- j) procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna;
- k) the removal of works, buildings and staging areas on completion of the construction phase of the project.

Sediment, erosion and storm water management plan

The environmental management plan must include a sediment, erosion and storm water management plan.

The sediment, erosion and storm water management plan must include:

- a) identification of all construction and operational processes that could potentially lead to water contamination;
- b) procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the site during and after construction and replaced as soon as possible. To this end:
 - (i) all land disturbances must be confined to a minimum practical working area;
 - (ii) soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed, and soil must be replaced as soon as possible in sequence;
 - (iii) stockpiles must be located away from drainage lines;
- c) the installation of geo-textile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas;
- d) procedures for waste water discharge management;
- e) a process for overland flow management to prevent the concentration and diversion of waters onto steep or erosion prone slopes;

- f) pollution management measures for stored and stockpiled materials including waste materials, litter, contaminated run-off and any other potential source of pollution to ground or surface waters;
- g) agreed program and appropriate capacity for annual inspection and regular maintenance of any on-site wastewater management system;
- h) a program of inspection and remediation of localised erosion within a specified response time.

Hydrocarbon and hazardous substances plan

The hydrocarbon and hazardous substances plan must include:

- (a) procedures for any on-site, permanent post-construction storage of fuels, lubricants, waste oil or other hazardous substances or potential contaminants to be in bunded areas;
- (b) contingency measures to ensure that any chemical or oil spills are contained on-site and cleaned up in accordance with the Council requirements.

Bushfire risk management plan and emergency evacuation plan

The bushfire risk management plan and emergency evacuation plan must include:

- (a) criteria for the provision of static water supply tanks solely for firefighting purposes, including minimum capacities, appropriate connections and signage;
- (b) procedures for vegetation management, fuel control and the provision of firefighting equipment during declared fire danger periods;
- (c) minimum standards for access roads and tracks to allow access for fire fighting vehicles, including criteria for access to static water supply tanks for fire fighting vehicles;
- (d) training of personnel of the organisations referred to above in relation to suppression of wind farm fires;
- (e) details of a lightning and earthing system to mitigate against the risk of bush-fires caused by direct lightning strikes on the turbines.

Significant species management plans

Significant species management plans must:

- (a) include plans for all wildlife species listed as Endangered, Vulnerable or Near Threatened under the provisions of the *Nature Conservation Act 1992* that:
 - i. are currently known to occur within or periodically utilise the site; or
 - ii. are detected within the site during the conduct of further baseline,

<p>construction or operational monitoring pursuant to other conditions; and</p> <p>iii. are not the subject of an equivalent management plan prepared in satisfaction of an approval issued under the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth).</p> <p>(b) set out key impact management strategies including:</p> <ul style="list-style-type: none"> i. further baseline programs; ii. management targets; iii. design, construction and operational impact avoidance and mitigation measures and protocols; iv. quantitative performance indicators; v. monitoring and reporting regimes; vi. corrective actions; vii. timeframes for identified actions; and viii. applicant and stakeholder responsibilities.
<p><u>Weed and pest management plan</u></p> <p>The weed and pest management plan must include:</p> <p>(a) protocols for the management of noxious environmental weed species on the site, with the objective of minimising the potential risk of introducing such weeds and pests.</p>
<p><u>Rehabilitation plan</u></p> <p>The rehabilitation plan must include guidelines to incorporate appropriate landscape rehabilitation strategies and methods into the management of disturbed land.</p>
<p><u>Habitat clearing and management plan</u></p> <p>The habitat clearing and management plan must include management strategies involved in mitigating impacts of habitat clearing on susceptible fauna, including the induction of workers and for wildlife spotters and catchers involved in habitat clearing.</p>
<p><u>Ecological fire management plan</u></p> <p>The ecological fire management plan must include management strategies to be implemented in order to maintain an appropriate fire regime for the various faunal and flora habitats represented on site.</p>
<p><u>Cultural heritage management plan</u></p> <p>The cultural heritage management plan must include the procedures to be followed for impact avoidance and mitigation of impacts upon Aboriginal heritage.</p>
<p><u>Environmental management plan training program</u></p>

The environmental management plan must include a training program for construction workers and permanent employees or contractors at the site, including a site induction program relating to the range of issues addressed by the environmental management plan.

Environmental management plan reporting program

The environmental management plan must include a program for reporting environmental incidents, including:

- (a) a register of environmental incidents, non-conformances and complaints, together with corrective actions taken in response to such incidents, non-conformances or complaints;
- (b) identification of the person to whom reports of environmental incidents, non-conformances and complaints should be made.

Implementation plan

The environmental management plan must include a timetable for implementation of all programs and works referred to in sections above.

Schedule 2: Approved plans and documents



Deputy Premier
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment

Our ref: MC16/5324

Your ref: BM:nj, MCU/11/0024

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ABN 90 856 020 239

31 JAN 2017

Mr Peter Franks
Chief Executive Officer
Mareeba Shire Council
PO Box 154
MAREEBA QLD 4880
peter@msc.qld.gov.au

Dear Mr Franks

Notice of Decision
Request to changed approval under Section 369 of the
Sustainable Planning Act 2009

I am writing to advise you that I have made a decision on a request to change the Mount Emerald Wind Farm development approval, subject to a previous ministerial call in, at Springmount Road and Kippin Drive, Arriga.

In accordance with section 376 of the *Sustainable Planning Act 2009*, I hereby enclose a copy of my decision.

If you require further information, I encourage you to contact Mr Patrick Atkinson, Director, Development Assessment in the Department of Infrastructure, Local Government and Planning on 3452 7449 or by email at patrick.atkinson@dilgp.qld.gov.au.

Yours sincerely

JACKIE TRAD MP
DEPUTY PREMIER
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment

Enc



Deputy Premier
Minister for Infrastructure, Local Government and Planning
and Minister for Trade and Investment

Our ref: MC16/5324

Your ref: SPD-1216-032720

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31 JAN 2017

Mr Frankie Carroll
Director-General
State Assessment and Referral Agency
Department of Infrastructure, Local Government and Planning
PO Box 15009
CITY EAST QLD 4002

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