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25 January 2019

Mr Darren Brewer

Manager – Development Assessment Division

Dept of State Development, Manufacturing, Infrastructure and Planning

Via email: dsdmip.qld.gov.au; RPIAct@dsdmip.qld.gov.au;

Dear Darren,

Re: RPI18-013 Huari - seeking minor amendment

We refer to the Regional Interests Development Approval (RIDA) approval provided to our client Lynd Resources Pty Ltd on 3 September 2018 (application reference RPI18-013 Huari).

Since this approval, our client has continued to investigate access to land options that will minimize environmental impact and, as a result, they now consider an alternative access route to be their preferred option. The access (as currently approved) runs from south to north, whereas the new access approaches the proposed drill pads from the west. Note that the location and size of the proposed drill pads remains unchanged.

The new access is considered to have less impact as:

- It disturbs less vegetation 6.15ha as opposed to the previous 8.59ha;
- There are less regulated vegetation (intersecting a watercourse) crossings 9 as opposed to the 12 approved under the existing approval.

Accordingly, pursuant to Section 55 of the *Regional Planning Interests Act 2014*, we hereby seek the Chief Executive's approval to amend the RIDA granted on 3 September 2018. We believe the change in access would not *"adversely change the impact of the resource activity (...) on the area of regional interest"*, as defined in Section 55, and in fact would have less environmental impact.

The new access does require the crossing of Red River (which is in a Designated Precinct), however the access track begins from an existing pastoral track within this Designated Precinct and aerial photography and ground reconnaissance indicates that the proposed crossing point of the Red River is one where limited riparian vegetation is present and only minimal clearing is likely.

Considering that this slight amendment in access is an internal property change (and that no comment was received following previous public notification), we do not believe that anyone other than the landholder may be impacted



by the change and therefore do not believe that further public notification is required in this instance. We therefore request the Chief Executive's consideration in waiving the notification requirements under Section 55(2).

Please find attached an amended RPI Act application, detailing the amended access and our environmental management consideration of the proposed new route. Please note that all strategies and commitments detailed in the original application remain in this amendment. We have also incorporated the additional requirements from the information request issued prior to the approval of RPI18-013.

We trust this is all in order, however should you have any questions, please contact me on 3368 1033 or at Richard.smith@ardent-group.com.au.

Regards

Richard Smith

General Manager (Approvals)

Job Code: Filename Page 2



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REGIONAL INTERESTS DEVELOPMENT APPROVAL AMENDMENT LYND RESOURCES PTY LTD RPI18/013 - HUARI

JANUARY 2019

LYN001



Document Control Sheet

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Project:	Project: RPI18/013 - Huari		24 January 2019			
Title:	Regional Interests Development Approval Amendment					
Project Manager:	Richard Smith					
Author:	Richard Smith / Jacob Arnold					
Client:	Lynd Resources Pty Ltd					
Client Contact:	Contact: Mark Dugmore					

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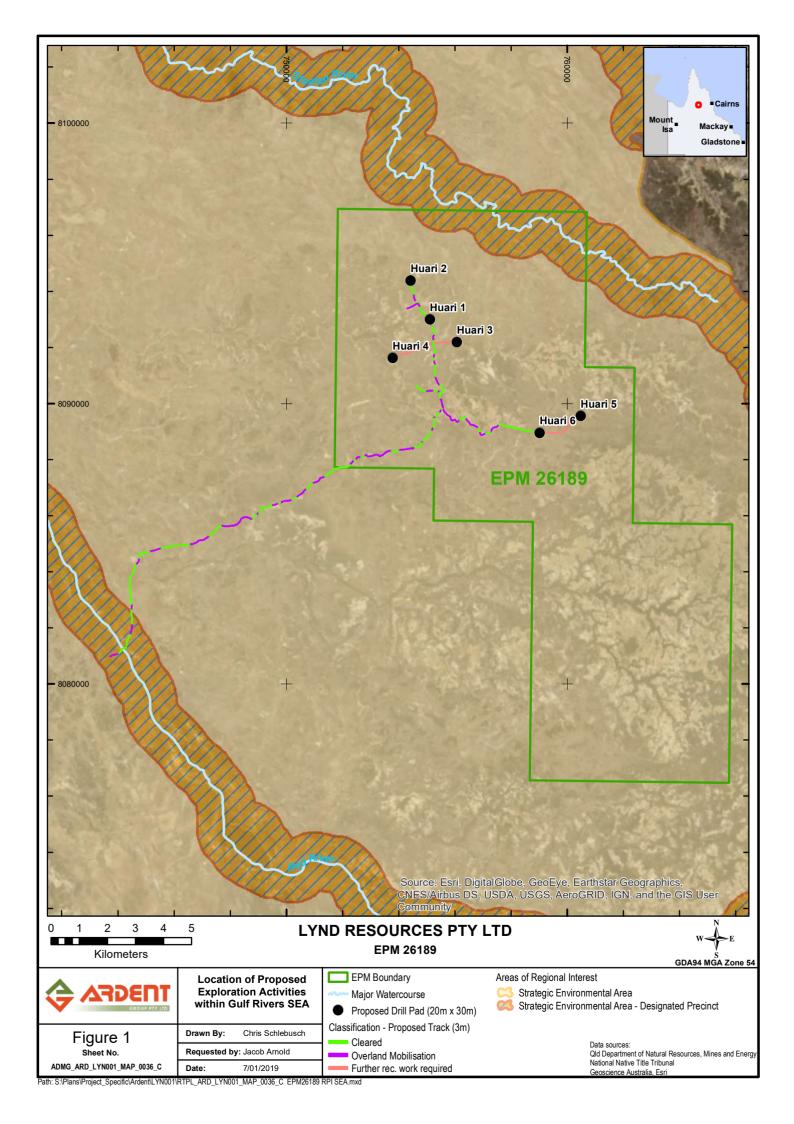


1. Introduction

Lynd Resources Pty Ltd (Lynd Resources) proposes to undertake exploration drilling for minerals on EPM 26189 as part of the Huari Project located approximately 100km north of Georgetown in North Queensland. The Huari project makes up part of the overall Lynd Resources' North Queensland exploration project.

The Huari exploration project is situated within the Gulf Rivers Strategic Environmental Area (SEA) (**Figure 1**) and therefore Lynd Resources are required to seek approval under s28 of the *Regional Planning Interests Act 2014* (RPI Act). Lynd Resources were granted a Regional Interests Development Approval (RIDA) (RPI18-013) under s53 of the RPI Act on 3 September 2018.

Since then, further reconnaissance work has been completed on the access tracks to the drill pads. A new route has been identified which will result in a reduced environmental impact on the environmental attributes within the Gulf Rivers SEA. As such, Lynd Resources are seeking to amend their RIDA approval pursuant to \$55 of the RPI Act.





1.1 The Applicant and Project Overview

Lynd Resources (ACN 610 450 498) is a wholly owned subsidiary of North Queensland Resources Pty Ltd (NQR) (ACN 610 450 185) which also has two other subsidiaries Gamboola Resources Pty Ltd and Yappar Resources Pty Ltd. In 2016/17, NQR acquired 100% of the mineral rights to a large tenement package in North Queensland.

In February 2018, NQR entered into a Strategic Alliance Agreement (SAA) with diversified global miner South32 to appraise a number of these exploration opportunities with significant potential across an area of 200km by 500km in North Queensland. The area comprises tenements (granted and under application), wholly-owned by NQR as well as several subject to farm-in with third parties.

NQR has defined at least 50 exploration targets across an area it has identified as prospective for Tier 1 mineral deposits. The prospective area is concealed under 20 to 200 metres of cover and historically has had minimal exploration.

1.2 Property and Tenure Details

A summary of the property and tenure details situated within EPM 26189 are shown in Table 1.

Table 1 Property and Tenure details within EPM 26189

Category	Property 1	Property 2	
Lot/Plan	Lot 4716 on SP273457	Lot 5309 on PH1681	
Property Name	Abingdon Downs Station	Torwood Station	
Tenure	Lands Lease	Lands Lease	
	The Trust Company Limited		
Landholder	(ACN 004 027 749) sub-leased	Carolyn Joyce Curley	
Lanunoidei	to Cunningham Cattle Company	Cardiyii Joyce Curiey	
	Pty Ltd (ABN 82 606 277 034)		

The majority of EPM 26189 is situated within Lot 4716 on SP273457 with all disturbance associated with exploration activities taking place within this lot. There will be no access onto Lot 5309 on PH1681 for current proposed exploration activities.

EPM 26189 was granted to Lynd Resources on 31 October 2016 for a period of 2 years, to expire 30 October 2018. Lynd Resources lodged a renewal to DNRME for a further 2-year period with EPM 26189 now expiring on 30 October 2020.

EPM 26189 was granted over an area of 51 sub-blocks (approximately 13,770ha based upon a sub-block size of 270ha). Standard EA EPSX03893516 was granted as a part of the approval for EPM 26189, requiring Lynd Resources to comply with the terms and conditions of the "Eligibility criteria and standard conditions for exploration and mineral development projects – ESR/2016/1985", as produced by DES.



2. Proposed Amendments

Since the RIDA was granted for the proposed exploration activities within the Gulf Rivers SEA, further reconnaissance has been completed in the area which has identified a different access route to the six drill locations within EPM 26189.

The new proposed access route enters EPM 26189 from the south-west via an existing pastoral track (Figure 1). The new track route is considered to have less environmental impact as there will only be nine regulated vegetation (intersecting a watercourse) corridors compared to the current approved track which contains twelve of these corridor crossings. Additionally, the reconnaissance activities also identified much of the access track will not require clearing works and will be suitable for overland mobilisation.

Consequently, Lynd Resources are seeking to amend Condition 1 of the RIDA which will subsequently involve changes to Table 1 (Approved Activities), Table 3 (Huari resource activities and associated locations) and the approved plans.

2.1 Condition 1 Amendment

Condition 1 is reproduced below as **Table 2**. Within condition 1, the information associated with points a, c and d are sought to be amended. The amendments required are detailed in this application as set out below:

- Point a) "Table 1: Approved Activities" are described in Section 2.2;
- Point c) "Table 3: Proposed Huari Resource Activities and associated locations" are described in Section 2.3.
- Point d) "The approved plans"; replacement plans will be described in Section 2.4.

Table 2 Condition 1 of RIDA approval

Condition Number	Condition	Timing for condition
1	Carry out the approved activities and disturbance of land generally in accordance with: a) The activities identified in Table 1: Approved activities. b) The activities defined in Table 2: Definitions of Activities. c) The locations provided in Table 3: Proposed Huari resource activities and associated locations. d) The approved plans: • Figure 1: location of Proposed Exploration Activities within Gulf Rivers SEA, Sheet No. ADMG_ARD_LYN001_MAP_0036_A, dated 30/04/18, as provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1); • Figure 1: Footprint of the Huari 1 drill pad, Sheet No.	At all times



Condition	Condition	Timing for
Number	ADMG_ARD_LYN001_MAP_0085_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1); • Figure 2: Footprint of the Huari 2 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0086_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1); • Figure 3: Footprint of the Huari 3 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0087_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1); • Figure 4: Footprint of the Huari 4 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0088_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1); • Figure 5: Footprint of the Huari 5 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0089_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018	condition
	 (refer Attachment 1); Figure 6: Footprint of the Huari 2 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0090_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1); Figure 7: Footprint of the Huari campsite and laydown area, Sheet No. ADMG_ARD_LYN001_MAP_0071_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1); Figure 8: Schematic of proposed drill pad, undated, provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1); Figure 9: Schematic of fuel and laydown storage area, undated, as provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1); Figure 10: Schematic of mobile campsite, undated, provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1); Figure 13: Exploration Activities Location Refinement, Sheet No. 	



Condition	Condition	Timing for
Number		condition
	DMG_ARD_LYN001_ MAP_0033_B, dated 9/05/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer	
	Attachment 1);	
	• Figure 15: Huari access track regulated vegetation crossing 1, Sheet	
	No. ADMG_ARD_LYN001_MAP_0099_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	
	• Figure 16: Huari access track regulated vegetation crossing 2, Sheet	
	No. ADMG_ARD_ LYN001_MAP_0100_B, dated 4/07/18, submitted	
	with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	
	• Figure 17: Huari access track regulated vegetation crossing 3, Sheet No. ADMG_ARD_ LYN001_MAP_0101_B, dated 4/07/18, submitted	
	with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	
	• Figure 18: Huari access track regulated vegetation crossing 4, Sheet No. ADMG_ARD_ LYN001_MAP_0102_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	
	• Figure 19: Huari access track regulated vegetation crossing 5, Sheet No. ADMG_ARD_ LYN001_MAP_0103_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	
	• Figure 20: Huari access track regulated vegetation crossing 6, Sheet	
	No. ADMG_ARD_ LYN001_MAP_0104_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July	
	2018 (refer Attachment 1);	
	• Figure 21: Huari access track regulated vegetation crossing 7, Sheet No. ADMG_ARD_ LYN001_MAP_0105_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July	
	2018 (refer Attachment 1);	
	• Figure 22: Huari access track regulated vegetation crossing 9, Sheet No. ADMG_ARD_ LYN001_MAP_0107_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	
	• Figure 23: Huari access track regulated vegetation crossing 11, Sheet No. ADMG_ARD_LYN001_MAP_0109_A, dated 3/07/18, submitted	



Condition Number	Condition	Timing for condition			
	with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);				
	• Figure 24: Huari access track regulated vegetation crossing 12, Sheet No. ADMG_ARD_LYN001_MAP_0104_A, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);				
	• Figure 25: Huari access track regulated vegetation crossing 13, Sheet No. ADMG_ARD_LYN001_MAP_0111_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);				
	• Figure 26: Huari access track regulated vegetation crossing 14, Sheet No. ADMG_ARD_LYN001_MAP_0114_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1).				

2.2 Table 1 – Approved Activities Amendment

Table 1 of the RIDA is reproduced as **Table 3** and details the current approved resource activities and areas of disturbance within the Gulf Rivers SEA. **Table 4** details the proposed amended disturbance areas associated with the newly identified access route. Reconnaissance work has broken down the track in sections which will require some clearing and other sections which are suitable for overland mobilisation and require no clearing of vegetation (**Figure 1**). The tracks to Huari 3, 4 and 5, which are not priorities at this stage, have not yet been further defined. Within **Table 4**, the access track resource activity has been divided into cleared, overland mobilisation (no clearing) and not yet defined. The maximum area of significant disturbance associated with the new track will be 6.15ha, which is a 2.44ha reduction in potential significant disturbance.

Table 3 Current RIDA approved activities

Area of Regional Interest	Location	Resource Activity	Area of Disturbance (ha)
		Access Tracks	8.15
Gulf Rivers		Drill pad (six in total, each being 20m x 30m)	0.36
Strategic Environmental	Part Lot 4716 on SP273457	Temporary Fuel Storage and Laydown Area (20m x 20m)	0.04
Areas		Temporary Mobile Campsite (20m x 20m)	0.04
		Total area of dis	sturbance is 8.59ha



Table 4 Proposed amendments to approved activities

Area of Regional Interest	Location	Resource Activity		Area of Disturbance (ha)
			To be cleared	4.47
			Overland	
		Access Tracks	Mobilisation (no	4.09*
Gulf Rivers			clearing)	
Strategic	Part Lot 4716		Not yet defined	1.24
Environmental	on SP273457	Drill pad (six in total, e	Drill pad (six in total, each being 20m x 30m) Temporary Fuel Storage and Laydown Area	
Areas		· · · · ·		
		(20m x 20m) Temporary Mobile Campsite (20m x 20m)		0.0 .
				0.04
		Maximu	ım area of significant di	sturbance is 6.15ha

^{*} Not included in maximum area of significant disturbance total as no clearing will be undertaken for certain parts of the access track.

2.3 Table 3 – Huari resource activities and associated locations amendment

Table 3 of the RIDA is reproduced as **Table 5** and details the locations of the currently approved resource activities. Due to the proposed amendment of the access track, **Table 6** provides updated locations of the beginning of the access track, temporary fuel and laydown storage and temporary mobile campsite.

Table 5 Current resource activities and associated location

Resource Activity	Number	Location (coordinates)
Access tracks	As required	Beginning of access track: -17.375493°,
Access tracks	As required	143.483690°
		Huari 1: -17.233700°, 143.399060°*
		Huari 2: -17.221350°, 143.392470°*
Drill Pads	3 initially; maximum of	Huari 3: -17.240900°, 143.408200°
Drill Paus	6	Huari 4: -17.246260°, 143.386780°
		Huari 5: -17.264220°, 143.449910°
		Huari 6: -17.269790°, 143.436260°*
Temporary Fuel and Laydown	1	-17.370718°, 143.483719°
Area	1	-17.370710 , 143.463713
Temporary Mobile Campsite	1	-17.370965°, 143.483833°

^{*}Denote initial target sites.



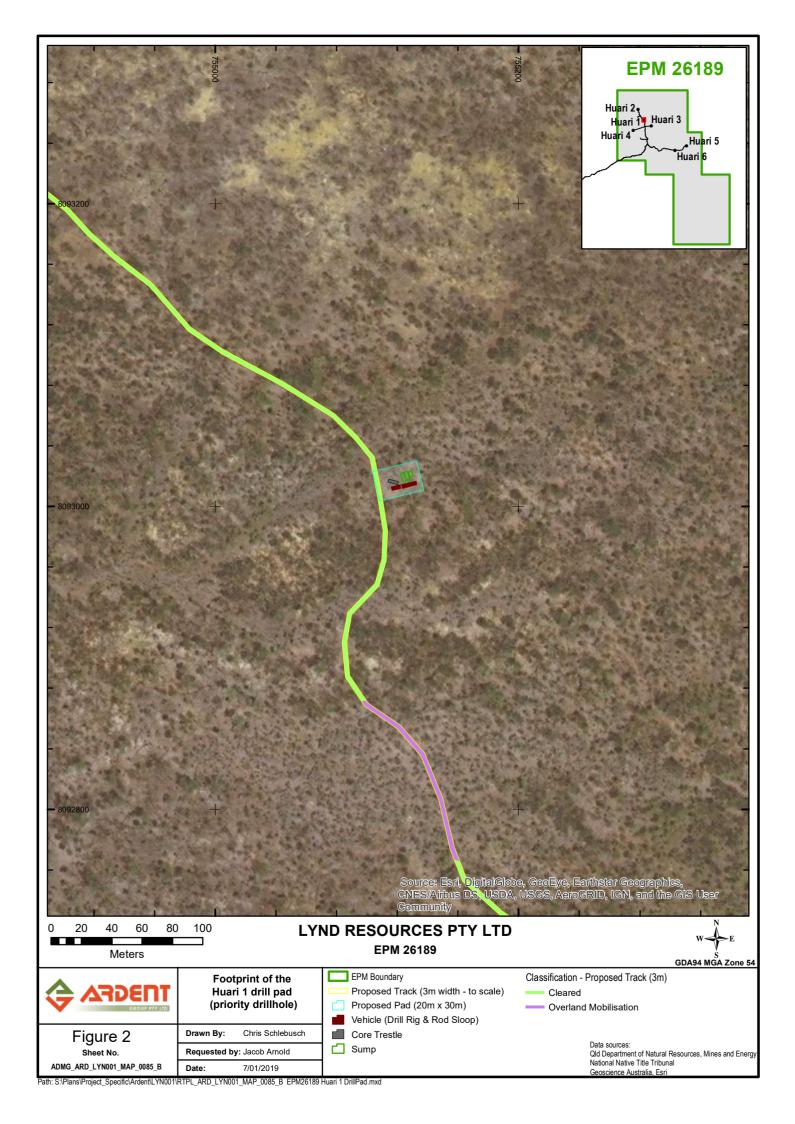
Table 6 Proposed resource activities and associated locations

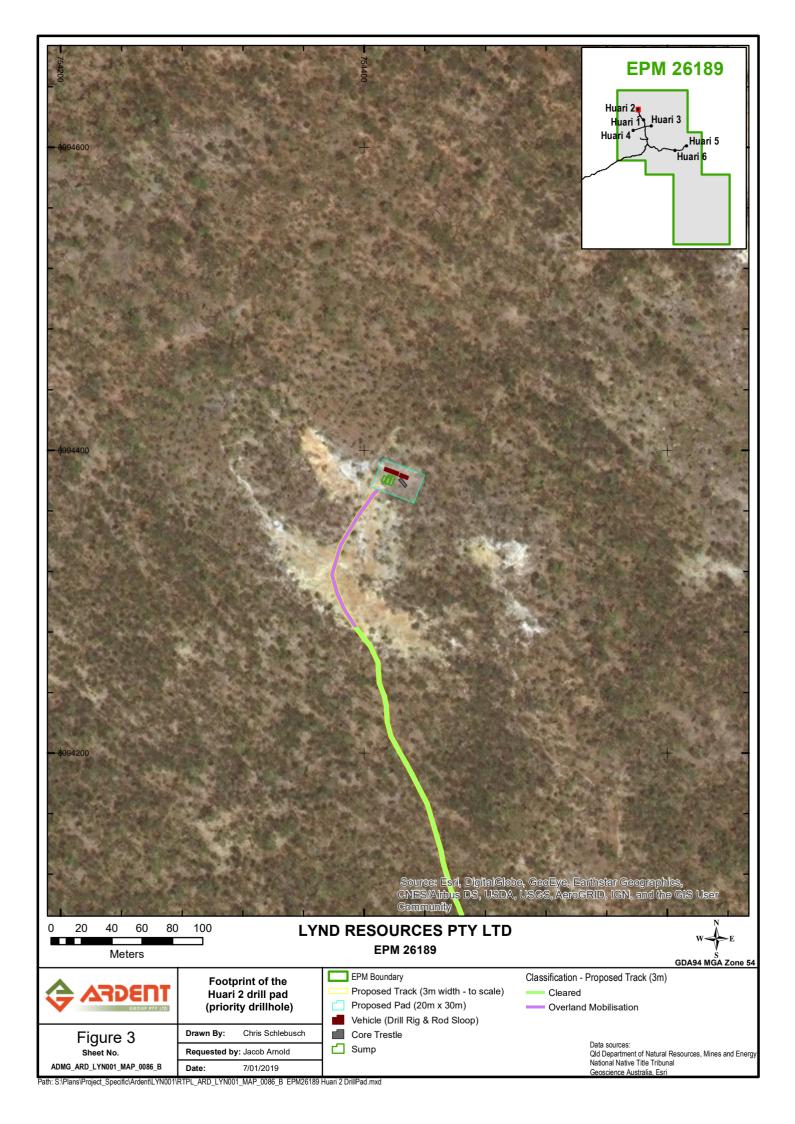
Resource Activity	Number	Location (coordinates)
Access tracks	As required	Beginning of access track: -17.343574°, 143.293403°
Drill Pads	3 initially; maximum of 6	Huari 1: -17.233700°, 143.399060°* Huari 2: -17.221350°, 143.392470°* Huari 3: -17.240900°, 143.408200° Huari 4: -17.246260°, 143.386780° Huari 5: -17.264220°, 143.449910° Huari 6: -17.269790°, 143.436260°*
Temporary Fuel and Laydown Area	1	-17.26233°, 143.40372°
Temporary Mobile Campsite	1	-17.26752°, 143.40383°

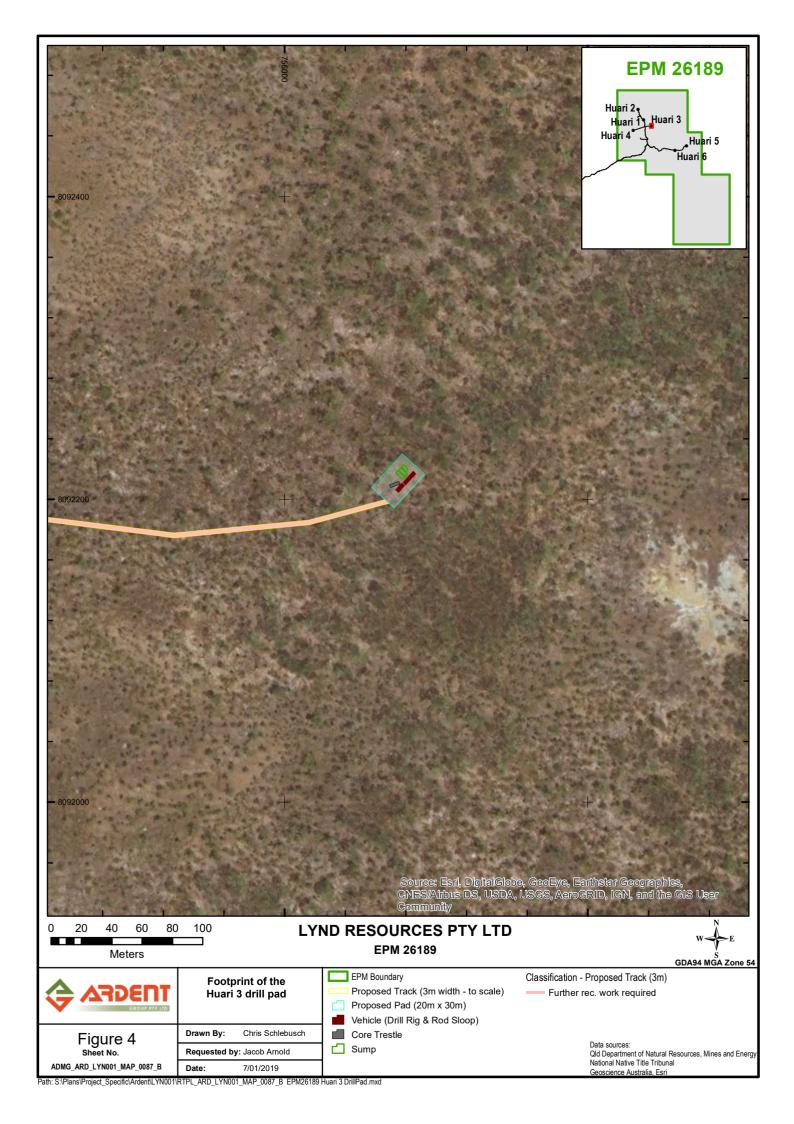
^{*}Denote initial target sites.

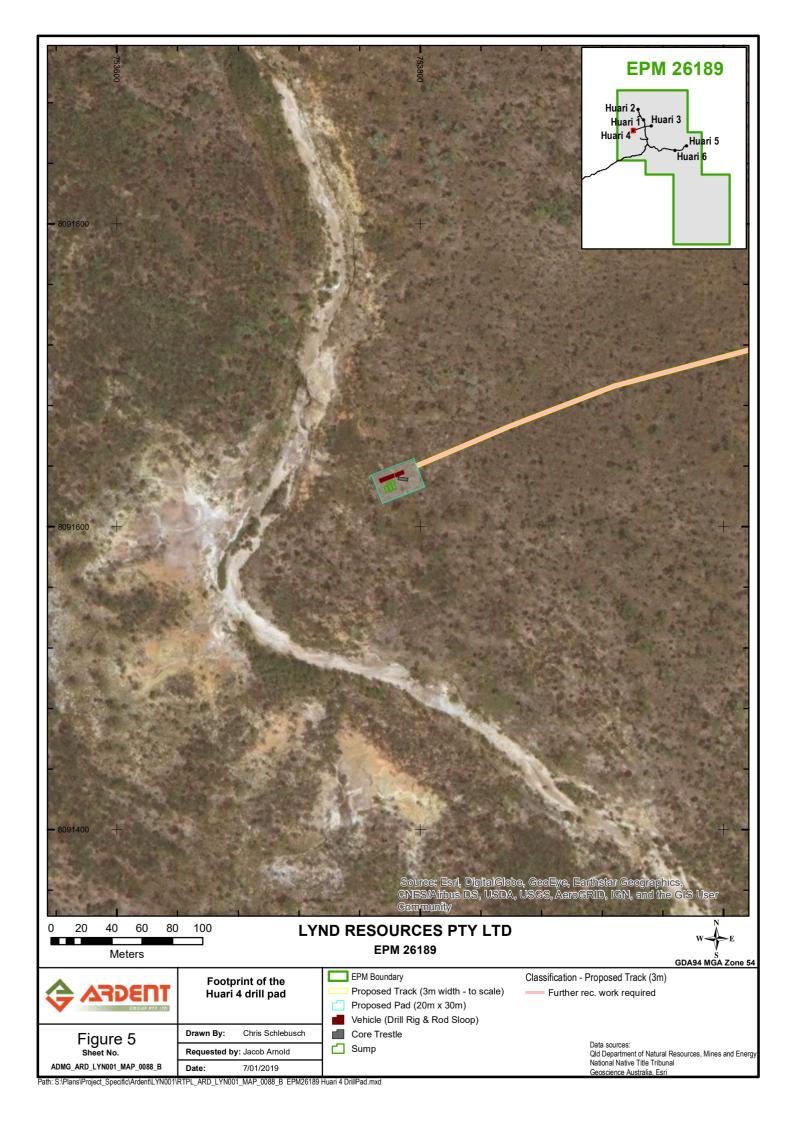
Figure 2 to **Figure 7** shows the updated extent of the proposed Huari drill pads, (an overview of the proposed activities is shown in **Figure 1**). The drill pad locations have not changed but rather the track locations. The approved plan "Figure 8: Schematic of proposed drill pad, undated, provided by the applicant and lodged with the application on 30 May 2018 (refer **Attachment 1**)" does not need to be amended, the size and composition of the drill pads will remain the same.

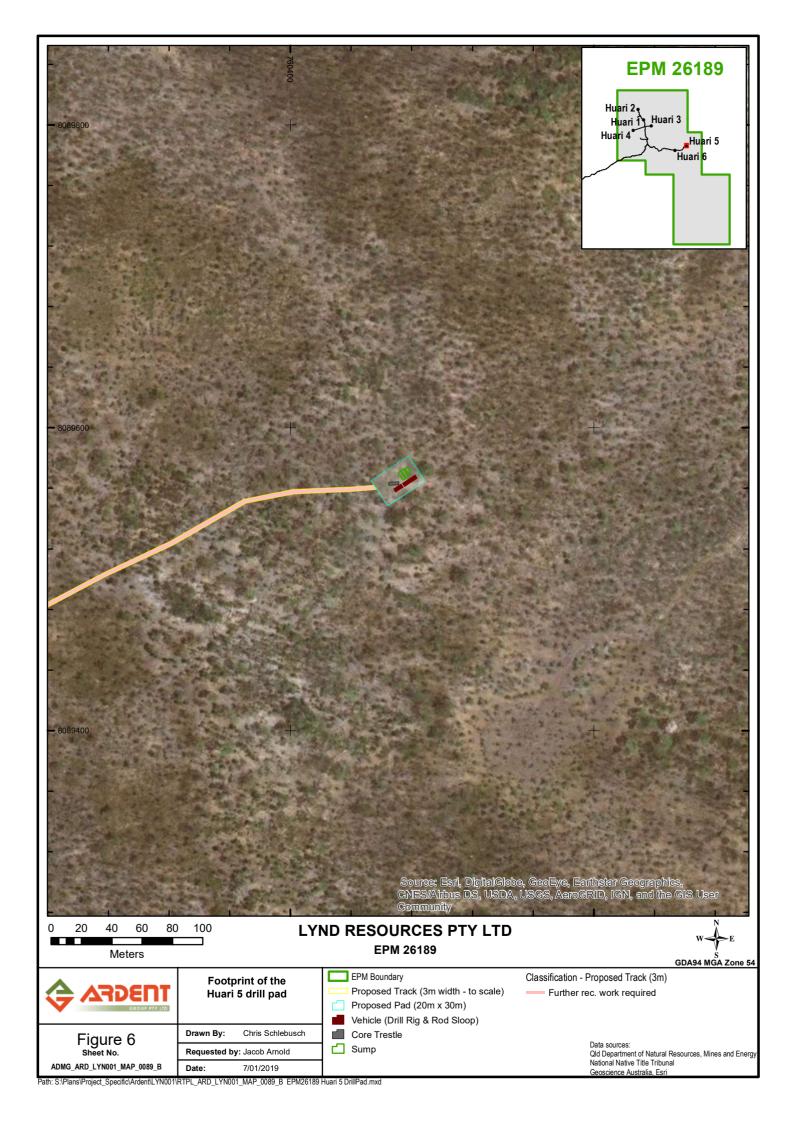
Figure 8 shows the updated location of the temporary campsite and temporary laydown and fuel storage area. The location of the temporary campsite and temporary laydown and fuel storage area are required to be relocated as the access track to the drill sites have been amended. The approved plans "Figure 9: Schematic of fuel and laydown storage area, undated, as provided by the applicant and lodged with the application on 30 May 2018 (refer **Attachment 1**)" and "Figure 10: Schematic of mobile campsite, undated, provided by the applicant and lodged with the application on 30 May 2018 (refer **Attachment 1**)" do not need to be amended, the size and composition of the temporary campsite and temporary fuel and laydown storage area will remain the same.

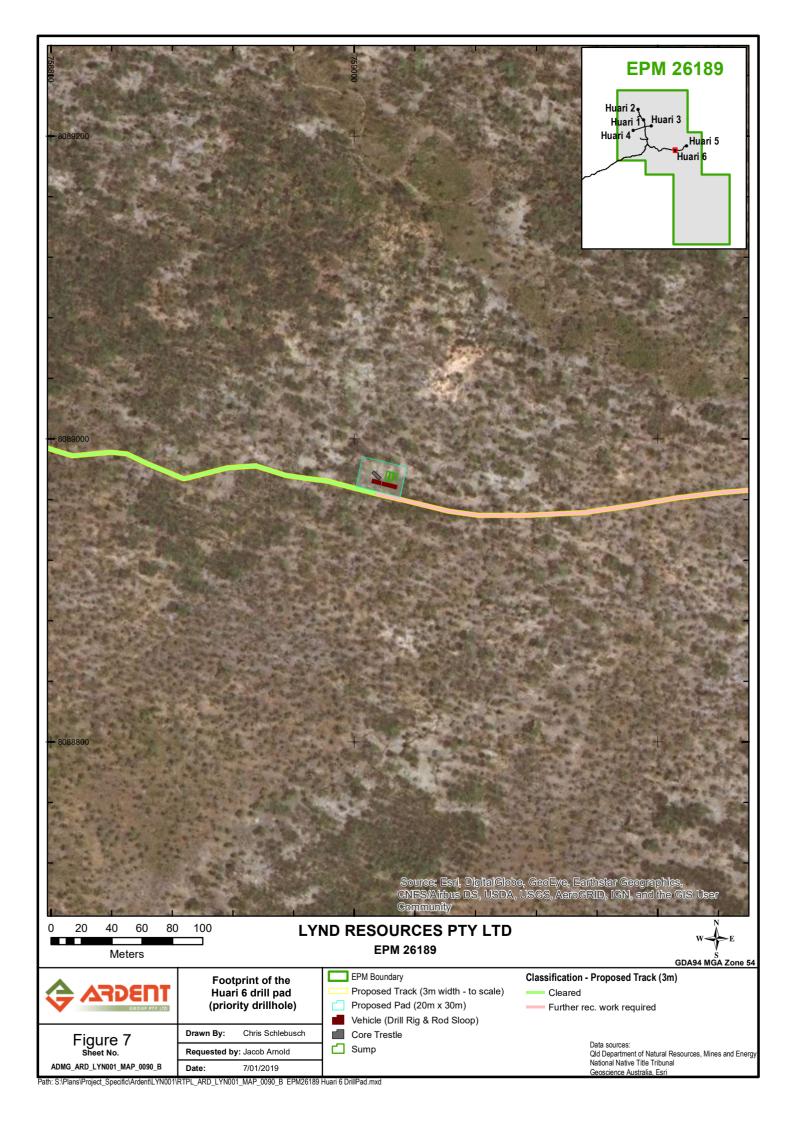


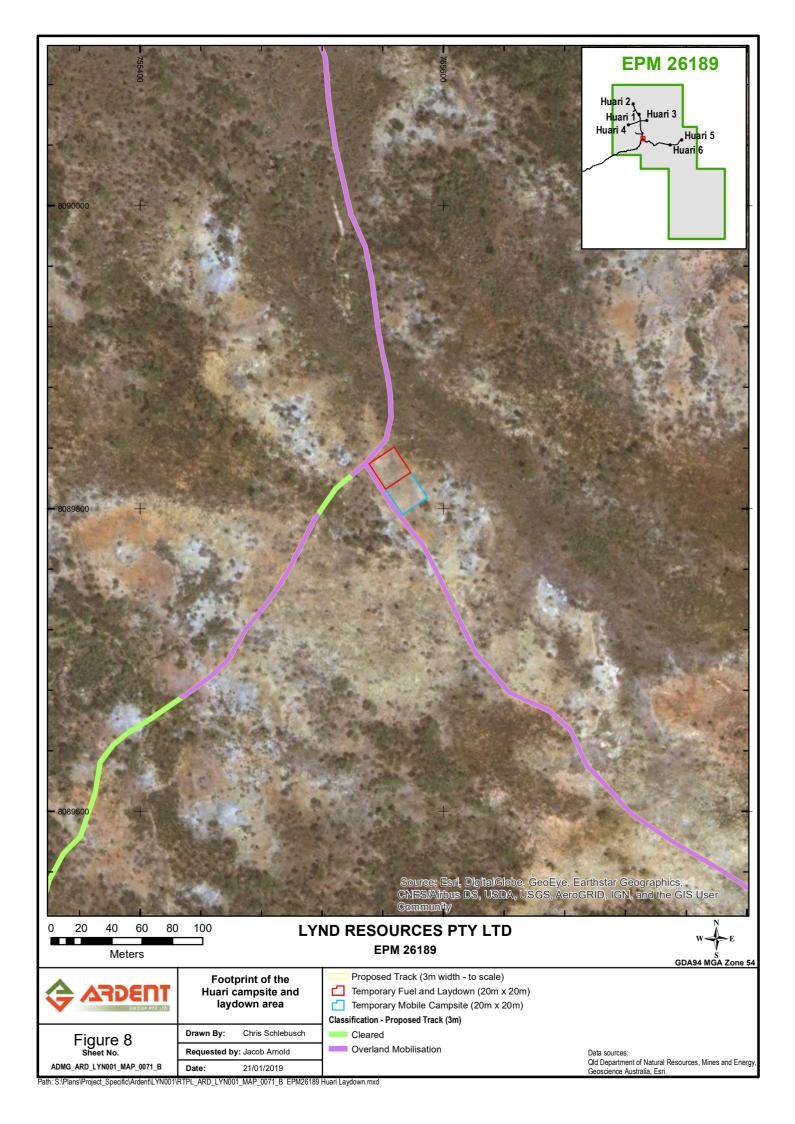














2.4 Approved Plans amendments

As the track is proposed to be amended, the approved plans are also required to be amended. **Table 7** details the current approved plans and the associated replacement plan reference within this report.

Table 7 Replacement approved plan reference table

Approved Plan	Replacement Plan reference within this report
Figure 1: location of Proposed Exploration Activities within Gulf Rivers SEA, Sheet No. ADMG_ARD_LYN001_MAP_0036_A, dated 30/04/18, as provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1);	Figure 1
Figure 1: Footprint of the Huari 1 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0085_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 2
Figure 2: Footprint of the Huari 2 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0086_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 3
Figure 3: Footprint of the Huari 3 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0087_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 4
Figure 4: Footprint of the Huari 4 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0088_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 5
Figure 5: Footprint of the Huari 5 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0089_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 6
Figure 6: Footprint of the Huari 2 drill pad, Sheet No. ADMG_ARD_LYN001_MAP_0090_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 7
Figure 7: Footprint of the Huari campsite and laydown area, Sheet No. ADMG_ARD_LYN001_MAP_0071_A, dated 2/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 8



Approved Plan	Replacement Plan reference within this report
Figure 8: Schematic of proposed drill pad, undated, provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1);	No change required
Figure 9: Schematic of fuel and laydown storage area, undated, as provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1);	No change required
Figure 10: Schematic of mobile campsite, undated, provided by the applicant and lodged with the application on 30 May 2018 (refer Attachment 1);	No change required
Figure 13: Exploration Activities Location Refinement, Sheet No. DMG_ARD_LYN001_ MAP_0033_B, dated 9/05/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Not required. Not included as a stamped approved plan.
Figure 15: Huari access track regulated vegetation crossing 1, Sheet No. ADMG_ARD_LYN001_MAP_0099_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 13
Figure 16: Huari access track regulated vegetation crossing 2, Sheet No. ADMG_ARD_ LYN001_MAP_0100_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 14
Figure 17: Huari access track regulated vegetation crossing 3, Sheet No. ADMG_ARD_ LYN001_MAP_0101_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 15
Figure 18: Huari access track regulated vegetation crossing 4, Sheet No. ADMG_ARD_ LYN001_MAP_0102_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 16
Figure 19: Huari access track regulated vegetation crossing 5, Sheet No. ADMG_ARD_ LYN001_MAP_0103_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 17
Figure 20: Huari access track regulated vegetation crossing 6, Sheet No. ADMG_ARD_ LYN001_MAP_0104_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 18



Approved Plan	Replacement Plan reference within this report
Figure 21: Huari access track regulated vegetation crossing 7, Sheet No. ADMG_ARD_ LYN001_MAP_0105_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 19
Figure 22: Huari access track regulated vegetation crossing 9, Sheet No. ADMG_ARD_ LYN001_MAP_0107_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 20
Figure 23: Huari access track regulated vegetation crossing 11, Sheet No. ADMG_ARD_LYN001_MAP_0109_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	Figure 21
Figure 24: Huari access track regulated vegetation crossing 12, Sheet No. ADMG_ARD_LYN001_MAP_0104_A, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	No longer required
Figure 25: Huari access track regulated vegetation crossing 13, Sheet No. ADMG_ARD_LYN001_MAP_0111_B, dated 4/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1);	No longer required
Figure 26: Huari access track regulated vegetation crossing 14, Sheet No. ADMG_ARD_LYN001_MAP_0114_A, dated 3/07/18, submitted with the applicant's response to the Requirement Notice on 13 July 2018 (refer Attachment 1).	No longer required.



3. Gulf Rivers Environmental Attributes

The relevant environmental attributes for the Gulf Rivers SEA are described in section 9 of the RPI Regulation and are reproduced below.

- a) The natural hydrologic processes of the area characterised by
 - i. Natural, unrestricted flows in and along watercourses and estuaries; and
 - ii. Overflow from watercourses onto the flood plains of the area, or the other way; and
 - iii. Natural flow paths of water across flood plains connecting waterholes, lakes and wetlands in the area; and
 - iv. Natural flow in and from groundwater and springs;
- b) The natural geomorphic processes of the area characterised by
 - i. Natural erosion; and
 - ii. The transport and deposit of sediment by water throughout the catchments and along the watercourse systems and estuaries;
- c) The functioning riparian processes of the area characterised by native riparian vegetation associated with watercourses, estuaries, lakes and floodplains and wetlands;
- d) The functioning wildlife corridors of the area characterised by
 - i. Natural habitat in the watercourse systems; and
 - ii. Permanent waterholes and springs;
- e) The natural water quality in the watercourse channels and aquifers and on flood plains in the area characterised by physical, chemical and biological attributes that support and maintain natural aquatic and terrestrial ecosystems.

Sub-sections 3.1 to 3.5 describe the Gulf Rivers SEA environmental attributes for the area of proposed activities. Potential impacts on these environmental attributes and mitigation strategies are detailed in Section 4 of this Report.

3.1 Riparian Process

The amended access track to the six drill pads will involve crossing nine corridors of regulated vegetation (intersecting a watercourse) (compared to twelve corridors with the approved access track route). The crossings are largely only associated with minor drainage features, except for the crossing of the Red River (Figure 9). The Red River is within an associated Designated Precinct, the access track begins off an existing pastoral track within this Designated Precinct. The crossing of the Red River is in a section where there is limited riparian vegetation present and is only likely to require minimal clearing (Figure 13).

Whilst some of the access track (11.23%) will be within 'of concern' vegetation (dominant 3.74%, subdominant 7.49%), the majority of access track disturbance (88.77%) will be within REs classified as 'no concern at present'.

An Environmentally Sensitive Area map has been obtained for EPM 26189 and the surrounding areas and has indicated that there are no category A, B or C environmentally sensitive areas that are within the scope of proposed activities. All proposed activities will occur within wholly within Lot 4716 on SP273457, a protected plants flora survey trigger map for this Lot has indicated it is not a high-risk area.



There are no known estuaries, lakes or wetlands that will be encountered as a result of the drill pads or access tracks.

A summary of all REs which will be disturbed through access tracks and/or drill pads are described in **Table 8** with 'of concern' REs illustrated in **Figure 10**.

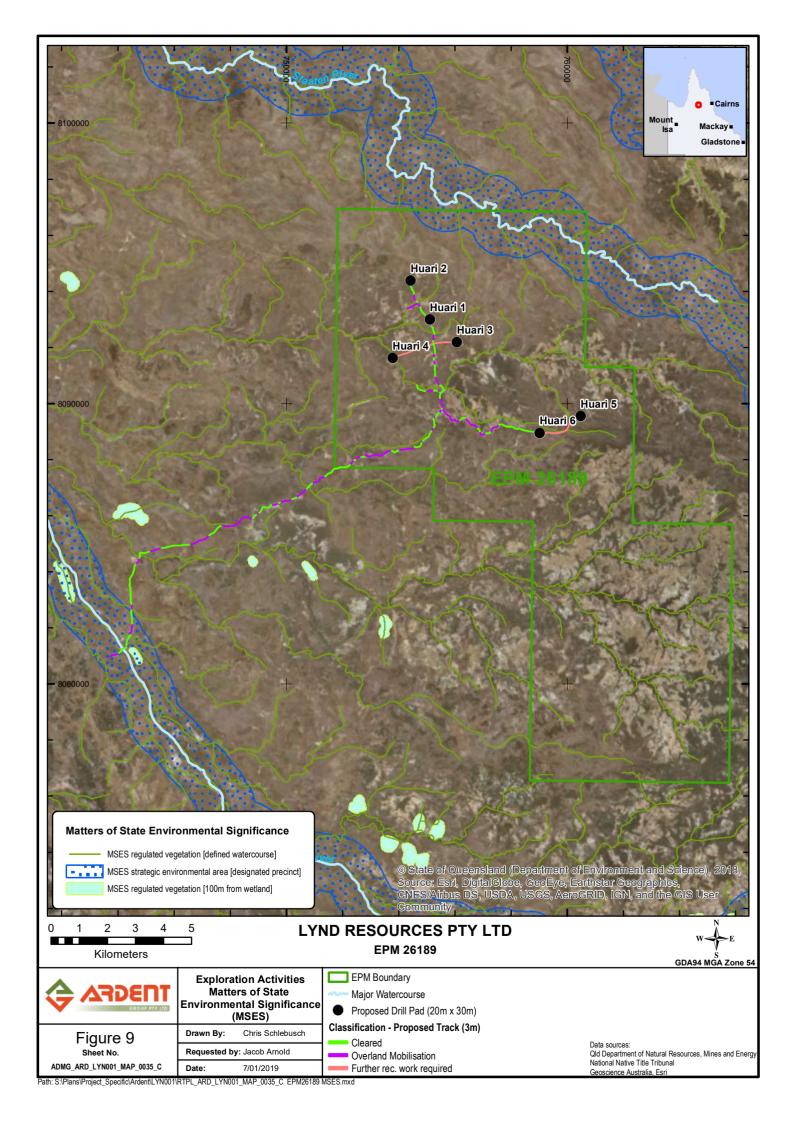




Table 8 Summary of Regional Ecosystems disturbed by exploration activities

RE	Summary Description	Biodiversity Status	Vegetation Management Act Class	Structure Category
2.3.17a	Eucalyptus microtheca low open woodland to woodland, commonly with Excoecaria parvifolia and Lysiphyllum cunninghamii. A sparse lower tree or shrub layer may occur, including canopy species and Atalaya hemiglauca. The ground layer is tussock grasses, including Astrebla spp., Iseilema spp., and Chloris pumilio. Occurs on fringes of channels on Quaternary alluvial plains derived from fine-grained parent material. Fine alluvial soils and cracking clays. Riverine wetland or fringing riverine wetland. (BVG1M: 16a). Special Values: Bioregional refuge for fauna, including macropods.	Of concern	Least concern	Sparse
2.3.21b	Mixed woodland, including combinations of the species <i>Eucalyptus leptophleba</i> , <i>Corymbia confertiflora</i> , <i>C. terminalis</i> , <i>C. polycarpa</i> and <i>C. bella</i> . Occasional canopy species include <i>Erythrophleum chlorostachys</i> , <i>Eucalyptus camaldulensis</i> and <i>Lysiphyllum cunninghamii</i> . A sparse, variable shrub layer may occur. The ground layer is tussock grasses, commonly <i>Heteropogon contortus</i> and <i>Chrysopogon fallax</i> . Occurs on levees and active Quaternary alluvial plains, associated with upper reaches of major watercourses (not associated with river deltas). Brown sandy and silty loam soils. Floodplain (other than floodplain wetlands). (BVG1M: 16b)	Of concern	Least concern	Mid- dense
2.3.21j	Eucalyptus leptophleba and/or Corymbia polycarpa and/or C. confertiflora woodland to open woodland. Occasional canopy species include Erythrophleum chlorostachys, Eucalyptus tetrodonta and Eucalyptus microneura. A secondary tree or shrub layer may occur, including Melaleuca viridiflora, Terminalia spp. and Grevillea spp. The ground layer is tussock grasses, including Aristida hygrometrica, Chrysopogon sp. and Eragrostis spp. Occurs on levees and active Quaternary alluvial plains of upper tributary watercourses in the east of the bioregion. Floodplain (other than floodplain wetlands). (BVG1M: 16b). Special values: Provincial refuge for some woodland flora and fauna.	Of concern	Least concern	Mid- dense
2.3.24a	Melaleuca argentea and/or M. fluviatilis and Eucalyptus camaldulensis woodland to open forest. Occasional canopy species include M. leucadendra and Leptospermum madidum. A variable lower tree layer may occur. A shrub layer commonly occurs, including Barringtonia acutangula and Acacia spp. The ground layer is commonly bare sand, with leaf litter and isolated tussock grasses and forbs. Occurs on fringes	Of concern	Least concern	Sparse



RE	Summary Description	Biodiversity Status	Vegetation Management Act Class	Structure Category
	and in channels of major watercourses in the north of the bioregion. Pale, coarse river sands. Riverine wetland or fringing riverine wetland. (BVG1M: 22c). Special values : Important sites for feeding and movement of birds, fish and reptiles.			
2.3.24b	Melaleuca argentea, M. fluviatilis and Eucalyptus camaldulensis open forest, commonly with Xanthostemon umbrosus and Lophostemon grandiflorus. A lower tree or shrub layer commonly occurs, including M. viridiflora, Terminalia platyphylla, Ficus opposita and M. clarksonii. The ground layer is bare sand with scattered grasses and forbs. Occurs on fringes and in channels of larger, upper tributary creeks in the north of the bioregion. Riverine wetland or fringing riverine wetland. (BVG1M: 22c). Special values: Supports locally uncommon plant species. Provincial refuge for flora and fauna.	Of concern	Least concern	Sparse
2.3.26a	Eucalyptus camaldulensis woodland to low woodland, commonly with Melaleuca spp. Occasional canopy species include Lophostemon grandiflorus, Grevillea pteridifolia, Corymbia polycarpa and Erythrophleum chlorostachys. A sparse shrub layer may occur, including Acacia spp., and Asteromyrtus symphyocarpa. The ground layer is sparse, commonly tussock grasses. Occurs on fringes and in channels of minor watercourses in the north-east of the bioregion. Coarse sands. Riverine wetland or fringing riverine wetland. (BVG1M: 16a). Special values: Significant provincial refuges for fauna. Includes areas of permanent water with high habitat values for aquatic and other species.	Of concern	Least concern	Mid- dense
2.3.29a	Melaleuca viridiflora low woodland to low open woodland, occasionally with M. citrolens, M. stenostachya. M. acacioides, Grevillea striata and Terminalia spp. may occur in the canopy. Emergent Corymbia polycarpa, Eucalyptus chlorophylla, E. microtheca and C. clarksoniana may occur. A shrub layer commonly occurs, including Melaleuca spp., Petalostigma spp. and Carissa lanceolata. The ground layer is tussock grasses, commonly Eriachne spp. Occurs on active Quaternary alluvial plains and drainage depressions in the north-east of the bioregion. Silty clay and texture contrast soils. Floodplain (other than floodplain wetlands). (BVG1M: 21a). Special values: Potential habitat for the golden-shouldered parrot (Psephotus chrysopterygius).	No concern at present	Least concern	Sparse



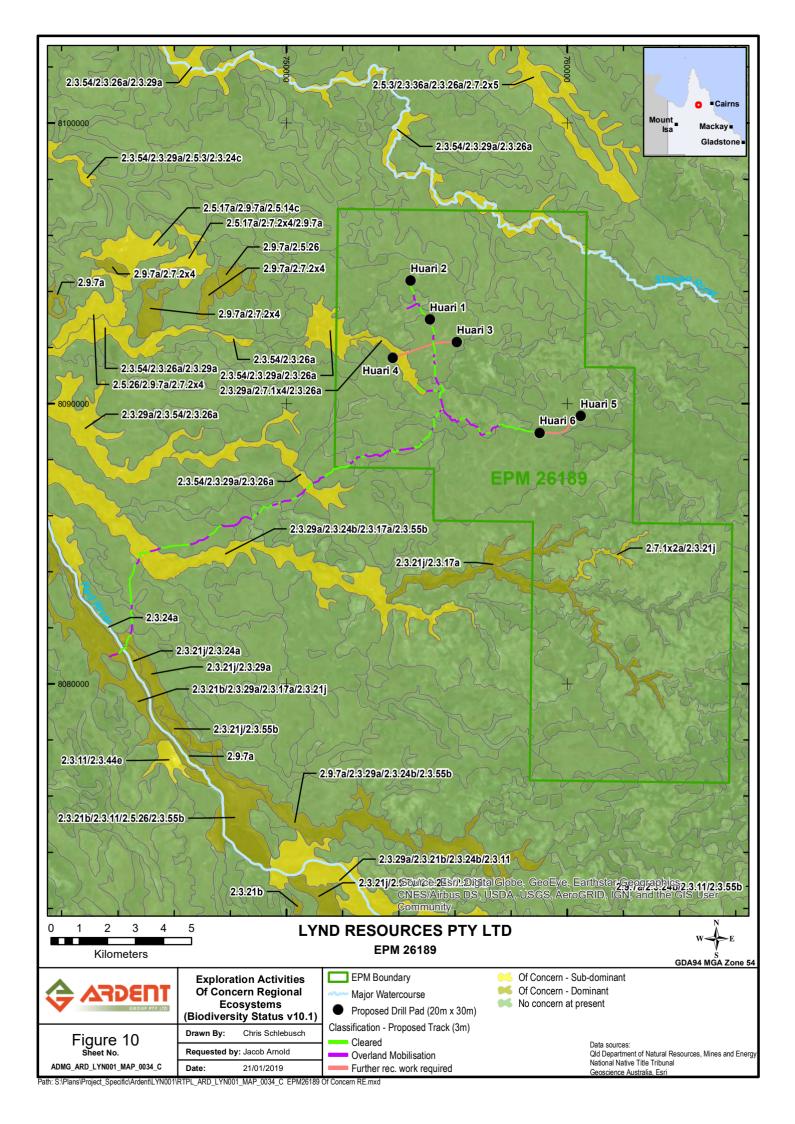
RE	Summary Description	Biodiversity Status	Vegetation Management Act Class	Structure Category
2.3.54	Corymbia polycarpa open woodland to woodland. A lower tree layer commonly occurs, including Melaleuca viridiflora, Grevillea spp., Erythrophleum chlorostachys and Pandanus sp. A sparse shrub layer may occur. The ground layer is tussock grasses, including Schizachyrium spp., Thaumastochloa spp. and Pseudopogonatherum contortum. Occurs in depressions and on fringes of minor watercourses in broad, Tertiary sand sheets in the north-east of the bioregion. (BVG1M: 16b)	No concern at present	Least concern	Sparse
2.3.55b	Seasonal swamps (wooded). <i>Melaleuca viridiflora</i> and/or <i>M. clarksonii</i> low open woodland to low open forest. The ground layer is a combination of tussock grasses, sedges and forbs, including <i>Pseudoraphis spinescens, Nymphoides indica</i> and <i>Eleocharis spp.</i> Includes small unwooded areas and open water. Occurs in closed depressions on Quaternary deposits in the Mitchell-Gilbert Fans subregion. Silty and sandy clay soils. Palustrine wetland (e.g. vegetated swamp). (BVG1M: 34c). Special values : Seasonal wetland. Important feeding and moulting sites for water birds.	No concern at present	Least concern	Sparse
2.5.6a	Mixed woodland, including combinations of the species <i>Eucalyptus tetrodonta</i> , <i>Corymbia pocillum, Erythrophleum chlorostachys, C. polycarpa and C. setosa. Eucalyptus chartaboma</i> and <i>C. dallachiana</i> may occur in the canopy. A variable shrub commonly occurs, including canopy species, <i>Melaleuca spp., Grevillea spp.</i> and <i>Petalostigma spp.</i> The ground layer is tussock grasses, including <i>Aristida spp., Heteropogon spp., Schizachyrium fragile</i> and <i>Sarga plumosum</i> . Occurs on undulating Tertiary sand sheets. Red and yellow sands or earths. (BVG1M: 14b). Special values: Occurs at the highest altitudes in the bioregion (up to 1000+m).	No concern at present	Least concern	Sparse
2.5.9	Eucalyptus microneura woodland to low open woodland. Occasional canopy species include Erythrophleum chlorostachys and Terminalia spp. The ground layer is dominated by Aristida spp. Occurs on plains and plateaus on earths, podzolics and skeletal soils. (BVG1M: 18d)	No concern at present	Least concern	Sparse
2.5.17a	Melaleuca stenostachya and/or M. citrolens low woodland to woodland, occasionally with Eucalyptus microneura, E. provecta, Acacia leptostachya and Terminalia platyptera. A shrub layer of Petalostigma banksii may occur. The ground layer is variable, commonly tussock grasses. Occurs on undulating outwash deposits	No concern at present	Least concern	Sparse



RE	Summary Description	Biodiversity Status	Vegetation Management Act Class	Structure Category
	and erosional Tertiary sand sheets in the north of the bioregion. Brown sandy and texture contrast soils. (BVG1M: 21b).			
2.5.26	Mixed low woodland to woodland, including combinations of the species <i>Eucalyptus melanophloia, Acacia julifera subsp. gilbertensis, Corymbia setosa, Melaleuca spp., E. microneura</i> and <i>Erythrophleum chlorostachys</i> . A variable shrub layer commonly occurs, including canopy species, <i>Acacia spp.</i> and <i>Petalostigma banksii</i> . The ground layer is tussock grasses, including <i>Thaumastochloa spp., Schizachyrium fragile</i> and <i>Chrysopogon sp.</i> Occurs on undulating, erosional, Tertiary sand sheets. Yellow to brown sands and loams. (BVG1M: 17b). Special values: None.	No concern at present	Least concern	Sparse
2.7.1x2a	Acacia meiosperma shrubland to open scrub, occasionally with Cochlospermum gregorii, Acacia shirleyi, Corymbia pocillum, Grevillea pteridifolia and Macropteranthes montana. A lower shrub layer, commonly Calytrix leptophylla and Micromyrtus forsteri may occur. The sparse ground layer commonly includes Triodia spp., Schizachyrium fragile and Aristida dominii. Occurs on breakaways and slopes of lateritised, Tertiary sandstone hills. (BVG1M: 24a). Special values: Supports plant species with restricted geographic ranges in the bioregion, including threatened species Macroptheranthes montana.	No concern at present	Least concern	Mid- dense
2.7.1x2b	Micromyrtus forsteri and/or Calytrix leptophylla dwarf open shrubland to open shrubland. Emergent Acacia shirleyi, Corymbia serendipita and A. meiosperma commonly occur. The ground layer is sparse grasses and forbs and includes areas of bare rock. Commonly occurs on flat, open areas in dissected, lateritised Tertiary sandstone hills. (BVG1M: 24a). Special values: Supports plant species with restricted geographic ranges.	No concern at present	Least concern	Mid- dense
2.7.1x4	Melaleuca foliolosa tall shrubland to low open forest, commonly with Macropteranthes montana, Acacia shirleyi, Eucalyptus provecta and Corymbia gilbertensis. A shrub layer commonly occurs, including Melaleuca foliolosa, Memecylon pauciflorum, Acacia meiosperma, Bossiaea armitii and Larsenaikia ochreata. The sparse ground layer is tussock grasses and forbs. Occurs on low rises, breakaways and stripped surfaces on lateritised Cretaceous mudstones. Special values: Supports plant species with restricted geographic ranges in the bioregion, including threatened species Macroptheranthes montana.	No concern at present	Least concern	Mid- dense



RE	Summary Description	Biodiversity Status	Vegetation Management Act Class	Structure Category
2.7.1x6	Triodia spp. hummock grassland, commonly with emergent Eucalyptus melanophloia, Melaleuca citrolens, Corymbia pocillum, M. stenostachya and Acacia meiosperma. Small areas of Eucalyptus melanophloia and/or Melaleuca citrolens low open woodland with Triodia spp. understorey occasionally occur. Occurs on crests and slopes of lateritised, Tertiary sandstone hills. (BVG1M: 33b) Special values: Supports plant species with restricted geographic ranges.	No concern at present	Least concern	Mid- dense
2.7.1x7	Acacia shirleyi woodland, commonly with Corymbia pocillum. A shrub layer of Acacia meiosperma or Gardenia vilhelmii commonly occurs. The ground layer is short tussock grasses, including Schizachyrium fragile and Eriachne spp. Occurs on crests and slopes of lateritised, Tertiary sandstone hills. (BVG1M: 24a). Special values: Supports plant species with restricted geographic ranges.	No concern at present	Least concern	Mid- dense
2.7.2x4	Eucalyptus provecta (predominantly) and/or E. tardecidens and/or E. chlorophylla low woodland to woodland. E. microneura, Melaleuca foliolosa, Acacia shirleyi and Erythrophleum chlorostachys may occur in the canopy. A sparse shrub layer commonly occurs, including canopy species, Gardenia vilhelmii and Carissa lanceolata. The ground layer is tussock grasses, including Chrysopogon fallax, Aristida spp. and Schizachyrium fragile. Occurs on footslopes, flats and low rises of lateritised Cretaceous mudstone. (BVG1M: 19d). Special values: Supports plant species with restricted geographic ranges.	No concern at present	Least concern	Sparse
2.7.2x5	Acacia shirleyi and/or Melaleuca foliolosa woodland. Corymbia pocillum, C. setosa, M. citrolens, C. polycarpa, M. viridiflora and Corymbia grandifolia subsp. grandifolia may occur in the canopy or as lower trees. A shrub layer may occur, including Petalostigma banksii, Gardenia vilhelmii and Bossiaea armitii. The ground layer is tussock grasses, including Schizachyrium fragile, Thaumastochloa sp. and Eriachne spp. Occurs on exposures of ferricrete in erosional, Tertiary sand sheets. Shallow to skeletal sandy soils over ferricrete. (BVG1M: 24a). Special values: Supports plant species with restricted geographic ranges.	No concern at present	Least concern	Sparse





3.2 Wildlife Corridors

Vegetation communities along watercourses and drainage features not only function as habitat for particular fauna but also as a movement corridor. According to the Vegetation Management Watercourse and Drainage Feature Mapping for the area, the proposed tracks will intersect nine regulated vegetation (intersecting a watercourse) corridors which may be used as habitat and movement corridors for fauna. The proposed Huari 4 drill pad is situated in a corridor of RE 2.3.29a/2.7.1x4/2.3.26a which largely has a different land zone and vegetation community to the surrounding area.

There are no known Groundwater Dependent Ecosystems (GDE) mapped nearby to the proposed disturbance areas.

3.3 Water Quality

The exploration activities will occur in the upper catchment of the Staaten River sub-basin. The location of the proposed exploration is very remote with little to no data on the water quality of watercourses within the upper catchment of the Staaten Basin. Drainage from the Huari sites will flow into the Red River before it converges with Pelican Creek which then diverges into Pelican and Wyaaba Creeks. The watercourses then converge into Wyaaba Creek before flowing into the Staaten River which ultimately flows into the Gulf of Carpentaria. There are no open or closed DNRME gauging stations directly downstream of the Huari sites. There is currently only one open DNRME gauging station within the Staaten Basin. While this gauging station will not display the exact characteristics of the exploration sites, the Staaten River at Dorunda gauging station will provide some insight to the characteristics of the catchment.

Water quality characteristics and flow conditions can be observed in **Table 9** and **Table 10**. Water flow in the catchment is seasonal, exhibiting large flows throughout the wet season from December to April before flows decrease dramatically over the dry season.

Table 9 Water Quality Characteristics at Site 918003A Staaten River at Dorunda (Queensland Government, 2019)

Parameter	Count	Mean	Median
EC @ 25°C (μS/cm)	26	51.89	48.5
рН	26	6.92	6.91
Turbidity (NTU)	26	7.12	6.5
Total Nitrogen (mg/L)	23	0.42	0.38
Total Phosphorous (mg/L)	23	0.07	0.04



Table 10 Water Flow Volume (ML) at Site 918003A Staaten River at Dorunda (Queensland Government, 2019)

	Daily				Monthly
Month	Max	Min	Mean	Median	Mean
January	92107	0	11720	862	358168
February	98090	0	23382	9331	635999
March	98712	11	19667	7733	609675
April	93797	0	3682	583	108850
May	30996	0	508	55	15441
June	2917	0	74	2	2176
July	407	0	10	0	318
August	31	0	1	0	16
September	1	0	0	0	0
October	508	0	1	0	31
November	3162	0	20	0	589
December	72052	0	1313	0	39923
All months	98712	0	4717	0	141722

In terms of groundwater, the Huari project is situated on the Great Artesian Basin in the Gulf Gilbert River Aquifer area. There are no known springs located near the Huari sites. The nearest registered groundwater bore (RN 157934) within the catchment is located at least 65km from the Huari sites but no groundwater quality data has been collected.

3.4 Hydrological Processes

The nearest Water Act-defined watercourse (Staaten River) is approximately 3km north of the Huari 2 drill site in the adjacent watershed within the Staaten Basin, with the nearest major watercourse within the Huari watershed being the Red River located approximately 15.5km southwest of the Huari 1 drill site. There are no dams, lakes, waterholes, springs or wetlands located within the tenement and subsequently near the drillholes. Off tenement, no access track will be located within 250m of any wetland.

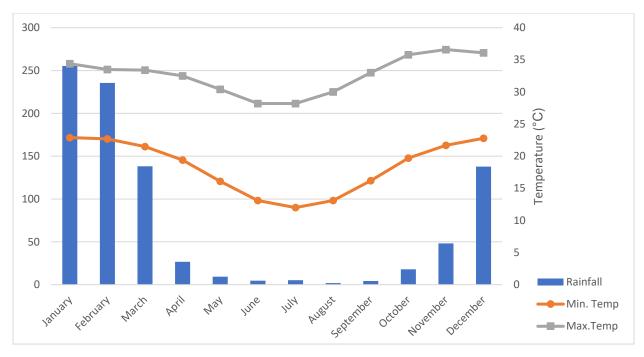
3.5 Geomorphic Processes

Drillholes will encounter sedimentary rocks of the Karumba and Carpentaria Basins before bottoming in Palaeozoic rocks, possibly volcanic or intrusive rocks. Several aquifers occur in the Karumba and Carpentaria Basin stratigraphy and are likely to be encountered, including weakly to moderately producing aquifers of the Gilbert River Formation, which is a sub-artesian to artesian aquifer.



3.6 Climate

The region is characterised by having a distinct wet and dry season, the mean annual rainfall for the region is 882.9mm with 87% of the annual rainfall falling between December and March. Daily minimum temperatures range from 12°C in winter to 22.9°C in summer and maximum temperatures range from 28.2°C in winter to 36.1°C in summer (Figure 11).



Rainfall data taken from Abingdon Downs Station weather station located approximately 47km from the Huari sites using monthly rainfall data beginning in 1945. The temperature data is taken from the Georgetown Post Office weather station located approximately 115km from the Huari Sites. Monthly data used for mean maximum temperature is from 1909 to present while the mean minimum temperature is from 1894 to present.

Figure 11 Monthly mean rainfall, minimum and maximum temperatures for the region (BOM, 2018)

3.7 Land Use

The land use of the surrounding area is classified as grazing native vegetation with the land use on Lot 4716 on SP273457 being a cattle station owned by Keough Cattle Co. Pty Ltd.



4. Potential Impacts on Environmental Attributes

To address Section 9 of the RPI Regulation (as shown in Section 3 of this Report), sub-sections 4.1 to 4.5 below detail the required outcomes in relation to:

- Riparian processes;
- Wildlife corridors;
- Water quality;
- Hydrologic processes; and
- Geomorphic processes.

4.1 Riparian Process

The new proposed exploration access tracks will have minor impact upon riparian vegetation as there are nine crossings of regulated vegetation (intersecting a watercourse) associated with minor drainage features. This has been reduced from twelve regulated vegetation (intersecting a watercourse) corridors. While the new route will impact three less regulated vegetation (intersecting a watercourse) corridors, the route will begin within a Designated Precinct associated with the Red River. At the chosen crossing section of the Red River, there is minimal vegetation present in this area, with minimal vegetation likely to be removed (Figure 13). Therefore, it is considered that negating impact to three less regulated vegetation (intersecting a watercourse) corridors will have less environmental impact despite the commencement of the track within a Designated Precinct area. In addition, crossing point 6 will only be required if the Huari 5 drillhole is confirmed to be drilled and crossing point 3 will not require any clearing and is suitable for overland mobilisation (Figure 15). It is therefore likely that only seven regulated vegetation (intersecting a watercourse) will be disturbed. These seven crossing points do not have well-defined riparian zones or clearly identifiable changes in vegetation structure, density or composition adjacent to the drainage line, and it is unlikely that crossing these drainage lines will have an impact on the structure and function of the regulated vegetation corridors.

Criteria used to decide the location of access tracks and watercourse crossing points include:

- The distance from the nearest constructed property track or fence line to the crossing point,
- The nature of the vegetation between the start point and the crossing point i.e. dense or open, Endangered, Of Concern, or Least Concern at Present Regional Ecosystems,
- The stream order at the crossing point with reference to the amount or area of increased disturbance if the watercourse were crossed at a lower stream order,
- Vegetation at the crossing point dense or open, woody or grassy, etc.,
- The entry and exit from the proposed crossing point incised or gradual, sandy or rocky etc.,
- The nature of the watercourse at the crossing point deep or shallow, incised channel or braided riffles,
- The position on the watercourse on a bend or on a straight,
- Evidence or likelihood of high use by fauna footprints, hollow bearing trees, nest or den sites etc.



Applying the criteria to route selection for the 3m wide access tracks through the regulated vegetation (intersecting a watercourse) corridors ensures that they will not interfere with the ecological function of the riparian vegetation communities. The access tracks were selected to start at the nearest existing track to each of the sites selected for drilling and were designed to reduce the extent of environmental disturbance by avoiding dense vegetation and regulated vegetation corridors.

Figure 13 to **Figure 21** are site-specific vegetation maps for each of the nine regulated vegetation (intersecting a watercourse) corridors that are to be crossed. Each crossing of a regulated vegetation corridor is at the lowest stream order practical, and/or where vegetation disturbance can be minimised. Although nine regulated vegetation corridors will be crossed, detailed desktop assessment has identified routes that will minimise environmental disturbance.

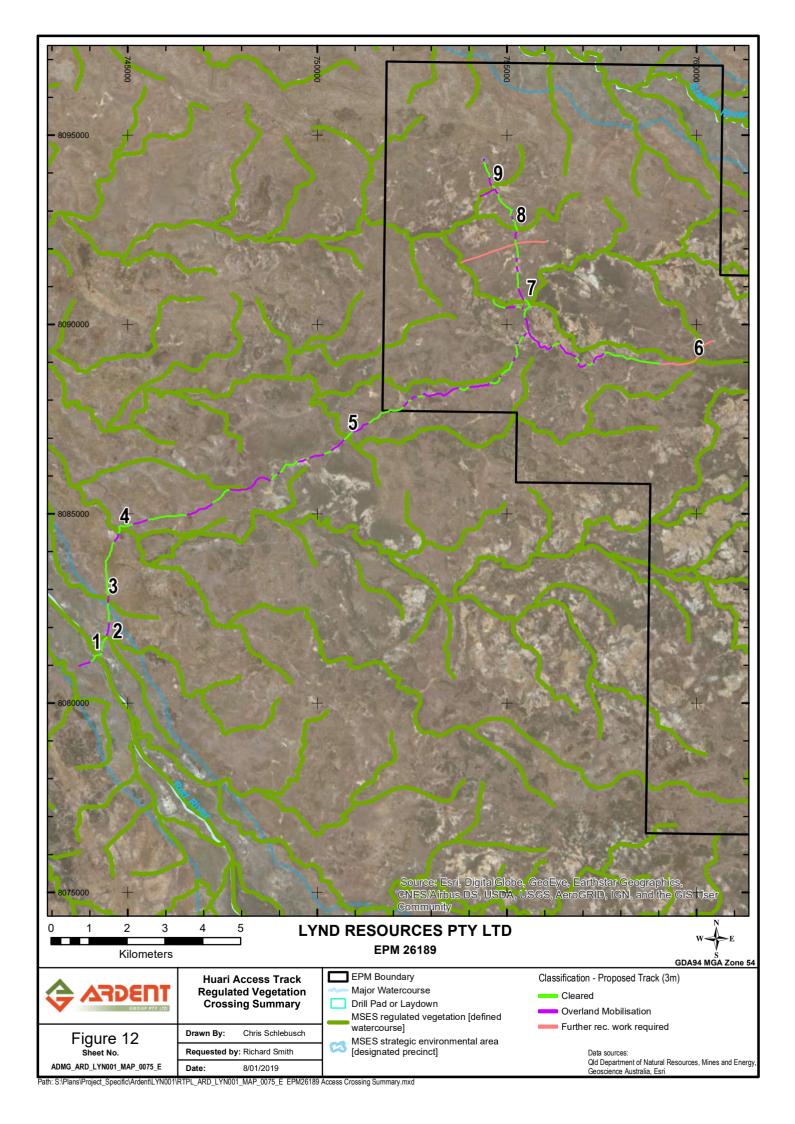
The first regulated vegetation corridor crossing has been chosen at a point in the Red River which is sparsely vegetated and will only require minimal clearing. This is also the case for crossing points 2, 4, 5, 7, 8 and 9. These crossing points have been identified as sections of the regulated vegetation corridor which will require minimal clearing as they are sparsely vegetated. No alternative crossing points were identified during reconnaissance work that would involve traversing less woody vegetation. It is in Lynd's best interests to minimise the amount of clearing conducted during track layout and subsequently requiring rehabilitation.

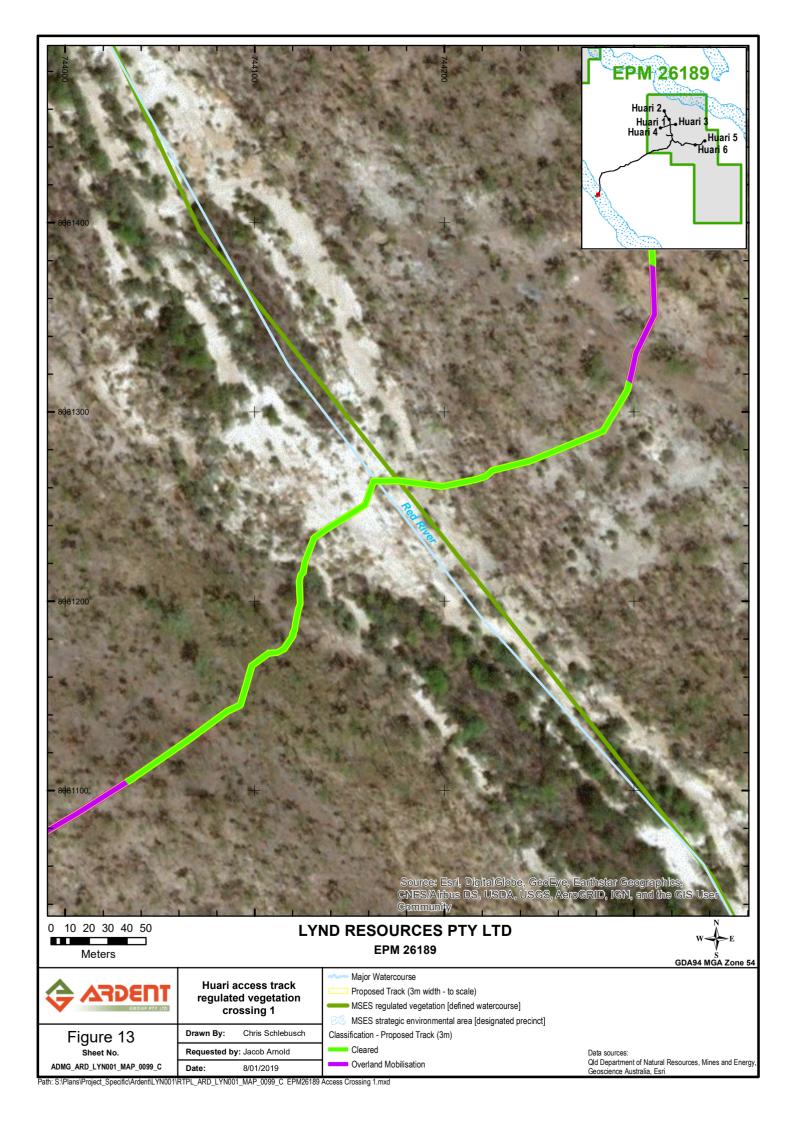
In the 'RPI Development Application Response to Requirement Notice' submitted on 13 July 2018, a significant impact test was conducted and identified that the access tracks would not create a significant residual impact as the linear tracks are limited to 3m wide. A number of management strategies were also identified in Section 2.2.4 of the report.

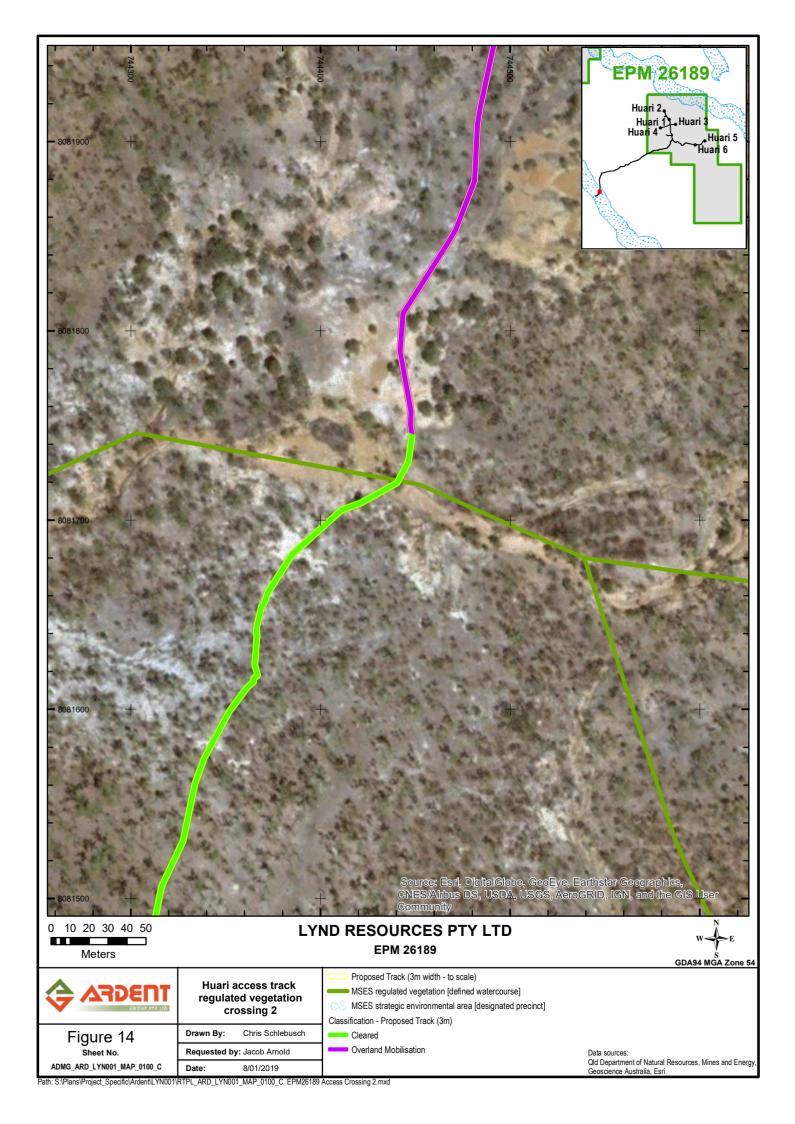
The area of land disturbance caused to these areas of regulated vegetation is considered to be minor, as only 3m wide tracks will be created which will not cause widespread, irreversible damage to the riparian processes.

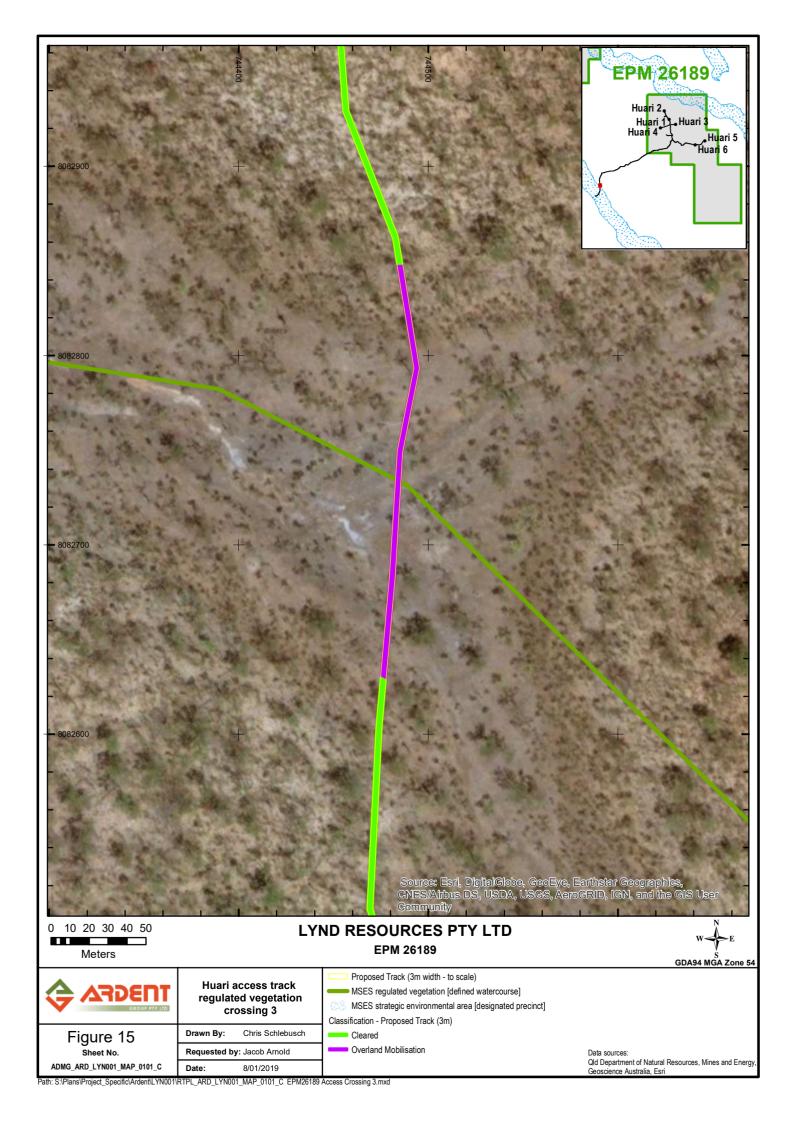
Further desktop and preliminary reconnaissance investigations have considered riparian ecosystems and therefore, there is no current intention to have further setback areas for this particular project. The proposed activities will not cause widespread or irreversible impacts to the riparian processes in the region, as:

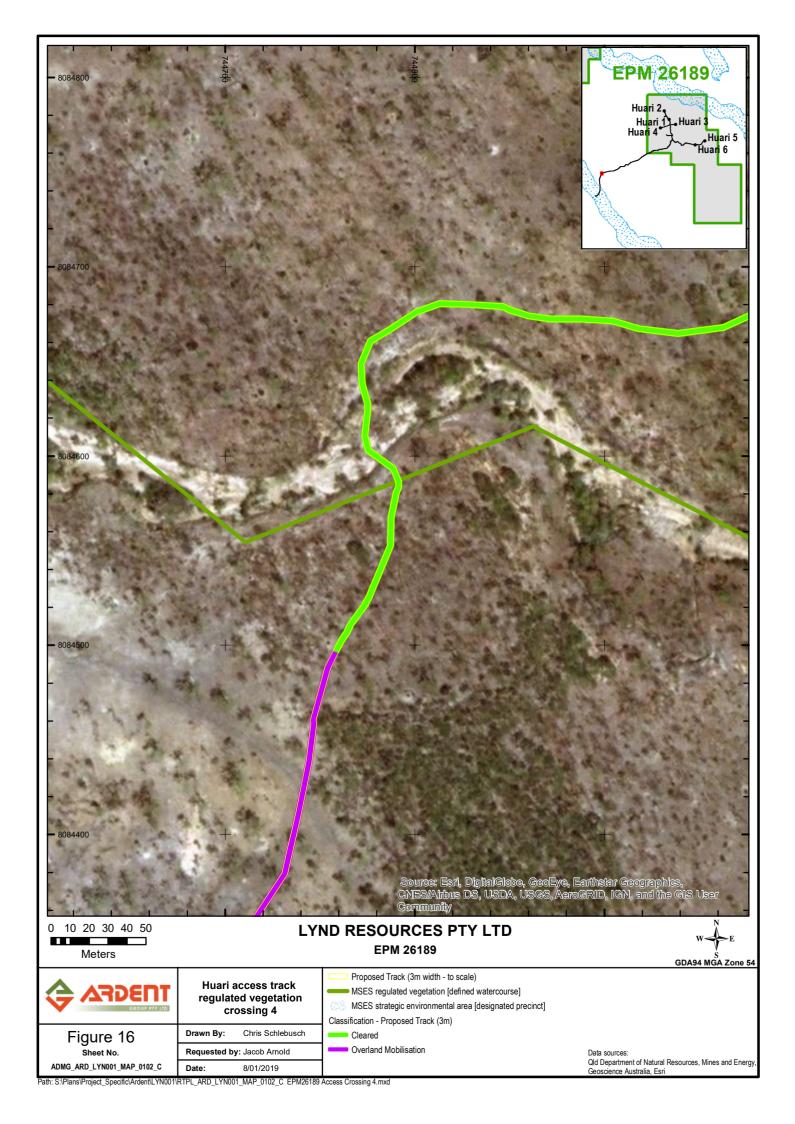
- exploration activities will be small-scale, of a temporary nature and conducted during the dry season;
- widespread areas of riparian vegetation will not be cleared;
- disturbance rehabilitation will occur immediately after works have been completed; and
- all activities and disturbance rehabilitation will be in accordance with the *Eligibility criteria and* standard conditions for exploration and mineral development projects Version 2 (2016).

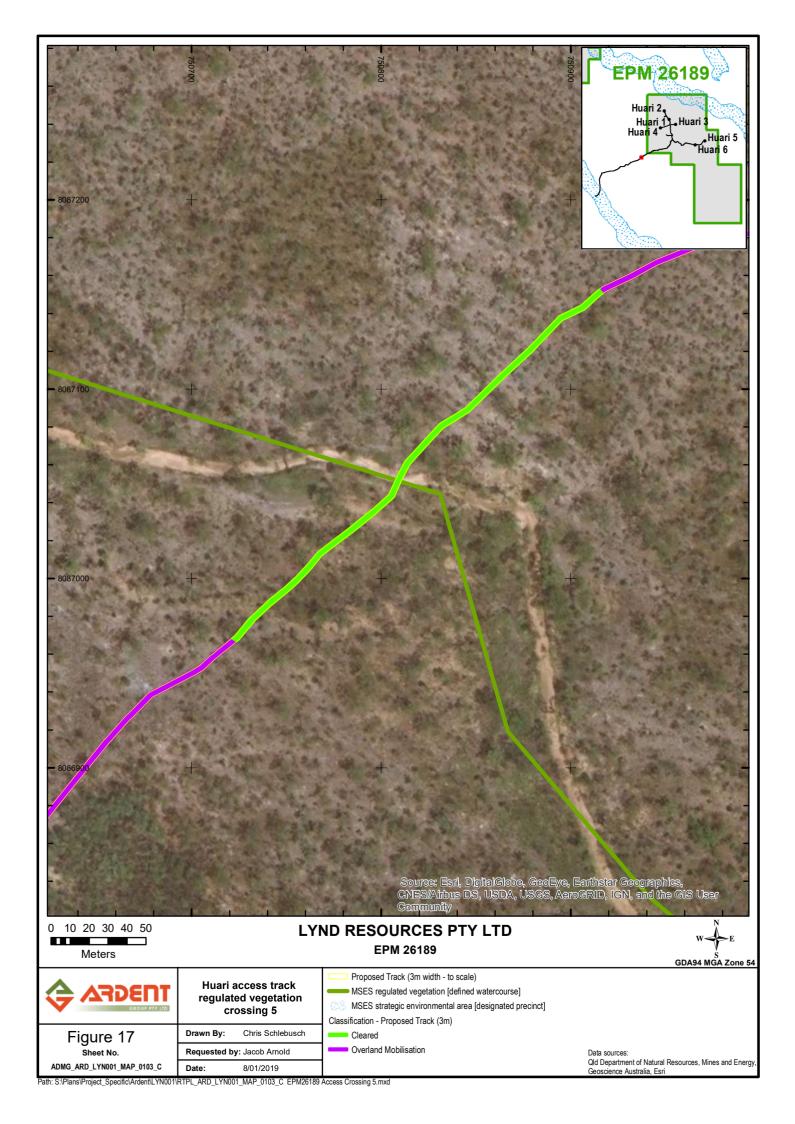


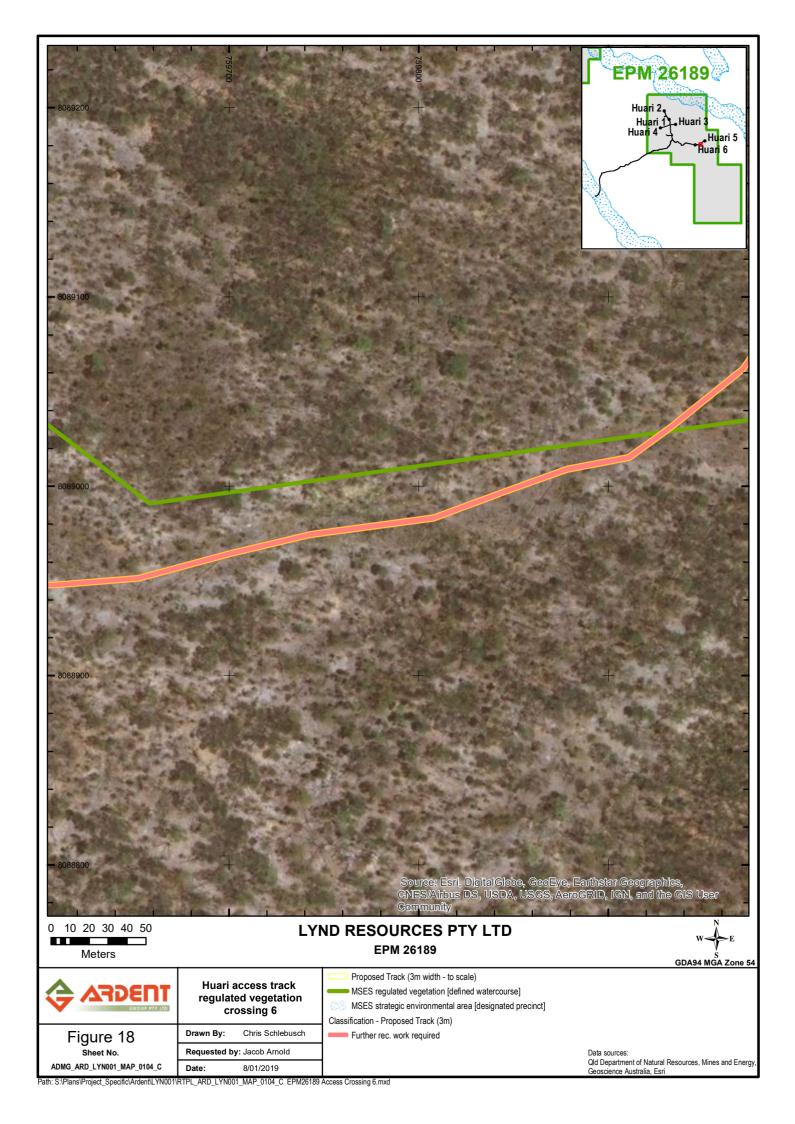


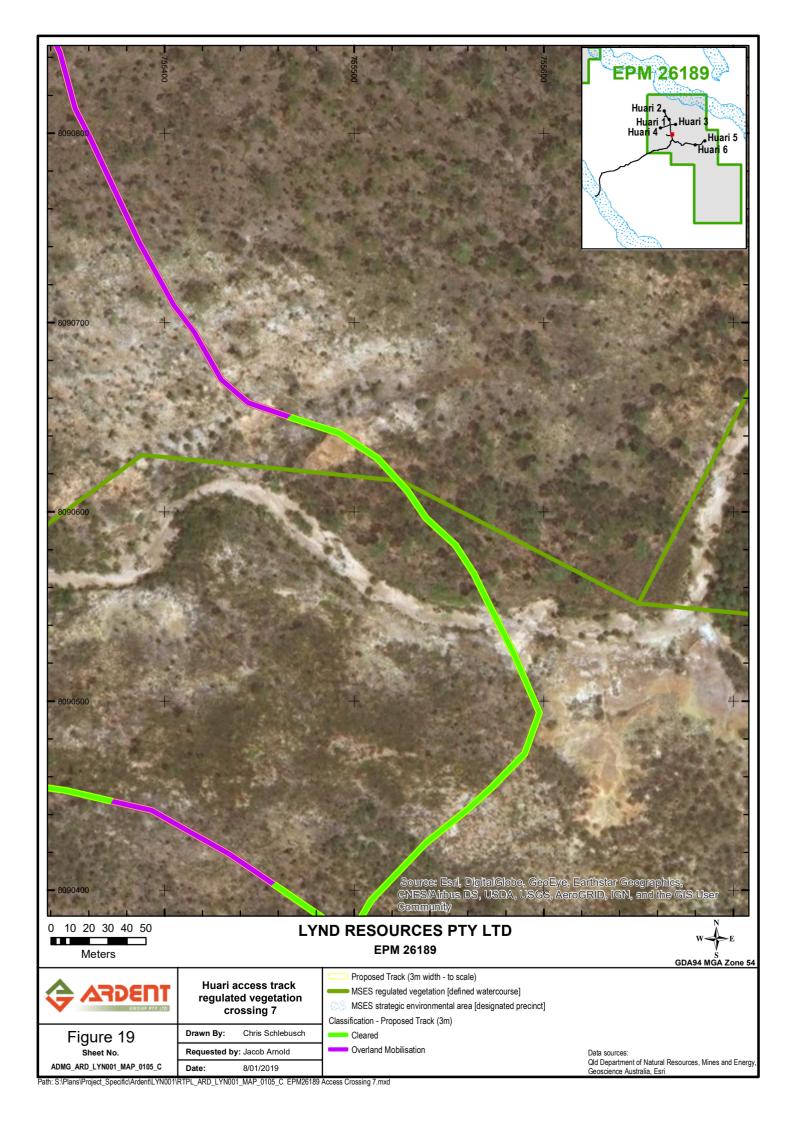


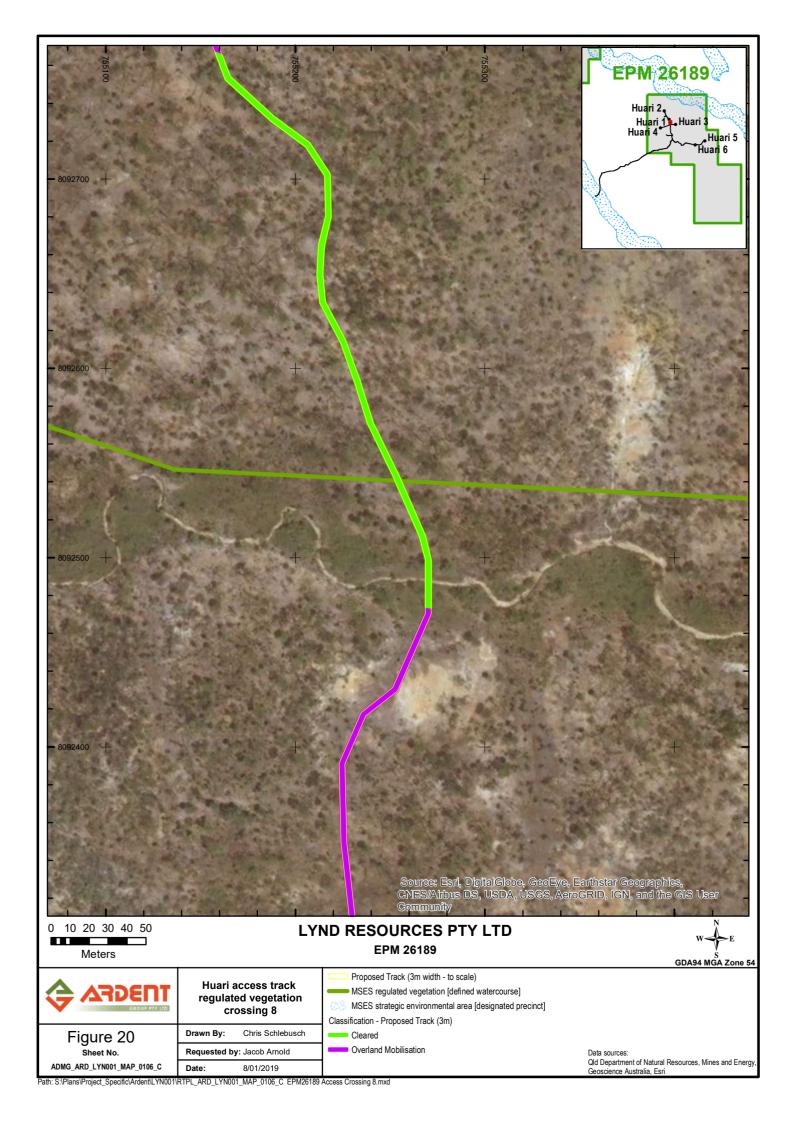


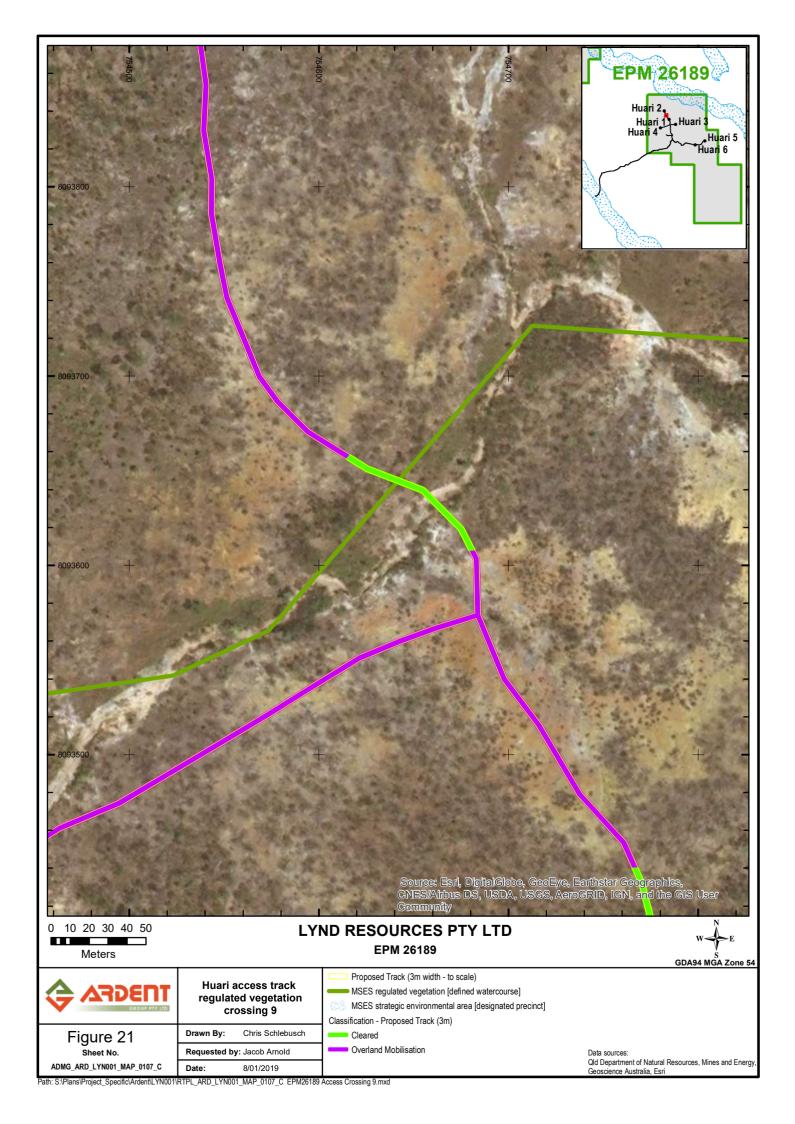














4.2 Wildlife Corridors

The proposed routes for the access tracks will minimise isolation, fragmentation and edge effects as access tracks will only be 3m wide and largely constructed within the REs 2.5.6, 2.5.26, 2.7.1 and 2.7.2. Wildlife corridors associated with the new access tracks will involve reduced nine crossings of regulated vegetation (intersecting a watercourse) associated with minor drainage features. The disturbance to these corridors will only involve 3m wide sections of track and it is not considered that widespread irreversible disturbance of these corridors will occur. The regulated vegetation corridors are sparsely vegetated and do not have a well-defined or densely vegetated riparian corridor, and consequently the proposed disturbance will not impede the movement of fauna or impact on any ecological functions of a riparian vegetation community.

The riverine vegetation communities situated around the Huari 4 drill site will still be of use for fauna migration and habitat, as activity impacts are not widespread. The clearing of vegetation will minimise the clearing of mature native trees and all disturbance will be rehabilitated as soon as practical following the completion of geological interest within the region. The exploration activities will not compromise the preservation of wildlife corridor function of the riparian vegetation as the connection between native terrestrial vegetation along and across any watercourse systems will maintain sufficient migration, shelter and habitat and will not impede passage for aquatic/marine fauna along watercourses.

As described in **Table 8**, RE 2.3.29a may provide habitat for the Golden-Shouldered Parrot (*Psephotus chrysopterygius*) which is listed as endangered in Queensland (*Nature Conservation Act 1992*) and Nationally (EPBC Act). The Golden-Shouldered Parrot nests in termite mounds, and as such termite mounds will be surveyed for and avoided during exploration activities within this RE.

There are no permanent waterholes and springs nearby that will be impacted as a result of the exploration activities.

4.2.1 Rare and Threatened Fauna

Appendix 1 is a copy of an *Environment Protection and Biodiversity Conservation Act 1999* (C'wlth) (EPBC Act) Protected Matters Report. This report lists threatened species or threatened species habitat that may, is likely to or is known to occur within the areas surrounding the regulated vegetation corridors being crossed.

The EPBC Act Protected Matters report lists two threatened fauna species or their habitat as likely to occur in the Huari exploration area. The Red Goshawk (*Erythrotriorchis radiatus*) is listed as Vulnerable under the EPBC Act and Endangered under the NC Act. The Red Goshawk inhabits tall open forests and woodlands and typically nests in trees that are taller than 20m. Consequently, mature trees greater than 20m, will not be cleared or damaged during exploration activities. The Ghost Bat (*Macroderma gigas*), is listed as Vulnerable under the EPBC Act and Endangered under the NC Act. Throughout the day, the Ghost Bat roosts in caves, rock crevices and old mines; the proposed exploration activities will not disturb caves, rock crevices or old mines.

The EPBC Act Protected Matters Report also lists that Golden-Shouldered Parrot (*Psephotus chrysopterygius*) or its habitat may be present in the area. Regional Ecosystem 2.3.29a may provide habitat for the Golden-Shouldered Parrot, which is listed as Endangered under the EPBC Act and the



Queensland *Nature Conservation Act 1992* (NC Act). The Golden-Shouldered Parrot nests in termite mounds, in addition the Antbed Parrot Moth (*Trisyntopa scatophaga*) (listed as Endangered under both the EPBC Act and NC Act) occurs exclusively in association with the Golden-Shouldered Parrot, whereby the parrot nestlings' excreta is eaten by the larvae of the moth within the termite mound. The Antbed Parrot Moth is likely to be wholly dependent on the Golden-Shouldered Parrot. Consequently, termite mounds in the vicinity of the proposed disturbance will be assessed by a suitably qualified and experienced ecologist. Damage to termite mounds will be avoided during exploration activities.

The only plant listed under the EPBC Act and known to occur within the area is *Macropteranthes montana*, this plant will be surveyed for during track, pad and campsite marking. If found during the survey, these plants will be identified to ground staff and protected from harm or disturbance.

A Queensland Government Wildlife Online Extract was completed for the areas surrounding the proposed activities. The species list search displayed no records for the area (Appendix 2).



4.3 Water Quality

The change in access track route will not have any increased impact on the water quality environmental attribute within the Gulf Rivers SEA. While the proposed activities will have minimal impact on the natural water quality in the watercourse channels, there will be a reduced impact as there will be three less watercourses crossed.

The proposed exploration activities will occur in the dry season with minimal if any precipitation falling resulting in reduced watercourse flows in the region. As illustrated in **Figure 11**, the mean average rainfall during proposed exploration activities occurring within April is 26.7mm. During exploration activities, the physical, chemical and biological water quality immediately downstream of the activities will remain consistent with water quality immediately upstream of the activity. Therefore, there will be negligible impacts on the physical, chemical and biological attributes that support and maintain natural aquatic and terrestrial ecosystems in the area.

In regard to drilling, each drill hole is expected to be completed in 2 to 5 days. The drilling and casing methodology will be undertaken in a manner to case off any aquifers encountered in the overburden. There may be some additives added to the water recirculated in the drill hole to improve drilling conditions, including materials such as bentonite clay. The drill fluid is recirculated within the casing (once placed) in the upper part of the drill hole, and therefore there will be little, if any exchange with the near surface aquifers. Deeper in the hole, pore pressure in the basement rock are such that drilling fluids will not migrate out of the drill hole. Therefore, there should be no impact on groundwater quality from the drilling.

Upon completion of drilling, the drill hole will be backfilled to surface with grout (cement) so as to fully seal the drill hole. This will ensure that any aquifers encountered are fully sealed and there can be no connection between aquifers, nor surface seepage. Therefore, there should be no impact on aquifer pressure from the drilling. Suitably qualified and experienced drillers (for artesian conditions) will supervise the drilling.

All drill sites and associated sumps will be rehabilitated in accordance with the *Eligibility criteria and* standard conditions for exploration and mineral development projects – Version 2 (2016). Due to the high evaporation rates in the region, drill water remaining in the sumps will likely evaporate within two to three weeks. Temporary fencing of the sumps will occur to prevent cattle or wildlife access. Once dry, rehabilitation of the site will occur with the bentonite clay material remaining at the bottom of the sumps to be covered with the stockpiled subsoil and topsoil. Timing of all activities will aid in minimising surface water impacts.



4.4 Hydrologic processes

The proposed access tracks will be constructed and used in the dry season and will have minimal influence on the gradient of the land to ensure the overflow or flow of surface water in or out of a watercourse will not be inhibited. As detailed in **Table 10**, median daily water flow at the DNRME water monitoring site 918003A Staaten River at Dorunda during the planned period of exploration in April is 583ML/day. This site is located within a higher order stream and significantly downstream of proposed activities. Therefore, it would be considered that watercourse flows will be minimal throughout the exploration area during the time of exploration activities. Crossings of minor drainage features should not impact any waterflow. The exploration activities will not alter the natural patterns and levels of runoff, stream flow and connectivity with other elements of the river and flood plain system to the extent of causing significant adverse outcomes.

Exploration activities are proposed to occur in the dry season (April to October) specifically in April with a mean rainfall of 26.7mm during this month. While activities are planned for April, activities may extend into May where an average rainfall of 9.4mm is expected occur during the month. Rainfall in the region reduces each month from April up until the start of the wet season (usually in November), if activities do extend later into the year, there is likely to be less impact on hydrological processes in the Gulf River SEA.

4.5 Geomorphic processes

The proposed exploration activities will not have widespread or irreversible impact on the natural erosion and transport and deposit of sediment by water throughout the catchment. As activities will occur in the dry season when negligible precipitation is expected, and water flows are heavily reduced, the transport and deposit of sediment by water throughout the catchment will be minimal reducing the possibility of any widespread or irreversible impacts. The exploration activities will not compromise the preservation of the natural erosion, transport and deposition of sediments by water throughout the catchment. Whereby, activities will not alter the delivery of sediment to the river system from adjacent lands and the erosion of the bed, banks and floodplains to the extent of causing significant adverse outcomes.

Erosion and sediment control may be required for both the access tracks, drill pads and other disturbance areas. Measures will be undertaken in accordance with the *Eligibility criteria and standard conditions for exploration and mineral development projects – Version 2 (2016*) and in line with the guiding principles contained within the International Erosion Control Association (IECA) Best Practice Erosion and Sediment Control (BPESC) manual.

For watercourse crossings, it will be the intention to:

- select appropriate crossing areas (for example: lower order streams, areas with less significant vegetation or with less vegetation requiring clearing and streams with sand/gravel/rocky streambeds);
- minimise any significant bank damage during the construction of any required access ramps;
- minimise the risk of sediment-laden runoff from the access ramps being allowed to discharge directly into the watercourse without passing through an appropriate sediment trap or vegetative filter; and
- minimise harm (including sediment accumulation) to the streambed.



To meet these key principles, following appropriate site selection, mitigation measures such as the following will be implemented as necessary:

- Minimise all vegetation clearing;
- Construct the crossing perpendicular to the channel;
- Install overland flow diversions to prevent run-off from the access road entering the watercourse directly;
- Stabilise access ramps and, if necessary, employ geotextile;
- Stabilise the streambed, if necessary, with a geogrid;
- Conduct regular inspections for erosion or channel scour; and
- Commence rehabilitation as soon as practicable after final use.

For the access tracks, drill pads and other disturbance areas, it will be the intention to:

- Select appropriate areas (for example: avoiding areas of environmental significance, retention of mature or habitat trees, minimise vegetation clearing, retain rootstock where practicable);
- Ensure the effect of exploration activities are minimised on surrounding vegetation or watercourses;

To meet these key principles, following appropriate site selection, mitigation measures such as the following will be implemented as necessary:

- Minimise all vegetation clearing;
- Store topsoil and subsoil for use in rehabilitation;
- Ensure all fuel is appropriately bunded;
- Store all exploration materials (drilling muds etc) on pallets;
- Construct all drill pads on flat surfaces;
- Stabilise access tracks wherever necessary and, if necessary, employ geotextile;
- Repair any damage caused by traffic as soon as practicable;
- Limit traffic along the access tracks;
- Direct all drilling muds to appropriately-sized sumps;
- Conduct regular inspections for fuel discharge, and sedimentation and erosion, as a result of exploration activities; and
- Commence rehabilitation as soon as practicable after final use.



5. Regional Planning Interests Regulation 2014 Assessment Criteria

Schedule 2, Part 5 of the RPI Regulation provide criteria for the assessment or decision of the RPI application. The required outcome and prescribed solutions are detailed below in **Table 11**. This table provides a summary of the details described in this report against the assessment criteria

Table 11 Criteria for assessment or decision in a SEA

Schedule 2 Part 5 of the RPI Regulation	Response		
Required Outcome	Response		
(14) The activity will not result in a widespread or irreversible impact on an environmental attribute of a strategic environmental area.	The proposed activities will not result in widespread or irreversible damage to the environmental attributes listed in s9 of the RPI.		
Prescribed Solution	Response		
(15)(1) The application demonstrates either — (a) the activity will not, and is not likely to, have a direct or indirect impact on an environmental attribute of the strategic environmental area; or			
 (b) all of the following – (i) if the activity is being carried out in a designated precinct in the strategic environmental area – the activity is not an unacceptable use for the precinct; 	However, none of the approved activities are an		
(ii) the construction and operation footprint of the activity on the environmental attribute is minimised to the greatest extent possible;	 Extensive desktop and preliminary investigations were conducted during the application phase for the current RIDA. This included: Access track refinement to minimise operational footprint on environmental attributes; Assessment of resource activities on the Gulf Rivers SEA environmental attributes; State and Commonwealth environmental database searches; Desktop assessment of potential impacts from activities by a qualified botanist-ecologist. Implement recommendations from this desktop assessment. Minimise extent of access track width and areas of drill pads, temporary campsite and temporary fuel storage and laydown areas. Avoid or minimise clearance of vegetation, in particular mature trees, 		



Schodule 2 Part E of the DRI Regulation	Danagas			
Schedule 2 Part 5 of the RPI Regulation	Response			
	threatened vegetation and riparian vegetation.			
	Reconnaissance since the RIDA has identified			
	an access track to further minimise the			
	operational footprint on environmental			
	attributes. In particular, on the functioning			
	riparian processes where five less regulated vegetation (intersecting a watercourse)			
	corridors will be impacted upon.			
	Resources activities will have minimal short-			
	and long-term impacts on natural hydrologic			
	processes in the area. Waterflows associated			
	with watercourses, floodplains and			
	groundwater will be minimal due to activities			
	being conducted in the dry season when			
	precipitation and waterflow is likely to be very low.			
	 Resource activities will have minimal short- 			
	and long-term impacts on geomorphic			
	processes in the area. There will be limited			
	impact to the natural erosion of the region, in			
	addition to the movement of sediment by			
	water throughout the catchment as waterflow			
	 will be minimal in the dry season. Resource activities will have minor short- term 			
	impacts and minimal long-term impacts on the			
(iii) the activity does not compromise the	functioning riparian processes and functioning			
preservation of the environmental attribute	wildlife corridors in the region. Disturbance to			
within the strategic environmental area;	riparian vegetation will be minor due to the			
	small-scale and temporary nature of the			
	activities. Vegetation clearing will be avoided and minimised where possible and all			
	disturbance from exploration activities will be			
	undertaken in accordance with the <i>Eligibility</i>			
	criteria and standard conditions for			
	exploration and mineral development projects			
	- Version 2 (2016) as soon as practicable. As a			
	result, it is considered unlikely that there will be widespread or irreversible impact to the			
	functioning riparian processes or the			
	functioning wildlife corridors.			
	Water quality in the region that supports and			
	maintains natural aquatic and terrestrial			
	ecosystems will have minimal impact.			
	Watercourses and associated floodplains are unlikely to have flows during the dry season			
	difficely to flave flows dufflig the dry season			



Schedule 2 Part 5 of the RPI Regulation	Response
	when exploration works are being conducted. The drilling and case method will be conducted cautiously and in a manner to case off any aquifers encounters in the overburden. The drillholes will be properly decommissioned to ensure impact to aquifer water quality will be minimised.
(iv) if the activity is to be carried out in a strategic environmental area identified in a regional plan – the activity will contribute to the regional outcomes, and be consistent with the regional policies, stated in the regional plan.	The Far North Queensland Regional Plan 2009-2031 does not identify the Gulf River SEA.



6. Conclusion

Lynd Resources have identified a new access track to the six drillhole locations as part of the Huari project (RPI18/013). As such, Lynd Resources are applying to amend Condition 1 (and associated references) of their current RIDA granted on 3 September 2018 pursuant to s55 of the RPI Act. This amendment is considered to have reduced environmental impact, largely from a reduction of three MSES regulated vegetation (intersecting a watercourse) corridors (12 in the current approved route compared to 9 in this proposed route). Crossing point 6 will only be required if the Huari 5 drillhole is confirmed to be drilled, while, crossing point 3 will not require any vegetation clearing. The remaining seven regulated vegetation crossings are sparsely vegetated and will involve minimal vegetation clearing, this includes one crossing associated with a Designated Precinct.

Not only has the number of regulated vegetation crossings reduced but the reconnaissance work has identified sections of the track that will not require vegetation clearing and will be suitable for overland mobilisation. Subsequently, the maximum area of significant disturbance has been calculated at 6.15ha if all six drillholes are ultimately drilled. If only the three priority holes are drilled (Huari 1, 2 and 6), there will be a maximum of 4.73ha cleared.

Where vegetation is required to be cleared, the construction of the access tracks will generally be 'blade up' and will not involve bare-earth clearing or formed and graded track construction. Access tracks are two-wheel tracks following a route to avoid woody vegetation and fauna habitat, and swept of obstacles such as rocks or fallen trees if these cannot be avoided. Tracks generally follow natural inclines into and out of drainage lines and go around large obstacles, landform, or dense vegetation.

The resource activities will continue to have no widespread or irreversible impacts on the five environmental attributes of the Gulf River SEA. In line with Section 15 (1)(b) of the RPI Regulation, it is not considered that the proposed activities will cause widespread or irreversible impacts to the SEA in the region, as:

- The activity is not an unacceptable use for a Designated Precinct;
- Exploration activities will be small-scale, of a temporary nature and conducted during the dry season;
- Drilling at each site is expected to be completed within two to five days;
- Searches of appropriate State and Commonwealth databases have been undertaken;
- Widespread areas of riparian vegetation will not be cleared;
- Disturbance rehabilitation will occur as soon as possible after works have been completed;
- All activities and disturbance rehabilitation will be in accordance with the *Eligibility criteria and* standard conditions for exploration and mineral development projects Version 2 (2016); and
- The resource activities will continue to adhere to conditions 2 to 14 of the current RIDA.



7. References

Bureau of Meteorology (BOM) 2018, Monthly rainfall Abingdon Downs Station, accessed 20 March 2018, http://www.bom.gov.au/jsp/ncc/cdio/wData/wdata?p_nccObsCode=139&p_display_type=dataFile&p_stn_num=030000>.

BOM 2018, Monthly mean maximum temperature Georgetown Post Office, accessed 20 March 2018, http://www.bom.gov.au/jsp/ncc/cdio/wData/wdata?p_nccObsCode=36&p_display_type=dataFile&p_stn_num=030018.

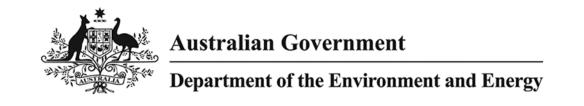
BOM 2018, Monthly mean minimum temperature Georgetown Post Office, accessed 20 March 2018, < http://www.bom.gov.au/jsp/ncc/cdio/wData/wdata?p_nccObsCode=38&p_display_type=dataFile&p_st n_num=030018>.

Queensland Government 2019, 918003A Staaten River at Dorunda, accessed 21 January 2019, https://water-monitoring.information.qld.gov.au/>.



RPI DEVELOPMENT APPLICATION SUPPORTING INFORMATION LYND RESOURCES PTY LTD

Appendix 1: EPBC Protected Matters Report



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about <u>Environment Assessments</u> and the EPBC Act including significance guidelines, forms and application process details.

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Summary

Details

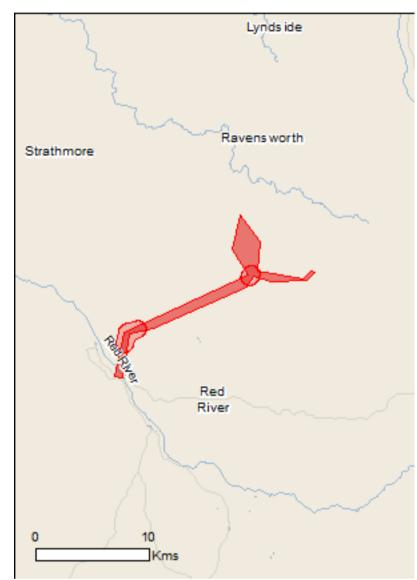
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Other Matters Protected by the EPBC Act

Extra Information

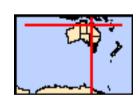
Caveat

<u>Acknowledgements</u>



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates
Buffer: 1.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the <u>Administrative Guidelines on Significance</u>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	10
Listed Migratory Species:	11

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	18
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	7
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		71
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Erythrura gouldiae Gouldian Finch [413]	Endangered	Species or species habitat may occur within area
Psephotus chrysopterygius Golden-shouldered Parrot, Alwal [720]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat may occur within area
Insects		
Trisyntopa scatophaga Antbed Parrot Moth [84159]	Endangered	Species or species habitat may occur within area
Mammals		
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat may occur within area
Plants		
Macropteranthes montana [9003]	Vulnerable	Species or species habitat known to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		

Name	Threatened	Type of Presence
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
<u>Cuculus optatus</u>		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
<u>Hirundo rustica</u>		
Barn Swallow [662]		Species or species habitat may occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat may occur within area
Other Matters Protected by the EPBC Act		

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat likely to occur

Name	Threatened	Type of Presence
		within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat
		may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
		may occur within area
Calidris melanotos		Consiss on an acies habitat
Pectoral Sandpiper [858]		Species or species habitat may occur within area
		may cood. million area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat
black-eared Cuckoo [705]		Species or species habitat may occur within area
		•
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat
Latriam's Onipe, Japanese Onipe [000]		may occur within area
Haliacotus lousogastor		
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat
		likely to occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat
		may occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat
		may occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
		may occur within area
Motacilla flava		Species or appoint habitat
Yellow Wagtail [644]		Species or species habitat may occur within area
Develop helicatus		•
Pandion haliaetus Osprey [952]		Species or species habitat
		may occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat
	_	may occur within area
Reptiles		
Crocodylus johnstoni		
Freshwater Crocodile, Johnston's Crocodile,		Species or species habitat
Johnston's River Crocodile [1773]		may occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Processes
	Status	Type of Presence
Frogs Rhinella marina		
Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris		
Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus caballus		
Horse [5]		Species or species habitat likely to occur within area
Felis catus		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Sus scrofa		
Pig [6]		Species or species habitat likely to occur within area
Plants		
Acacia nilotica subsp. indica		
Prickly Acacia [6196]		Species or species habitat may occur within area
Cryptostegia grandiflora		
Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the gualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-17.34441 143.29916,-17.31142 143.30456,-17.30659 143.32414,-17.27536 143.3977,-17.26706 143.4033,-17.27187 143.41775,-17.27017 143.446,-17.26429 143.45234,-17.26302 143.4488,-17.26884 143.44244,-17.26355 143.4067,-17.24085 143.40877,-17.22062 143.39242,-17.24652 143.38621,-17.26583 143.39936,-17.30986 143.30084,-17.34373 143.29294,-17.34441 143.29916

Acknowledgements

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- -Office of Environment and Heritage, New South Wales
- -Department of Environment and Primary Industries, Victoria
- -Department of Primary Industries, Parks, Water and Environment, Tasmania
- -Department of Environment, Water and Natural Resources, South Australia
- -Department of Land and Resource Management, Northern Territory
- -Department of Environmental and Heritage Protection, Queensland
- -Department of Parks and Wildlife, Western Australia
- -Environment and Planning Directorate, ACT
- -Birdlife Australia
- -Australian Bird and Bat Banding Scheme
- -Australian National Wildlife Collection
- -Natural history museums of Australia
- -Museum Victoria
- -Australian Museum
- -South Australian Museum
- -Queensland Museum
- -Online Zoological Collections of Australian Museums
- -Queensland Herbarium
- -National Herbarium of NSW
- -Royal Botanic Gardens and National Herbarium of Victoria
- -Tasmanian Herbarium
- -State Herbarium of South Australia
- -Northern Territory Herbarium
- -Western Australian Herbarium
- -Australian National Herbarium, Canberra
- -University of New England
- -Ocean Biogeographic Information System
- -Australian Government, Department of Defence
- Forestry Corporation, NSW
- -Geoscience Australia
- -CSIRO
- -Australian Tropical Herbarium, Cairns
- -eBird Australia
- -Australian Government Australian Antarctic Data Centre
- -Museum and Art Gallery of the Northern Territory
- -Australian Government National Environmental Science Program
- -Australian Institute of Marine Science
- -Reef Life Survey Australia
- -American Museum of Natural History
- -Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
- -Tasmanian Museum and Art Gallery, Hobart, Tasmania
- -Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.



RPI DEVELOPMENT APPLICATION SUPPORTING INFORMATION LYND RESOURCES PTY LTD

Appendix 2: Wildlife Online Extract



Wildlife Online Extract

Search Criteria: Species List for a Specified Point

Species: All

Type: All

Status: All

Records: All

Date: All

Latitude: -17.3001

Longitude: 143.3694

Distance: 10

Email: jacob.arnold@ardent-group.com.au

Date submitted: Monday 21 Jan 2019 13:47:46

Date extracted: Monday 21 Jan 2019 13:50:07

There were no records retrieved for your selection

Disclaimer

As the DSITIA is still in a process of collating and vetting data, it is possible the information given is not complete. The information provided should only be used for the project for which it was requested and it should be appropriately acknowledged as being derived from Wildlife Online when it is used.

The State of Queensland does not invite reliance upon, nor accept responsibility for this information. Persons should satisfy themselves through independent means as to the accuracy and completeness of this information.

No statements, representations or warranties are made about the accuracy or completeness of this information. The State of Queensland disclaims all responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

