

CONTENTS

Section	Page
ABBREVIATIONS	vii
GLOSSARY	ix
1 INTRODUCTION	
2 RESPONSE TO GOVERNMENT SUBMISSIONS	
2.1 Department of Local Government, Planning, Sport and Recreation	2-1
2.2 Queensland Environmental Protection Agency	2-2
2.3 Department of Primary Industries and Fisheries	2-3
2.4 Department of Natural Resources and Water	2-4
2.5 Department of Main Roads	2-5
2.6 Department of Communities	2-5
2.7 Queensland Police Service	2-6
2.8 Department of Emergency Services	2-6
2.9 Caloundra City Council	2-6
3 RESPONSE TO COMMUNITY SUBMISSIONS	
3.1 Water allocations—Obi Obi Creek and the Mary River catchment	3-1
3.2 The NPI and Traveston Crossing Dam	3-2
3.3 The Environment Protection and Biodiversity Conservation Act	3-2
3.4 Cross-catchment transfer of organisms	3-2
3.5 Environmental management plans	3-2
3.6 Greenhouse gas emissions	3-4
3.7 Facilities at Old Gympie Road	3-4
3.8 Compatibility with federal water policy	3-4
4 AMENDMENTS TO THE EIS CORRIDOR	
4.1 Corridor amendments	4-1
4.2 Revision H corridor—environmental values	4-3
5 REFERENCES	
APPENDICES	
A List of contributors	

ILLUSTRATIONS

Figure		Page
1.1	Locality map	1-2
2.1	Koala conservation plan boundaries	2-3
4.1	Alignment change—Morayfield offtake	4-4
4.2	Alignment change—South Wararba Creek	4-5
4.3	Alignment change—Lagoon Creek	4-6
4.4	Alignment change—Elimbah offtake	4-7
4.5	Alignment change—Bluegum Street	4-8
4.6	Alignment change—Tunnel Ridge Road	4-9
4.7	Alignment change—South Mooloolah River	4-10

TABLES

Table		Page
1.1	Summary of responses to stakeholder submissions on the EIS	1-3
2.1	Significant environmental areas in Caloundra Shire	2-7
4.1	Environmental values of new sites	4-3

Abbreviations

GENERAL

AS	Australian Standard
ASS	acid sulfate soils
CCC	Caloundra City Council
CHMP	cultural heritage management plan
CoG	Coordinator-General
DES	Department of Emergency Services (Qld)
DOC	Department of Communities
DLGPSR	Department of Local Government, Planning, Sport and Recreation (Qld)
DME	Department of Mines and Energy (Qld)
DoI	Department of Infrastructure (Qld)
DPI&F	Department of Primary Industries and Fisheries (Qld)
EIS	environmental impact statement
EMP	environmental management plan
EPA	Environmental Protection Agency (Qld)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)
EVR	Endangered, vulnerable or rare
IPA	<i>Integrated Planning Act 1997</i> (Qld)
iROL	interim resource operations licence
NPI	Northern Pipeline Interconnector
NRW	Department of Natural Resources and Water (Qld)
QWC	Queensland Water Commission
RE	regional ecosystem
ROP	resource operations plan

ROW	right of way
SDPWOA	<i>State Development and Public Works Organisation Act 1971 (Qld)</i>
SEQ	South-east Queensland
SRWP Co	Southern Regional Water Pipeline Company
ToR	terms of reference
VMA	<i>Vegetation Management Act 1999</i>
WRP	water resource plan
WTP	water treatment plant

Glossary

Acid sulfate soils	Soil, sediment or rock that contains elevated levels of metal sulfides, which can generate sulfuric acid when exposed to oxygen.
Algae	Any of various primitive, chiefly aquatic, one-celled or multicellular plants that lack true stems, roots and leaves but usually contain chlorophyll. Included among the algae are kelps and other seaweeds, and the diatoms.
Aquatic	Biota living in or on water for all or a substantial part of the life span.
Bacteria	Microscopic, single-celled organisms.
Best practice	Implies continual improvement to maintain maximum performance.
Catchment	The land area drained by a river and its tributaries.
Cultural heritage	Possessing historical, archaeological, architectural, technological, aesthetic, scientific, spiritual, social, traditional or other special cultural significance, associated with human activity.
Ecosystem	A relatively self-contained ecological system defined by the types of organisms found in it and their interactions.
Endangered regional ecosystem	A listing under the <i>Vegetation Management Act 1999 (VMA)</i> where a regional ecosystem type occupies less than 10% of its pre-clearing extent, or where 10-30% of the pre-clearing extent remains but is less than 10,000 ha.
Endangered species	A species at serious risk of disappearing from the wild if present land use or other causal factors continue.
Environment	The term is used in its broadest sense to include physical, biological, cultural and social aspects.
Environmental impact statement	A report documenting the outcomes of investigations into the potential environmental impacts of a project or activity which is typically required as part of state or federal approvals processes.
Environmental management plan	Documentation of the procedures and physical methods that will be used to manage a particular activity such that its environmental impact is minimised.
Geotextile	Synthetic fabric for use in landscapes as a soil covering to smother weeds or prevent them from germinating.
Habitat	The locality or environment in which a plant or animal lives.
Mary Basin Water Resource Plan (WRP)	An instrument under the <i>Water Act 2000</i> which establishes the overarching principles for the allocation of waters in the Mary Basin.
Matters of national environmental significance	This refers to those matters protected under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> and includes listed threatened and migratory species, wetlands of international importance, World Heritage properties, National Heritage Places, nuclear actions and the Commonwealth marine environment.
<i>Not of concern</i> regional ecosystem	A listing under the VMA where a regional ecosystem type occupies more than 30% of its pre-clearing extent and more than 10,000 ha.

Of concern regional ecosystem	A listing under the VMA where a regional ecosystem type occupies 10-30% of its pre-clearing extent or more than 30% remains but is less than 10,000 ha.
Offset	Refers specifically to vegetation management offsets under the Queensland <i>Vegetation Management Act 1999</i> . An arrangement or agreement that guarantees to maintain the extent, structure and function of remnant vegetation to meet the requirements of a regional vegetation management code.
Piling	A construction method, used at river and creek crossings, involving the drilling of concrete piles in the riparian zone and/or the waterway itself to support the pipeline.
Potable water	Water suitable for human consumption.
Precautionary principle	Refers to the principle that, where there are threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason to postpone environmental protection measures.
Proponent	The person or organisation putting forward a proposition or proposal.
Raw water	The water from a surface water or groundwater source prior to filtration or treatment.
Regional ecosystem	A vegetation community consistently associated with a particular geology, landform and soil, used by the Queensland Government as the basis for nature conservation planning.
Rehabilitation	Activities undertaken to return disturbed land to a predetermined beneficial land use/productivity.
Remnant vegetation	Wholly and predominantly intact native vegetation, excluding young regrowth.
Riparian	Frequenting, growing on or living on the banks of streams or rivers.
Riprap	A collection of coarse rock used to line or protect earthen embankments from erosion.
Species	A taxonomic grouping of organisms which are able to interbreed with each other but not with members of other species.
Significant species	Any species listed as rare, vulnerable or endangered under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> and/or the Queensland <i>Nature Conservation Act 1992</i> .
Spoil	Surplus soil and rock material after backfilling pipeline trenches.
Stakeholder	Persons, parties or organisations with specific interests in the project.
Terms of reference	A document prepared by the Office of the CoG outlining those issues to be addressed by the EIS.
Terrestrial	Living or found on land, as opposed to in rivers, lakes, oceans or in the atmosphere.
Trenching	Installation of a pipe by excavating a trench, followed by pipe placement and backfilling with soil and rock material.
Vulnerable species	A native plant or animal species or population whose ability to survive in the wild is compromised by exposure to threatening processes such as habitat destruction or disease.
Water grid	Refers to the South East Queensland water grid; the water grid will comprise a series of pipelines and major storages in the region to allow water to be moved from areas with a surplus to areas that face a shortfall.

Wetland	An area of land that supports plants that are adapted to and dependent on living in wet conditions for at least part of their life cycle.
Wildlife corridor	A relatively narrow area—land, water, or both—used by wildlife to travel or migrate from one larger habitat area to another.

1 Introduction

The Environmental Impact Statement (EIS) for the Northern Pipeline Interconnector (NPI) Stage 1 was released for public consultation on 30 June 2007 for a one-month period to 30 July 2007. This Supplementary Report to the EIS is prepared in response to properly made submissions received from state government agencies and the public up to 30 July 2007. The Coordinator-General (CoG) forwarded formal submissions received from 11 state agencies and two local governments, and 20 community submissions (individuals or organisations) for the review and response of the project proponent, the Southern Regional Water Pipeline Company (SRWP Co).

The Supplementary Report includes a summary of the key issues, concerns and comments from submissions. In response, this document provides additional discussion and supporting material, including mapping showing changes to the corridor published in the EIS.

The route refinements identified in this report are the result of detailed investigations of the corridor and ongoing consultation with stakeholders and affected landholders. These refinements are included in the Revision H corridor (see Figure 1.1) and are discussed in detail in Section 4 and include changes to the route at:

- Morayfield offtake
- South Wararba Creek
- Lagoon Creek
- Elimbah offtake
- Bluegum Street
- Tunnel Ridge Road
- South Mooloolah River
- South of Nobels Road.

Responses to submissions on the EIS are presented in the format of a written reply to each part or component of a particular submission. Where appropriate, responses are cross-referenced to similar replies in order to provide a concise document.

Importantly, the response to each submission considered the relevant economic, engineering, social and environmental aspects of the proposal as detailed in the final terms of reference for the project. Where appropriate, these aspects are discussed in detail.

Table 1.1 provides a summary of all responses to stakeholder submissions.

Figure 1.1
Locality map

Table 1.1 Summary of responses to stakeholder submissions on the EIS

Submission received from	Comment/issue	Addressed at
STATE AGENCIES		
Department of Local Government, Planning, Sport and Recreation (DLGPSR)	The primary interest of the DLGPSR concerns the workability of the project within the legislative and planning framework, and the degree to which the interface of the project with planning instruments is adequately reflected in the EIS. Specifically, the EIS needs to clearly articulate the status of the project in regard to the Queensland <i>Integrated Planning Act 1997</i> (IPA) and the Queensland <i>State Development and Public Works Organisation Act 1971</i> (SDPWOA) and, if the project is exempt development under the IPA, then the process by which this exemption is achieved should be clearly and unambiguously outlined.	2.1.1
	A number of State Planning Policies (SPPs) are not referenced. It is suggested Section 1.7.2 reference all SPPs and clarify whether each SPP is relevant or not.	2.1.1
	The reference to SPP1/05 Conservation of Koalas in south-east Queensland is out of date. In 2004, the Koala was classified as vulnerable to extinction in the SEQ bioregion under the <i>Nature Conservation Act 1992</i> . The Koala Plan now comprises two parts: the Nature Conservation (Koala) Plan 2006 and Nature Conservation (Koala) Management Plan 2006-2016. These details should be updated in the EIS.	2.1.2
	Local government planning schemes (Caboolture and Caloundra) and the SEQ Regional Plan 2005-2006 are statutory planning tools under the IPA. The implications of these planning tools, such as the development intent for the land and the pipeline's consequences for this, should be outlined in the EIS. Planning schemes and the Regional Plan will affect/influence the preferred land use types intended in the project area.	2.1.1
	The South East Queensland Infrastructure Plan and Program 2007-2026 should also be considered. In this regard it would be worth clarifying with the relevant councils whether there are any major development applications being considered in the project area and, if so, the implications of these for the project.	2.1.1
Environmental Protection Agency (EPA)	The principal areas of concern are the protection of water quality in waterways, the placement and methods of crossing waterways, particularly those that are lined with significant vegetation ('endangered' or 'of concern' remnant ecosystems) and the removal of significant vegetation along the pipeline easement.	2.2
	The EIS is a reasonably comprehensive assessment of the environmental issues that will need to be addressed during construction, including timing of operational works to minimise impacts on water quality and an assessment of individual creek crossings and the potential environmental impacts. Co-location of the pipeline in the existing power easement is supported.	Noted

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Environmental Protection Agency (continued)	Investigation of options that reduce disturbance of significant riparian vegetation and appropriate rehabilitation and stabilisation of stream banks is recommended. The pipeline alignment crosses bioregional wildlife corridors at several locations in Caloundra Shire. In many locations riparian vegetation provides important, and often the only, habitat linkages in these wildlife corridors. However, all remnant vegetation within bioregional wildlife corridors, particularly 'endangered' or 'of concern' vegetation types, should be disturbed as little as possible.	Noted
	Trenching is recommended by the proponent for a number of smaller creek crossings but will involve significant disturbance of stream banks. The EPA would like to be consulted about options for crossing creeks and the potential environmental impacts of viable alternatives.	Noted
Department of Primary Industries and Fisheries (DPI&F)	<i>Fisheries</i> DPI&F understands that none of the works will be carried out below the level of the highest astronomical tide (HAT) and that no marine plants will be disturbed. It also understands that the use of structures that would impede fish movement along waterways is not anticipated; however, that approval will be sought if the use of these structures becomes necessary.	2.3
	DPI&F notes that the Mooloolah River, Caboolture River and Wararba Creek will be crossed by boring, piling or span bridging methods. The department supports bored crossings of these significant waterways to reduce impacts on riparian and in-stream values of their aquatic ecosystems. DPI&F also fully supports all measures employed to minimise degradation and rehabilitate aquatic habitats.	2.2
	<i>Agriculture</i> It is noted that some activities may need to be restricted to maintain the integrity of the pipe. DPI&F understands that the potential for commercial impacts to pineapple and macadamia nut growers is high and that compensation for any associated losses will be included in the process of land acquisition.	2.3
Department of Natural Resources and Water (NRW)	<i>Legislation and policy requirements—Water Act 2000</i> The last two sentences of the first paragraph on page 20 should be amended to read: 'Specifically, any works that involve the destruction of vegetation, excavation or the placing of fill in a watercourse as defined in the <i>Water Act 2000</i> will require a riverine protection permit. However, as this project constitutes 'authorised works' under the <i>State Development and Public Works Organisation Act 1971</i> , if certain CoG powers are delegated or authorised in writing to the SRWP Alliance, these permits are not required.'	2.4.1

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Department of Natural Resources and Water (continued)	<p>The following should also be inserted following this paragraph: ‘If there is a requirement to source quarry material from nearby watercourses, a quarry material allocation notice is required, along with a development permit for quarrying in a watercourse or lake. Similarly, if there is a need to source water for construction purposes from a watercourse, lake or spring, or from underground water, a water permit or other water entitlement may be required.’</p>	2.4.1
	<p><i>Acid sulfate soils</i> The report uses misleading terminology for describing actual acid sulfate soils (ASS). ASS includes both potential and actual ASS. Also in the legend for Figure 3.21, the word ‘potential’ should be removed from the title, as it can be confused with potential acid sulfate soils (PASS). The items in the legend should also include descriptions, as per NRW’s Acid Sulfate Soils–Redcliffe to Teewah map.</p>	2.4.2
	<p><i>Water resources and water quality</i> It is noted that the project will require water during the construction phase, as well as for hydrotesting and commissioning the pipeline. Under NRW’s Mary Basin and Moreton Water Resource Plans, water for these purposes may be provided through a surface water permit. Alternatively, water not covered by a WRP could be used (recycled water, ground water or overland flow water).</p>	2.4.1
	<p><i>Approvals checklist</i> If there are no entitlement requirements for the taking or interfering with water involved in the project, then this approval item should be deleted from the approvals checklist. The ‘removal of quarry material from a watercourse’ should be deleted and replaced with ‘quarry material allocation notice’. In addition, the EIS should state where the bedding sand material for the pipeline is to be sourced.</p>	2.4.1, 2.4.3
	<p>The checklist should also include the following approvals: (1) water permit (for the temporary taking of water under the <i>Water Act 2000</i>); and (2) development for quarrying in a watercourse or lake (under the IPA).</p>	2.4.1

Table 1.1 (continued)

Submission from	received	Comment/issue	Addressed at
Department of Communities (continued)		<p>The EIS has limited information on socio-economic impacts and mitigation measures. Issues to be addressed in the EIS should include (1) disruption of traffic and access to essential services; (2) reduced social amenity with temporary health and leisure activity impacts; (3) possible temporary relocation of residents; (4) disruption to normal schedules, life, sleep patterns; and (5) presence of workers/workforce external to the region. It is suggested that the EIS provide a broad demographic profile of affected landowners and impacts so the social impacts can be assessed.</p> <p>The EMP and/or community and stakeholder management plan should clearly indicate that (1) social issues are also included in the environmental issues covered by the complaints management plan; (2) an out-of-hours contact number will be available for residents; (3) feedback on issues and intended management will be provided to complainants with appropriate follow-up to ensure these issues are satisfactorily resolved; and (4) community and social supports, such as access to counselling services, will be available as required.</p>	
Queensland Police Service		The Queensland Police Service has been appreciative of the level of consultation and advice provided to date. The Police Service requests that it continue to be consulted during development and implementation of both the traffic management plan and incident response plan and that they be informed of any envisaged protest activity.	2.7
Department of State Development (DSD)		The Department of State Development has reviewed a discussion paper entitled ‘Northern Pipeline Interconnector—Stage 1’ and provides no comments in relation to this document. The DSD is supportive of this paper.	Noted
Department of Emergency Services (DES)		The DES is satisfied that the EIS has addressed all of the issues raised in its response to the draft terms of reference (ToR); however, the DES requests more information with respect to the precise location of the project site office. DES also requests that the DES and its regional officers are provided with the construction EMP and that the latter incorporates the incident response plan.	2.8
Department of Mines and Energy (DME)		The EIS sufficiently addresses all matters relevant to the DME.	Noted
Queensland Treasury		Treasury has examined the documentation and has no comments.	Noted

Table 1.1 (continued)

Submission from	received	Comment/issue	Addressed at
LOCAL GOVERNMENT			
Caloundra City Council (CCC)		<p>CCC’s comments relate to the ecological value of specific sites along the corridor. Specifically, these include:</p> <ul style="list-style-type: none"> <li data-bbox="449 488 1633 591">▪ <i>Beerburrum State Forest (between Beerburrum Creek and south of Beerburrum-Woodford Road):</i> Works are likely to have an adverse impact on ‘endangered’ (12.5.3) and ‘of concern’ (12.3.4) RE types. It is likely that the Glossy Black Cockatoo feeds on <i>Allocasuarina</i> spp. in these RE types. This site also provides wetland habitat for fauna including the Wallum Froglet and the Tusked Frog. <li data-bbox="449 602 1633 704">▪ <i>Glass House Mountains (between Glass House-Woodford Road and Coonowrin Creek):</i> Works are likely to have a significant impact on the ‘not of concern’ RE 12.12.15 and the ‘of concern’ RE 12.3.2, which provide habitat for rare and threatened flora species including <i>Acianthus amplexicaulis</i>, <i>Liparis simmondsii</i> and <i>Marsdenia longiloba</i>. <p>CCC owns land along an approximate 310 linear metre stretch of the proposed pipeline easement alignment and will want to be contacted at least two weeks prior to any works immediately adjacent to council land. Both council sites are within CCC’s City Plan major corridors and have been identified as essential habitat areas and form part of the Glass House corridor—a major City Plan corridor identified in Caloundra City Plan 2004 (Map 7.8) and links several key areas.</p> <ul style="list-style-type: none"> <li data-bbox="449 857 1633 1015">▪ <i>Old Gympie Road and Beerwah Mountain Road, Glass House Mountains:</i> Works are likely to have a significant impact on ‘endangered’ (12.5.3) and ‘of concern’ (RE 12.3.4) RE types, which are within the Glass House corridor, a City Plan major corridor, and link major areas. The works will also result in clearing and soil disturbance of a substantial amount of the corridor link between the two larger sections of the regional ecosystems. A rehabilitation plan should be clearly stated in an EMP. The ‘of concern’ RE 12.3.4 also provides wetland habitat for fauna including the Wallum Froglet and the Tusked Frog. 	<p>2.9.1, Table 2.1</p> <p>2.9.1, Table 2.1</p> <p>2.9.1, 2.9.4</p> <p>2.9.1, Table 2.1</p>

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Caloundra City Council (continued)	Recent vegetation orders have been adopted partially on Lot 1 RP209828 and the whole of Lots 2 and 6 RP209828 Old Gympie Road, Glass House Mountains as of 19 July 2007. Lot 2 RP209828. The current pipeline alignment indicates that this block is likely not to be adversely impacted by the proposal. Lot 6 is vegetated up to its western boundary, and the pipeline works are likely to severely impact the floristic integrity of the remnant on this block.	Table 2.1
	There will be no permit requirement to clear this protected vegetation under Local Law 14 (Vegetation Clearing) 2003 as works are within the community's interest. However, as the council has recognised the significance of this vegetation, it is strongly recommended that restricted corridor provisions are applied in this area.	2.9.1
	<i>Old Gympie Road, Glass House Mountains:</i> Works are likely to have a significant impact on the 'of concern' RE 12.3.2, which provides habitat for rare and threatened flora species including <i>Acianthus amplexicaulis</i> , <i>Liparis simmondsii</i> and <i>Marsdenia longiloba</i> . This RE also provides wetland habitat for fauna including the Wallum Froglet and the Tusked Frog. The works are also likely to have an adverse impact on the 'endangered' RE 12.5.3—as such, a restricted corridor is supported.	2.9.1, Table 2.1
	<i>Lindeman Road, Glass House Mountains:</i> Works are likely to have a predominant impact on the 'not of concern' RE Type 12.9-10.14. There has been previous clearing on the outer edge of this RE, which is likely to regenerate if no further disturbance occurs. During any works at this site it is pertinent to apply appropriate environmental best practices to prevent further soil and vegetation disturbance.	2.9.1, Table 2.1
	Works are also likely to have a significant impact on the 'of concern' RE types 12.8.20 and 12.3.2, which provide habitat for rare and threatened flora species (see species above). Both these ecosystems are within CCC's City Plan Major Corridors Essential Habitat Area. It is also highly likely that the vulnerable Glossy Black Cockatoo feeds on the <i>Allocasuarina littoralis</i> within RE 12.8.20.	Noted

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Caloundra City Council (continued)	<p><i>Old Gympie Road, Beerwah:</i> Works are likely to have a significant impact on the ‘of concern’ RE 12.3.2, which provides habitat for rare and threatened flora and fauna species (see species above). It is also a likely habitat for Whipstick Wattle (<i>Acacia attenuata</i>)—therefore a restricted corridor is supported. Works are also likely to have a predominant impact on the ‘not of concern’ RE 12.9-10.14a. Both of these RE types are within CCC’s City Plan major corridors—the Mt Mellum-Coochin Creeks corridor is a major City Plan corridor identified in Caloundra City Plan 2004 and links several key areas.</p>	2.9.1, Table 2.1
	<p><i>South of Thompsons Road, Beerwah:</i> This site contains ‘of concern’ RE 12.3.4 and ‘endangered’ RE 12.5.3. Council will want to be contacted at least two weeks prior to any works immediately adjacent to council land.</p>	2.9.1, Table 2.1
	<p><i>Old Gympie Road (below Little Rocky Creek), Landsborough:</i> Works are likely to have an adverse affect on the ‘endangered’ RE 12.5.3. The proposed alignment works go through council land in two locations within this site. Council will want to be contacted at least two weeks prior to any works immediately adjacent to council land. The use of a restricted corridor is supported.</p>	2.9.1, Table 2.1
	<p>It is highly likely that the Queensland Nature Conservation Act 1992 (NCA)-listed Glossy Black Cockatoo feeds on the <i>Allocasuarina littoralis</i> within this RE. Koalas have been confirmed at this site. It is also likely that this ecosystem provides habitat for the Rose-shaded Skink and the Elf Skink.</p>	Noted
	<p><i>Mellum Creek, Landsborough:</i> Mellum Creek is a valued natural waterway that is a significant environmental feature. The creek is also identified as an environmental link in the Caloundra City Plan 2004. Works are likely to have an adverse effect on the ‘endangered’ RE 12.3.1. This RE type is important for fruit-eating birds and is likely to provide habitat for the Richmond Birdwing Butterfly and Coxen’s Fig Parrot. RE 12.3.1 also provides wetland habitat for fauna including the Oxleyan Pygmy Perch, Honey Blue-eye, Wallum Froglet and Tusked Frog.</p>	2.9.1, Table 2.1
	<p><i>Addington Creek (south of Gympie Street North), Landsborough:</i> Works are likely to have a significant impact on the ‘of concern’ RE 12.3.2, which provides habitat for rare and threatened flora species (see species above), the Wallum Froglet and the Tusked Frog. The proposed alignment works go through council land in two locations within this site. Council will want to be contacted at least two weeks prior to any works immediately adjacent to council land.</p>	2.9.1, Table 2.1

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Caloundra City Council (continued)	<p><i>Tunnel Ridge Road, Landsborough:</i> Works are likely to have a predominant impact on the ‘of concern’ RE 12.9-10.1 and the ‘not of concern’ RE 12.9-10.17d. This site is also part of the Ewen Maddock Dam corridor identified in Caloundra City Plan 2004. In the Areas of Coastal Biodiversity Significance (terrestrial), SEQ Regional Coastal Plan, 2006, this site has been identified as a SEQ bioregional corridor. Consequently this site is within an identified bioregional wildlife corridor in Caloundra City Council’s Open Space Strategy. It is strongly recommended that restricted corridor provisions are applied in this area.</p>	2.9.1, Table 2.1
	<p>The proposed alignment works go through council land within this site. Council will want to be contacted at least two weeks prior to any works immediately adjacent to council land.</p>	2.9.4
	<p><i>Eucalyptus siderophloia</i> and <i>E. propinqua</i> are key food sources for Koala. As council has recognised the local significance of this vegetation in its Biodiversity Strategy 2006, it is strongly recommended that the precautionary principle is applied in this area. It should be noted that the area is within Koala District A in the Nature Conservation (Koala) Plan 2006, and this document should be sourced during development of the EMP.</p>	2.1.2
	<p>It is highly likely the NCA-listed Glossy Black Cockatoo, listed as vulnerable under state legislation feeds on the <i>Allocasuarina littoralis</i> within this regional ecosystem.</p>	Noted
	<p><i>Mooloolah River, Mooloolah Valley:</i> Works at the Mooloolah and South Mooloolah rivers are likely to have a predominant impact on the ‘endangered’ RE 12.3.1, which provides habitat for rare and threatened flora and fauna species (see species above). Immediately north of the site is Palmview corridor, a major City Plan corridor, identified in Caloundra City Plan 2004 and which links several key areas.</p>	2.9.1, Table 2.1
	<p>There is a small section of land above Mooloolah Connection Road that is council land. Council will want to be contacted at least two weeks prior to any works within council land.</p>	Noted
<p><i>Flooding and waterway comments:</i> Beerburrum, Tibrogargan and Addington creeks are not shown on the mapping and should be considered as moderate to lowland creeks as per Section 3.4.2. In addition, this map should include council’s natural drainage lines to assist with design for minor waterways.</p>	2.9.3	

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Caloundra City Council (continued)	Council requests the opportunity to review the proposed method of backfilling and stream bed and bank restoration where trenching across waterways is proposed.	2.9.3
	Council requests involvement in the Mooloolah River crossing if a piled crossing arrangement is the preferred option. Other waterways intended for trenching may have to be bored if there are integral stands of riparian vegetation and adjacent RE vegetation.	Noted
	<i>Environment, landscape and recreation management (ELR) comments:</i> For minimised visual, environmental and social impact, ELR would like to see a limited 15-20 m wide construction corridor wherever the pipeline is crossing any land that is owned or maintained by CCC.	2.9.1
	ELR would like to be informed of locations and size of additional sites and services required where the pipeline may have an impact on CCC owned or managed land, such as site offices, work compounds, storage areas for fuels and chemicals, release of commissioning waters and permanent disposal of trench spoil.	2.9.4
	ELR would like to see management and rehabilitation plans for aquatic fauna, water crossings, commissioning waters and weed management for permanently trenched spoil.	2.9.3
	ELR would also like to see any further studies undertaken in regard to flora and fauna.	2.9.1
	ELR would like to see the number of nest boxes replacing hollows on CCC land kept to a minimum. Where they are required, ELR would like to see plans for monitoring and maintenance.	2.9.4
	In regard to Pioneer Park, and the award winning all-abilities playground, ELR would like to see extra care taken during the construction and rehabilitation phases, should the final route affect the reserve. The playground is a significant regional facility, and should there be any impact, CCC and Disability Services Queensland must be consulted regarding the extent of impact, including estimated time frames for public access restriction and the restitution of impacted infrastructure.	2.9.4
	For CCC-managed or freehold land parcels, pre- and post-inspections with CCC staff must be conducted and cost recovery for any damage to infrastructure must be included in the construction process.	2.9.4

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Caloundra City Council (continued).	<i>Infrastructure policy comments:</i> Council supports the intent to prepare traffic control plans and traffic management plans. Council also welcomes the intent to inspect the condition of each affected road before and after haulage and construction. There is no specific reference to liaison with councils—councils should also be included in these discussions where there is potential for council roads to be affected. Affected intersections or works adjacent to intersections should be highlighted.	2.9.4
	Depth of pipeline in or across a road reserve should be a minimum of 1500 mm to allow for existing or minor upgrades to existing services without compromising the NPI pipe.	2.9.4
	Design of pipeline in or across a road reserve must allow for normal maintenance activity to occur including grading of gravel roads, trimming or reforming drainage table drains, use of vibrating earthmoving/construction equipment in the future etc.	2.9.4
	Design of the pipeline must allow for council to maintain or replace/upgrade any existing services without being encumbered by special work methods or clearance restrictions which will cause a cost or time impost.	2.9.4
	CCC considers the traffic directly associated with the construction of the NPI to be of an exceptional nature which will substantially reduce the useful life of the haul routes' road pavement and seal. This will result in expenses to CCC beyond the normal repair associated with these roads. Council would seek to be compensated for this extra ordinary expense.	2.9.4
	<i>Environmental management plans:</i> The EMP should contain information on a number of matters, including water crossing methodologies, proposed sites of water storage balance tanks and pump stations, clearly stated weed management techniques, specific methods for the disposal of super-chlorinated water, a crisis management plan addressing bushfire risk management, spill prevention and response, and containment of fuel, oil and other chemicals.	3.5
	It is recommended that the Alliance liaise with council's natural area staff and local environment groups in relation to appropriate provincial species for use in revegetation projects.	2.9.4

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Caloundra City Council (continued).	<i>Other comments</i>	
	Table 3.7 (page 3-72) incorrectly lists RE 12.3.4 as ‘not of concern’. This RE type is, in fact, ‘of concern’.	2.9.1
	CCC will expect to be involved in environmental offset negotiations regarding impacted ecosystems.	2.9.2
	CCC requests the opportunity to review and comment (as necessary) on the management plans identified at page 5-1 of the EIS.	2.9.1
	Council requests site locations for stockpile within Caloundra City. It should be noted that CCC approval is required for operational work—refer Caloundra City Plan 2004, Volume 1, Table 4.2.3 (C). Disposal must not reduce flood storage volume.	2.9.4
	It is council’s understanding that it will be afforded the opportunity to submit comment on the EMP.	2.9.1
	If possible, council should be informed of any significant cultural heritage finds.	2.9.6
	What about RE types not currently mapped?	2.9.2, 4.2
Brisbane City Council	Council anticipates compensation for the review of Management and Master Plans of Open Space—Park and Reserves that may be impacted, and also any impacted infrastructure.	2.9.4
	The corridor may need to retain an access tract for maintenance purposes. Would segments of the corridor be available for walk/cycle paths (if appropriate)?	2.9.5
	BCC has reviewed the NPI environmental impact statement and has no comments as Stage 1 of the NPI is located outside the bounds of Brisbane City Council.	Noted

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
COMMUNITY (INDIVIDUALS AND ORGANISATIONS)		
Mary River Catchment Coordinating Association (MRCCA)	<p>The MRCCA has some concerns about the comprehensiveness of the EIS and believes that some key considerations need to be addressed in the EIS to ensure a full assessment of the impact of the proposal. The MRCCA is concerned that the EIS does not address the impact of taking the full entitlement of water from Baroon Pocket Dam and its devastating impact to the Obi Obi Creek downstream, and the EPBC Act’s matters of national environmental significance (i.e. the endangered Mary River Cod and vulnerable Australian Lungfish).</p> <p>Obi Obi Gorge (downstream of Baroon Pocket Dam spillway) is identified in the Mary River Cod Recovery Plan as a critical habitat area for the endangered Mary River Cod. A self-sustaining population of cod exists in this location and the EPA has nominated the Narrows section of the gorge as a ‘high environmental value’ area.</p> <p>The MRCCA has eight main concerns with the EIS as it stands, which are summarised as follows:</p> <ol style="list-style-type: none"> 1) An assessment of the likely impacts of taking the full entitlement of water from Baroon Pocket Dam (prepared by the technical advisory panel to the Mary Basin WRP), found that this would result in a substantial reduction in minor and moderate floods in Obi Obi Creek downstream of Baroon Pocket Dam. The MRCCA maintains that the impacts of increased water extraction from Obi Obi Creek, although allowable under an existing water licence, will occur as a direct consequence of the NPI. The MRCCA is concerned that the EIS specifically excludes the consideration of any environmental impacts on Obi Obi Creek downstream of the dam, which is the very location in which the greatest environmental impacts will occur. The MRCCA recommends that Section 3.1.2 (Cumulative Impacts) be reviewed to include the findings of the technical advisory panel for the development of the Mary Basin WRP and include the full impact of the NPI—in particular, the taking of water from Obi Obi Creek and the Mary River catchment. 2) The MRCCA believes that the EIS does not adequately address the NPI project’s compatibility with the policies outlined in the ToR. Specifically, the MRCCA believes that an assessment of the environmental impacts of the full utilisation of entitlements to Baroon Pocket Dam is required to address these policies. 3) The MRCCA stresses the importance of ensuring the risks of spreading weeds and disease are tightly controlled. The MRCCA is also concerned about the potential spread of aquatic weeds between water storages and streams in contact with the pipeline. 4) The MRCCA believes that the EIS should address matters of national environmental significance (NES) protected under the Commonwealth EPBC Act that relate to the utilisation of existing water allocations to the Baroon Pocket Dam. Specifically, the MRCCA believes that the effect of decreases in mean and median annual flows on aquatic biota in Obi Obi Creek should be assessed. 	3.1

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Mary River Catchment Coordinating Association (MRCCA) (continued)	<p>5) Due to the particularly high ecological values found in the Obi Obi Gorge vicinity, the area has been declared a national park. Recently, as part of the WRP process, the EPA declared the Obi Obi Gorge an area of 'high ecological value', nominating the threatening process as 'water resource development'. The MRCCA recommends that the EIS acknowledge the EPA's declaration of the Obi Obi Gorge as an area of 'high ecological value'.</p> <p>6) The MRCCA believes that the EIS does not adequately address the costs and benefits of the project as required by the ToR. MRCCA recommends that a 'proper' cost-benefit analysis of the project is prepared, which contains methodology to assess the ecological costs of the whole project.</p> <p>7) The MRCCA believes that the EIS should address the cumulative impacts of the NPI project and the Traveston Crossing Dam on flows in the Mary River and into the estuary at the Hervey Bay Ramsar site.</p> <p>8) The MRCCA believes that an assessment of the impact of climate change on yields in the Baroon Pocket Dam should be included in the EIS.</p>	
Save the Mary River Coordinating Group (STMRCG)	<p>STMRCG strongly advocates that the EIS includes the environmental impacts of the operation of the NPI on the Mary catchment where the 'unallocated' water is being taken from. The major environmental impact of Stage 1 of the NPI proposal will be to allow the level of water extraction from Baroon Pocket Dam on Obi Obi Creek to go from its current level of about 18,500 ML/a to its full level of about 36,000 ML/a, within a time frame of 18 months. The Mary River is already over-allocated and has water quality problems. The STMRCG recommends that the EIS:</p> <ul style="list-style-type: none"> ▪ reassesses the yields, benefits and costs of the project in comparison with other water supply options ▪ includes an assessment of the impacts on downstream flows using data that takes into account climate change ▪ refers to studies undertaken by the technical advisory panel for the Mary Basin WRP in the NRW (2006) ▪ includes a comprehensive alternatives section which includes an option to not proceed with the NPI ▪ includes a comprehensive cost-benefit analysis of this project, which includes methodology to assess the economic, ecological and social costs of the whole project ▪ includes 'allocation being unavailable' as a key risk due to climate change and/or reassessment of the interim resource operations licence (iROL) due to inadequacy of environmental flows when extraction is increased during the operational phase of the pipeline ▪ assesses the level of land clearing and extraction of water occurring via this pipeline against relevant national and state policies specifically mentioned in the ToR ▪ compares the level of extraction of water occurring via the NPI pipeline from the Mary catchment to what is available to be extracted in the Moreton WRP, and confirms that the project meets the requirements of relevant national action plans and agreements, including the Lower Obi Obi Creek Rehabilitation Management Plan 	<p>3.1</p> <p>3.8</p>

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Sunshine Coast Environment Council (SCEC)	<ul style="list-style-type: none"> ▪ includes the take of water from Baroon Pocket Dam in Section 3.4–Water Resources and Water Quality, and addresses details on potential impacts and mitigation ▪ includes an assessment of the cumulative impacts of inter-basin transfers on water quality and quantity, and in particular the risk and management strategies to prevent transfer of aquatic weed species and pathogens isolated to particular water storages that are planned to be connected through the water grid. It is imperative that the cumulative impacts of the operation of Stages 1 and 2 of the NPI and Traveston Crossing Dam be also taken into account in the EIS for each project. <p><i>Note: The submission from STMCG includes issues and technical information similar to that presented in the submission by the Mary River Catchment Coordination Association (MRCCA). These arguments are presented above and are not replicated here.</i></p> <p>SCEC is concerned that too little time elapsed between the closing date for comments on the draft ToR and the release of the EIS to allow a proper impact assessment to be completed.</p> <p>SCEC also holds the view that the EIS should include an assessment of the cumulative impacts of the NPI and the Traveston Crossing Dam. Considering the impact of the total extractions of the completed project along with the impact of each stage of extraction will a) provide a genuine and detailed assessment of the environmental impact that on a stage by stage basis may appear acceptable and b) enable assessment of the actual viability of the first stage of the NPI as a stand-alone measure should the cumulative impact be found to be unacceptable.</p> <p>The submission from SCEC supports a number of the key points made above with respect to the assessment of the costs and benefits of the project and the project alternatives.</p> <p>SCEC argues that projects of this magnitude should implement ‘offset’ measures such as the purchase of lands of high conservation value and subsequent dedication as a reserve. These properties would be of a size and ecological value that would more than compensate for the long-term negative impacts of the project.</p> <p>It is SCEC’s view that the EIS does not adequately discuss plans that allow for the maintenance and/or enhancement of habitat and corridor function, including species chosen for revegetation. The EIS also requires further discussion of methodologies used to assess and handle injuries inflicted on livestock and native fauna, and measures to minimise the introduction of feral species and other exotic fauna.</p> <p>Environmental management plans have not been provided in the EIS. SCEC considers this a serious deficiency and confirms their view of the document as rudimentary.</p>	3.1

Table 1.1 (continued)

Submission from	received	Comment/issue	Addressed at
Tiario and District Landcare Group		This submission supports those arguments made by other Mary Valley community groups and believes that the EIS should consider those aspects associated with the transfer of water from the Baroon Pocket Dam.	3.1
John Braby, Save the Valleys, Conondale		Mr Braby's submission supports that made by the Mary Valley community groups and states that 'the proposal to take water from the Baroon Pocket Dam risks doing further harm to the Obi Obi Creek'. Mr Braby presents anecdotal evidence collected from local farmers demonstrating the decline in the environmental condition of the creek since the raising of Baroon Pocket Dam. Mr Braby is concerned that 'an almost entirely economic factor drives this inter-basin transfer', and that 'water is to be transferred from a lower dollar-value market—farm and environmental flow, to a higher dollar-value market—the highly-dependent urban consumer.' Mr Braby submits that 'four of the farmers interviewed in this study used the very same words: 'The dam has stuffed the creek'. The exporting of Mary catchment water to fuel Sunshine Coast development—and the dam to do it—was the cause. The problem is hardly rectified by sending huge quantities of water down to the bottomless thirst that is Brisbane and its expanding suburbs.'	3.1
Conondale Range Committee		This submission is also concerned with the impact of the take of water from Baroon Pocket Dam on species in Obi Obi Creek and the potential cross-catchment transfer of water weeds.	3.1, 3.4
Queensland Conservation Council (QCC)		The QCC is concerned about a number of issues relating to the environmental, social and economic sustainability and viability of the proposed project. The recommendations put forward by the QCC support those made by the Mary Valley community groups with respect to the take and allocation of water on downstream flows and in the context of climate change, the cumulative impacts of the transfer of water for the NPI and the proposed Traveston Crossing Dam, the assessment of alternative options and the inclusion of a 'no allocation available' option to be considered as part of the risks to the project.	3.1
		The QCC also recommends that the EIS describe how the reduction, avoidance and mitigation of greenhouse gases emitted from the development will be undertaken; and how the project will contribute towards the Queensland Government's commitment to 60% greenhouse gas reduction by 2050.	3.6
Wildlife Preservation Society of Queensland (Sunshine Coast & Hinterland) (WPSQ)		The WPSQ has concerns over some sections of the pipeline route due to the likelihood of adverse impact on the environment, species of conservation significance and critical habitats for endangered species. WPSQ endorses those comments made by consultants with respect to the flora and fauna values of the proposed corridor and believes the final route should avoid areas of environmental significance.	3.5.2

Table 1.1 (continued)

Submission from	received	Comment/issue	Addressed at
Nick Clancy		<p>Mr Clancy objects to the location of the tank and pump station on Lot 2 RP171423 and adjoining unmade section of Old Gympie Road as shown on Figure 2.14 of the EIS. Mr Clancy is concerned that ‘no effort was made by the proponent or its representatives’ to contact him as an affected landowner. Mr Clancy is also concerned that no impact assessment has been undertaken on his property or surrounding land.</p> <p>Mr Clancy points out that the EIS states ‘at this stage, the location and size of the balance tanks is not determined and will require further investigation and review’, and asks why locations are then nominated on these figures. Mr Clancy has since been informed by the DoI that these works will occur as part of Stage 2 of the pipeline and requests that this figure be amended.</p> <p>Mr Clancy recommends that the proposed tank location be assessed and documented in the EIS for the NPI Stage 2 to allow for considered stakeholder comment, and that alternative sites are investigated as part of this process.</p>	3.7, 4.1.8
Mick Smith (Maroochy Shire)		<p>Mr Smith states that there is a need to balance the social outcomes of the NPI with respect to addressing a shortage in the supply of potable water, with desirable environmental outcomes. The current EIS does not adequately address the cumulative environmental impacts on Obi Obi Creek from the Baroon Pocket Dam spillway to its confluence with the Mary River, which is where the greatest environmental impact will occur.</p> <p>The EIS should also consider that rainfall and dam yields are likely to be lower as a result of climate change. A range of different scenarios should be modelled and assessed to determine the likely environmental impacts of abstracting 34,000 ML/year under drier conditions, when rainfall events are likely to be less frequent.</p>	3.1
Dave Milligan		<p>Mr Milligan states that ‘the \$300 million dollar pipeline is very expensive water indeed for 20,075 ML to 23,725 ML annually, which is not available from the Sunshine Coast Storages anyway. A fraction of the volume of water is available as surplus to our needs. The correct pipeline would be to build a pipeline from the sewage treatment plants on the coast to your existing dams to recycle our available water supplies. This reuse is ‘the future’, not dinosaur dams which are dwindling fast with absolute certainty.’</p>	3.2

Table 1.1 (continued)

Submission received from	Comment/issue	Addressed at
Dan Ball	<p>Mr Ball is concerned that the route proposed traverses an area of environmental significance on his property on the South Mooloolah River, and believes the route requires further consideration. Mr Ball states that ‘this particular area of native rainforest has remained unaffected by humans to date. There are many older endangered native tree specimens thriving in this area’s delicate ecosystem... The area of native rainforest which borders the South Mooloolah River contains several species on the endangered RE 12.3.1 endangered vegetation list.’</p> <p>Mr Ball is also concerned that the route crosses the South Mooloolah River at two points on his property, which he considers will have serious environmental impacts on flora and fauna species in the immediate area and downstream of the crossing point. Mr Ball states that there are cleared sites behind the river which are more suitable for pipeline construction and urges consideration of an alternative route that would minimise the damage to this ecosystem.</p>	4.1.7
Andrew Usher	<p>Mr Usher strongly objects to the proposed route passing through heritage-listed Glass House Mountains National Park and people’s homes and properties. Mr Usher is also concerned about the timing of this development and the cumulative disruptive effects of the NPI, the duplication of the railway and upgrading of Steve Irwin Way. Mr Usher believes that a more appropriate route would be along the Bruce Highway and the edge of the forestry areas to avoid the use of secondary roads as haulage routes. Mr Usher has little confidence in the current \$300 million estimate and believes the NPI will end up costing \$1 billion.</p> <p>Mr Usher is an affected property holder and strongly objects to the present route across his own property.</p>	Noted
Gabrielle Luft and Mark Taylor	<p>‘We strongly object to this project altogether because of environmental and social impact reasons. It is fundamentally wrong the Beattie Government doesn’t first put strict population growth caps and other legally binding safeguards in place to manage the manmade water supply crisis more sustainably.’</p>	Noted
Independent Trawler Association Inc. (ITA)	<p>The ITA supports the submissions of the STMRCG and MRCCA which go into the detail of the proposal (see above). The ITA also raises the concerns of independent fishers regarding ‘ongoing changes to catchments by government departments that appear to have a total lack of concern for any of the ecological functions of fresh water and its fluxing roll in marine ecosystems.’</p> <p>The ITA’s concerns relate to the cumulative impact of the Traveston Crossing Dam, the Mary River Barrage and water infrastructure and the resulting problems downstream. The ITA doesn’t want ‘another disaster like the Burnett catchment, where there was a total disregard for and sacrifice of marine productivity and the theft of fishing licences under the disguise of marine fish protection using ESD and precautionary principles’.</p>	3.1
Lake Macdonald Catchment Care Group (Secretary Raul Weyhardt)	<p>The submission endorses submissions provided by the MRCCC.</p>	Noted

2 Response to government submissions

Submissions were received from the Caloundra City Council (CCC), Brisbane City Council (BCC) and 11 Queensland Government agencies. This section responds to the comments provided by the various government bodies on the EIS, as appropriate. Those agencies that made submissions are:

- Department of Local Government, Planning, Sport and Recreation (DLGPSR)
- Environmental Protection Agency (EPA)
- Department of Primary Industries and Fisheries (DPI&F)
- Department of Natural Resources and Water (NRW)
- Department of Main Roads (DMR)
- Department of Communities (DOC)
- Queensland Police Service
- Department of State Development (DSD)
- Department of Emergency Services (DES)
- Department of Mines and Energy (MNE)
- Queensland Treasury.

The Department of State Development, Department of Mines and Energy and Queensland Treasury advised that the EIS had suitably addressed any relevant matters and required no further input. Accordingly, the discussion below provides responses to those matters raised by other agencies.

2.1 DEPARTMENT OF LOCAL GOVERNMENT, PLANNING, SPORT AND RECREATION

2.1.1 Legislation, policy and approvals

Amendments to the *Water Act 2000* and the *Water Regulation 2002* direct that works be carried out under state law to complete the NPI by 31 December 2008. Further, a regulation has been made under s.100 and s.109 of the SDPWOA authorising SRWP Co to undertake works for the NPI. This regulation also places an obligation on the CoG to exercise certain powers in relation to the completion of such works under the SDPWOA.

Schedule 9 of the *Integrated Planning Act 1997* (IPA) lists development that is exempt from assessment against a planning scheme. The NPI has been determined to fall within the exemptions of Schedule 9 where Table 5 Item 4 states that ‘all

aspects of a development a person is directed to carry out under a notice, order or direction made under a State law' constitute exempt development.

As such, the NPI project does not constitute assessable development under the Caboolture and Caloundra planning schemes. However, approval may need to be sought from councils where some aspect of the development is regulated under a local law. In any case, limited significant impacts on existing or future land uses are anticipated as the pipeline will be located underground (see Section 3.2.1 of the EIS). Where future activities over the pipeline will be restricted, individual landholders will be compensated for any associated losses (see Section 3.10.12 of the EIS).

The SEQ Regional Infrastructure Plan (OUM 2006) identifies the North Coast Rail Line upgrade as a priority project between 2009 and 2015. This is addressed at Section 3.2.1 of the EIS, with the cumulative impacts of both projects on the receiving environment considered at Section 3.12.

All state planning policies which have relevance to the NPI project have been addressed in the EIS.

2.1.2 Nature Conservation (Koala) Plan 2006

The comments provided by DLGPSR are acknowledged. Where Koalas are expected to be present in the project area (see Figure 2.1), environmental management of construction sites will have reference to relevant legislation, including the Nature Conservation (Koala) Plan 2006 and Nature Conservation (Koala) Management Plan 2006-2016. All fauna management for the project will be in accordance with a project-specific fauna management plan developed in consultation with the EPA, with professional spotter-catchers employed at sites throughout construction as appropriate.

2.2 QUEENSLAND ENVIRONMENTAL PROTECTION AGENCY

The EPA's principal areas of concern relate to the protection of waterways and riparian vegetation, which provide important corridors for wildlife movement. In most cases, waterway crossings will be conducted within the power easement, where riparian vegetation has experienced significant previous disturbance and large trees are excluded under the transmission line.

Where waterways have high ecological value, crossing methods such as piling over or boring under will be considered to minimise disturbance. Alternative crossing methods are proposed for key crossings providing habitat for significant species such as the Caboolture and Mooloolah Rivers, or comprising high quality endangered vegetation such as Wararba Creek.

All waterway crossings will be managed in accordance with a project-specific water crossings management plan. The EPA has provided comments and suggestions on a draft version of this plan. Where appropriate, the EPA will be consulted throughout the development and implementation of this plan.

Figure 2.1
Koala conservation plan boundaries

2.3 DEPARTMENT OF PRIMARY INDUSTRIES AND FISHERIES

The comments provided by DPI&F are acknowledged. SRWP Alliance confirms that:

- all works will be carried out above the level of the highest astronomical tide and no marine plants will be disturbed
- the use of structures that would impede fish movement in waterways is not anticipated; however, approval will be sought if the use of such structures becomes necessary.

The DoI is managing the land acquisition and compensation process for the NPI project. All landholders will receive compensation for any losses associated with the establishment of easements for the pipeline, with the level of compensation to be addressed with individual landholders.

2.4 DEPARTMENT OF NATURAL RESOURCES AND WATER

2.4.1 Legislation and policy requirements—the *Water Act 2000*

The comments provided by NRW are acknowledged. By way of amendment, this Supplementary Report now includes the following:

A number of permits under the *Water Act 2000* (the Water Act) may be required for the construction of the proposed pipeline. Any works that involve the destruction of vegetation, excavation or the placing of fill in a watercourse as defined in the Water Act would normally require a riverine protection permit. However, as the project constitutes ‘authorised works’ under the SDPWOA, and certain CoG powers have been delegated to the SRWP Alliance, these permits are not required.

If there is a requirement to source quarry material from nearby watercourses, a quarry material allocation notice is required, along with a development permit for quarrying in a watercourse or lake. Similarly, if there is a need to source water for construction purposes from a watercourse, lake or spring, or from underground water, a water permit or other water entitlement may be required.

A range of options are being investigated with respect to water sources for construction, hydrotesting and commissioning of the pipeline. Where appropriate, the Alliance will prepare applications to NRW for surface water permits.

2.4.2 Acid sulfate soils

The comments provided by NRW with respect to the use of terminology in the EIS are acknowledged. The project area has a very low risk of encountering acid sulfate soils as the proposed corridor does not traverse through elevations less than 5 m to AHD.

2.4.3 Bedding material

Pipeline bedding material will be a 5-7 mm self-compacting aggregate sourced locally from quarries on the Sunshine Coast. The use of this material avoids the need for water in preparing the bed of the pipe. Further, the use of materials from local

quarries will minimise the cost and emissions associated with long-distance transport and subsequent reinstatement of local roads.

2.5 DEPARTMENT OF MAIN ROADS

All temporary works including traffic control devices, detouring of traffic, sidetracks and the realignment of existing roads, shall be designed and erected in compliance with the recommendations contained in the DMR publications:

- Manual of Uniform Traffic Control Devices Part 3 2003
- Guide to Managing Traffic Disruptions
- Traffic & Road Use Management Manual Edition 1.0.

The relevant road authority will be given notice prior to changes in traffic movements necessary for the performance of work under the contract. This notification will include approval of a traffic control plan detailing proposed traffic arrangements and traffic control devices to be used. Any changes to an approved traffic control plan will be notified to the relevant road authority prior to its implementation. A register of the implementation of each individual traffic control plan will be maintained. Details of daily inspections will be recorded in the register. Changes will be notified to the Construction Manager for approval and forwarded to relevant road authority.

Exact haulage routes for construction of the NPI will be determined through the construction management plan and communicated to the DMR as appropriate. Construction works are not anticipated to occur within the boundaries of state controlled roads as all DMR assets will be tunnelled/bored under the surface. As such, it is anticipated that all state controlled roads will be maintained at 100% capacity.

2.6 DEPARTMENT OF COMMUNITIES

The comments provided by the DOC with respect to community profiling are acknowledged. There are a number of potential descriptors relating to community structure; however, the intent of the EIS was to identify those elements most likely to be impacted by the proposed NPI project. The assessment undertaken concluded that the primary impacts on the social environment would relate to the construction phase of the project and, therefore, that impacts would be largely temporary. As such, the discussion is limited to issues associated with disruptions to traffic, access to residences and essential services, and impacts on visual amenity. Ongoing restrictions to land use for directly affected landholders are addressed at Section 3.10.12.

The use of local labour and equipment has both time and cost benefits for the project and the local community. Employment opportunities will be advertised in local and electronic media for a range of technical and labour groups during the construction phase of works. It is not considered that particular sensitive groups are likely to be impacted by the installation of a subterranean water pipeline and, as such, this is not discussed.

2.6.1 Complaints management

A complaints-response management mechanism is inherent to the project EMP dealing with noise. The EMP includes processes for activities in accordance with the acceptable standards and guidelines adopted for the building industry.

Aspects of the community structure suitable for assessing impacts from the proposal are addressed in the project EIS. A detailed communications and stakeholder engagement management plan will be implemented prior to the commencement of construction activities to address any site-specific or unique community-related issues. These are recorded and managed through an integrated database that informs all elements of construction.

All members of the public, including local users of kindergarten and child care facilities, will have opportunity to access the project complaints register. This can be either through direct communications to the project 24-hour 1800 number, the project web-site, or via direct mail to the project. The SRWP Alliance employs an efficient system for responding to any relevant public complaints received.

2.7 QUEENSLAND POLICE SERVICE

The Queensland Police Service will continue to be consulted on relevant matters during the implementation of construction plans. This will include communications for traffic management plans and the incident management plan. Further, the Queensland Police Service will be informed of any envisaged protest activity or issues regarding public safety or misconduct.

2.8 DEPARTMENT OF EMERGENCY SERVICES

The primary site office for Stage 1 of the NPI will be located on King Street, Caboolture. The SRWP Alliance will continue to consult with the DES to ensure a coordinated approach to the management of emergencies. A copy of the construction EMP and incorporated incident management plan was provided to the DES for their review and comment.

2.9 CALOUNDRA CITY COUNCIL

2.9.1 Significant environmental areas—Caloundra Shire

The terrestrial ecology discussion in the EIS is derived from both desktop studies of available regional ecosystem (RE) and threatened species data, and physical field survey of the NPI corridor. Physical survey comprised qualified flora and fauna consultants assessing sites along the route to confirm the nature and condition of the vegetation and the likely presence of endangered, vulnerable or rare (EVR) species protected under state and federal legislation.

The assessment prepared for the EIS takes into account the actual conditions at particular sites, including habitat suitability for significant fauna. As such, this information is considered to be a more accurate reflection of the biodiversity values along the NPI corridor than can be gleaned from desktop survey only.

Only one protected flora species, the rare plant *Eucalyptus curtisii*, was recorded within the corridor. Other species occurred in the vicinity (see Table 3.10 in the EIS); however, none of these will be affected by the proposed works. Sites where protected fauna species have been recorded are included at Table 3.15 of the EIS. This table also includes management recommendations, which have been incorporated into the relevant EMPs.

The SRWP Alliance also acknowledges the specific sites identified by CCC. The likely impact on these sites, and the proposed mitigation measures, are summarised in Table 2.1. Constrained corridors will be used for construction at key locations, namely in ‘endangered’ RE types and significant species’ habitat.

All management of environmentally sensitive areas will be in accordance with the construction EMP that has been developed in consultation with the Queensland EPA.

Table 2.1 Significant environmental areas in Caloundra Shire

Site	Constraints/mitigation measures
Beerburrum State Forest	The works in the state forest adjacent to Tunbubudla (the Beerburrum Forest Reserve) will be located in cleared areas under the power line and along Old Gympie Road. There will be no impact on remnant vegetation in this area, except where two small gullies cross the clearing under the power line. Wallum Froglet has been confirmed in these gullies, which will be managed and reinstated with appropriate species as outlined.
Glass House Mountains (Glass House - Woodford Road to Coonowrin Creek)	Diversion from the power easement is required to avoid destabilisation of this slope in the vicinity of the electricity tower. No rare or threatened species have been recorded in this location. Clearing will be limited to the 30 m corridor required for construction and vegetation reinstated with appropriate species.
Old Gympie Road and Beerwah Mountain Road	Works will be located within the power easement and will not impact on any mapped remnant vegetation. The adoption of vegetation orders on the lots identified is noted.
Old Gympie Road, Glass House Mountains	Works will be located within the power easement, which has been cleared of vegetation and is dominated by Lantana. Works can be accommodated within the easement.
Old Gympie Road, Beerwah	Works will be located within the power easement, which has been largely cleared of vegetation under the easement. The corridor will be constrained to the western side of the easement to avoid the <i>Eucalyptus curtisii</i> plants on the eastern side.
South of Thompsons Road, Beerwah	A small section of RE 12.3.4 extends into the easement on this property and will require clearing to facilitate construction. No significant species have been recorded in this location; however, fauna spotters will be utilised on site to ensure there is a limited impact on local fauna. Clearing will be limited with the construction area rehabilitated with appropriate wetland species.
Below Little Rocky Creek, Landsborough	The corridor through this area will be restricted to within the existing easement wherever possible. Some clearing will be required in an ‘endangered’ RE type at the rear of properties on Gowen Drive. A constrained corridor will be used in this location to minimise the impact on RE 12.5.3.
Mellum Creek	Riparian vegetation along Mellum Creek is heavily degraded at the crossing point. This vegetation is mapped RE 12.3.1 and has been identified as potential habitat for the Giant Barred Frog, although this species was not confirmed during the survey. Construction of this crossing will be in accordance with a sensitive area plan to minimise the impact on vegetation and key habitat features.
Addlington Creek	Tusked Frog has been recorded at Addlington Creek; however, the crossing location is heavily degraded under the easement and construction will not remove any permanent habitat for this species. Spotter-catchers will be deployed prior to the commencement of works to ensure individual animals are relocated from the work area.
Tunnel Ridge Road, Landsborough	Wherever possible, vegetation clearance will be minimised and works conducted in accordance with relevant legislation, including the Nature Conservation (Koala) Plan 2006 (see Section 2.1.2 of this report).

Table 2.1 (continued)

Site	Constraints/mitigation measures
Mooloolah River	The EPBC-listed endangered Giant Barred Frog has been recorded calling from the Mooloolah River, which supports small pools and breeding habitat adjacent to the river banks. This crossing will be achieved by boring or tunnelling under the river to minimise the impact on this species and its habitat.

2.9.2 Vegetation clearing and offsets

The detailed vegetation survey completed for the EIS identified mapped and unmapped areas of remnant vegetation within and adjacent to the NPI corridor. Vegetation map amendments will be sought, where appropriate, for currently unmapped areas of remnant vegetation. Where a particular remnant community is present but unmapped, vegetation will be managed according to the principles established in the EIS. For example, Wararba and South Wararba Creeks (in Caboolture Shire) both support riparian remnants of the ‘endangered’ RE 12.3.1 which are too narrow to be mapped at a 1:100,000 scale (the NRW standard mapping scale). Construction in these areas will occur in a constrained corridor to minimise damage to these communities.

With respect to the Queensland *Vegetation Management Act 1999*, SRWP Co will enter into a deed of agreement with NRW for the provision of vegetation offsets. At this stage it is anticipated that the DoI and NRW will coordinate the provision of offsets for all water grid projects to ensure a strategic approach which maximises the conservation and biodiversity values of offsets and reserves.

2.9.3 Waterways

Beerburum Creek was inadvertently omitted from the waterway mapping presented in the EIS. The SRWP Alliance does have access to Council’s drainage layer; however, only the major creeks were shown on the map in the EIS to ensure the material was presented clearly. Detailed waterway planning for the project involves members of the construction, environment and engineering teams walking the alignment to record the location of all features of interest to construction.

The method of restoration for trenched waterway crossings will be determined on a site-by-site basis with reference to the specific characteristics of a particular waterway. Watercourse banks will be reinstated as near to their original profile as possible and stabilised through the use of rip rap, geotextile and/or replanting of riparian vegetation.

The construction EMP includes a water crossings management plan, developed in consultation with the Queensland EPA.

2.9.4 Council land and assets

The location of a temporary site office and pipe laydown areas in Caloundra Shire are currently being negotiated between the SRWP Alliance and the Manager of Caloundra Shire’s Property Management Unit (Mr Steve Linnane) with input from the DoI.

Construction works will result in temporary disruption to land use; however, recreational uses on council land will not be permanently affected by the NPI. While restricted corridors can be employed where overriding social, environmental or engineering dictate, use of a constrained corridor results in significantly slower productivity, greater duration of activity and an increased cost of construction works. Council infrastructure impacted during construction will be reinstated at the conclusion of works, as appropriate. Ongoing consultation will be undertaken with the appropriate sections of Caloundra Shire with respect to affected council-owned lands and assets along the pipeline route.

As noted below, the EIS corridor (Revision G) showed a route through Pioneer Park. Subsequent route verification and optimisation investigations have confirmed the Revision H corridor that corresponds to the power easement on the west side of the park. As such, it is not anticipated that there will be substantial impact to the playground or nest boxes. As a minimum, any infrastructure in the easement will be reinstated to its previous condition.

2.9.5 Use of the corridor

The pipeline route traverses through easements on private property for the majority of the route. Therefore, while public access in the vicinity of the buried pipe will be possible on public lands, access through private property will not be made available.

2.9.6 Cultural heritage

Cultural heritage surveys will be undertaken in accordance with the approved cultural heritage management plan. The release of this information to any party will be subject to negotiation with the Gubbi Gubbi #2 as the endorsed Aboriginal party.

3 Response to community submissions

3.1 WATER ALLOCATIONS—OBI OBI CREEK AND THE MARY RIVER CATCHMENT

The CoG has received a number of submissions which express the view that the impacts of the transfer of water to Brisbane by the NPI on flows in Obi Obi Creek downstream of the Baroon Pocket Dam should be assessed in the Stage 1 EIS.

The key concerns raised in these submissions relate to the full utilisation of existing entitlements in the Baroon Pocket Dam, and the impact of using the full allocation on the actual flows in Obi Obi Creek. The point at issue as it relates to the EIS for Stage 1 of the NPI concerns the scope of the assessment undertaken.

The NPI constitutes one part of the Queensland Government's water grid. When complete, the water grid will form an interconnected system of pipelines and water storages throughout south-east Queensland. SRWP Co has been commissioned to construct a pipeline with the capacity to transfer up to 65 ML/d between the Sunshine Coast and Brisbane, as per the direction under the *Water Act 2000*.

At the same time, the NRW and the Queensland Water Commission (QWC) are developing a resource operations plan (ROP) which will establish the day-to-day operating rules governing the use of water from the Mary Basin. The ROP is intended to implement those objectives set out in the Mary Basin WRP. Matters relating to the use or allocation of water are being addressed through the development and implementation of the WRP and the ROP.

It is anticipated that the ROP will be finalised in mid-2008, prior to completion of the NPI Stage 1. QWC will coordinate the provision of all water for the project in accordance with the provisions of the Water Act and relevant subordinate legislation.

The NPI is a drought contingency project. In the short term, the staging of the NPI project is designed to supplement the critically low levels of the Wivenhoe and Somerset storage systems. Water transferred to Brisbane via the NPI Stage 1 will be sourced from existing allocations to the Landers Shute WTP. This water is currently available under the iROL for the Baroon Pocket Water Supply Scheme 2004.

However, in the medium term, Stage 2 of the NPI will connect additional water sources to the SEQ water grid to augment those supplies drawn from Baroon Pocket Dam. Investigations are currently under way for the Stage 2 works which will connect supplies from Lake Macdonald (through the Noosa WTP) and Wappa Dam (through the Image Flat WTP) to the Stage 1 pipeline south from Landers Shute WTP.

3.2 THE NPI AND TRAVESTON CROSSING DAM

The NPI Stage 1 is designed to accommodate water from potential future sources on the Sunshine Coast, including the proposed Traveston Crossing Dam should it be approved. However, the NPI Stage 1 is primarily a stand-alone drought contingency project which will deliver water from existing storages on the Sunshine Coast into Brisbane and the SEQ water grid as directed under the *Water Act 2000*.

3.3 THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT

Pursuant to section 524 (1) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), decisions by a state or a state agency do not constitute actions under the Act. As such, decisions with respect to water resource planning made by a state or state agency do not constitute assessable development under the EPBC Act.

3.4 CROSS-CATCHMENT TRANSFER OF ORGANISMS

As directed under the *Water Act 2000*, the NPI Stage 1 will transfer up to 65 ML/d of *treated* potable water. This transfer will occur from the Landers Shute WTP to Morayfield and, ultimately, into the SEQ water grid. There is no inter-catchment transfer of raw water. Raw water from Baroon Pocket Dam is treated at the WTP using 11 major treatment processes to ensure water quality of an acceptable standard for human consumption. This includes sand/coal filtration to remove small particles such as algae and bacteria from the water (Aquagen 2007).

Further information on the treatment processes used at the Landers Shute WTP is available from the Aquagen website at <http://www.aquagen.qld.gov.au/>.

3.5 ENVIRONMENTAL MANAGEMENT PLANS

The planning environmental management plan (PEMP) included in the EIS sets out the framework for environmental impact management on the NPI project. Individual management plans have been developed for a number of key environmental areas. These plans have been developed in consultation with the EPA, which provided final comments on 14 August 2007.

The construction EMPs set out the general principles and specific mitigation measures outlined in the EIS for particular environmental elements (air, noise, soil, water quality, fauna, vegetation, etc.). These EMPs are also supported by sensitive area plans and environmental constraints mapping for key areas.

3.5.1 Sensitive area management

Every attempt has been made to avoid sensitive environmental areas by locating the route within existing service easements and cleared areas wherever possible. However, as discussed in the EIS, impacts may occur in or adjacent to the corridor where:

- remnant vegetation persists as narrow corridors along waterways running west-east across the project area and it is not possible to avoid passing through them

- the existing easement is narrow and constrained by vegetation on one or both sides
- the corridor is constrained by the position of existing infrastructure within the easement and needs to expand to accommodate the work area
- the easement traverses areas with significant geological constraints (hard rock) or side slope where extensive earthworks are required to create a safe working platform for construction equipment.

Where it is not possible to avoid areas through appropriate route selection, further disturbance will be minimised by restricting clearing to the edges of remnant vegetation to minimise the ongoing impacts associated with ‘edge effects’. Replanting with appropriate species is an important part of the rehabilitation strategy for affected areas, although a corridor of up to 10 m wide will not support deep-rooted vegetation to preserve the integrity of the pipe.

3.5.2 Threatened species

Where the presence of rare or threatened species has been identified on or adjacent to the pipeline corridor, measures will be implemented during construction to ensure that important habitat features are not significantly impacted by works. For example, detailed site planning is being undertaken at the Mooloolah River to ensure a crossing methodology that preserves habitat features for the Giant Barred Frog (*Mixophyes iteratus*).

This crossing will be achieved by driving piles into the top of the banks and installing the pipe over the main channel, which eliminates the need for disturbance of the river bed and banks and preserves microhabitat features (overhanging macrophytes, tree roots, undercut banks, accumulations of debris) within the stream channel. Disturbance is restricted to a minor tributary or overflow, where habitat features suitable for *M. iteratus* have been eliminated by cattle.

Mitigation measures for specific sites are triggered by the presence of a species and based on detailed site investigations and habitat assessments by experienced fauna consultants. They are aimed at eliminating impacts on those habitat features (e.g. emergent vegetation, water quality, etc.) which are considered critical for the persistence of a species at a particular locality.

3.5.3 Fauna and livestock management

Injuries to fauna and livestock could potentially result from a number of causes; vegetation clearance, animals falling into open trenches, or conflict with construction traffic using existing or constructed roads. Potential injuries are minimised by having a qualified fauna ‘spotter/catcher’ attend the site prior to, during and after clearing to relocate animals using vegetation in the work area. The amount of time that trenches are left open will be restricted (i.e. by excavating limited lengths of trench at a time, particularly where trenches are to be left unattended), and exclusion fencing erected to prevent access by humans, livestock and native fauna.

If fauna injuries do occur, animals will be removed and treated by licensed fauna handlers or taken to a local vet.

3.6 GREENHOUSE GAS EMISSIONS

Greenhouse gas emissions for the project can be separated into two categories; emissions from construction resulting from a variety of sources such as site vehicles, machinery, vegetation clearing, site offices, etc; and emissions from ongoing operations which will largely result from pumping large volumes of water.

While Stage 1 relies on gravity to transfer water from Landers Shute WTP to Brisbane, pumping will be required to realise the reverse flow capacity of the NPI or to accommodate larger flow volumes in the future. As such, the pipe is designed to minimise operational energy (to reduce both cost and emissions) over the life of the NPI while still responding to immediate engineering and environmental constraints. General greenhouse gas mitigation strategies for construction are set out at Section 3.5.3 of the EIS.

There are no specific targets set by the Queensland Government with respect to greenhouse gas emissions for the NPI project. However, the following opportunities have been identified to minimise the greenhouse gas impact of both construction and operations:

- use of a micro hydropower scheme. Initial investigations have indicated that, through the installation of turbines within the pipe, a micro hydropower scheme could provide an alternative energy source for pump stations required for reverse flow
- use of high efficiency pumps and motors
- procurement of vegetation offsets in a manner that maximises their usefulness as carbon sinks (e.g. including a revegetation element in vegetation offsets).

3.7 FACILITIES AT OLD GYMPIE ROAD

Mr Clancy's comments with respect to consultation about the location of the pump station and balance tank at Nobels Road are acknowledged and have been forwarded to the DoI. While associated pumping and storage facilities will not be completed as part of the Stage 1 works, these facilities are required to accommodate the reverse flow of the NPI. It is anticipated that these facilities will be located within the undeveloped road reserve adjacent to Mr Clancy's property. Environmental issues related to the development of these facilities will be considered as part of the Stage 2 works.

3.8 COMPATIBILITY WITH FEDERAL WATER POLICY

3.8.1 National Competition Policy framework

The following extracts from the Australian Government National Competition Policy (NCP) 2005 Annual Report set out the framework for the NCP.

In April 1995, the Australian Government, States and Territories entered into three Inter-Governmental Agreements—the Conduct Code Agreement (CCA), the Competition

Principles Agreement (CPA), and the Agreement to Implement the National Competition Policy and Related Reforms (Implementation Agreement). These Agreements aim to provide a timely, coordinated and comprehensive approach to competition reform across all levels of government.

The commitments embodied in these Agreements effectively underpin NCP in Australia. These reforms perform a mutually reinforcing role with other competition policy initiatives.

The National Water Initiative (NWI) would comprise one of these initiatives.

The NCP framework targets particular opportunities for governments to encourage competitive outcomes. These include the following:

- the implementation of competitive neutrality for all government business activity operating in a contestable market, which requires that such businesses not benefit commercially simply by virtue of their public ownership. For example, they should be liable for the same taxes and charges, rate of return and dividend requirements as their private sector competitor;
- the structural reform of public monopolies, where their markets are to be opened to competition or they are to be privatised, to ensure they have no residual advantage over potential competitor;
- the provision of access arrangements to services provided by significant infrastructure facilities (such as electricity grids, airports and communications networks) that would be uneconomic to duplicate, to encourage competition in upstream and downstream markets and reduced prices for related product;
- ensuring commitment to related reforms in key infrastructure areas of electricity, gas, road transport, and until 2005, water with a view to improving efficiency, implementing nationwide markets and standards, and protecting the environment.

Benefits to the community from this reform process are becoming more evident, particularly in terms of lower prices to consumers.

NCP reforms have contributed to reductions in costs and prices across most infrastructure services that have been subject to reform. However, it is important to recognise that this is a long-term process. Ongoing commitment by all levels of government to effective reform will be necessary to realise significant returns.

The NPI project would fit strategically within this policy framework as the SRWP Co is established as a corporation that is required to:

- operate economically as a commercial entity
- provide infrastructure that will improve efficiency in the supply and transfer of bulk water across the southern part of the south-east Queensland conurbation
- ensure that the environmental impacts of the NPI are minimised.

3.8.2 National Water Initiative

The following extract is from the NWI website.

The National Water Initiative (NWI) is Australia's blueprint for national water reform. The NWI was signed by the Queensland State Government on 25 June 2004.

The NWI builds on the previous Council of Australian Governments (COAG) framework for water reform which was signed by the Australian Government and all state and territory governments in 1994. Since 1994, national reform agreements of this kind have proved important in Australia for guiding the shape of water reform and maintaining the pace of water reform. The 1994 Council of Australian Governments' Water Resource Policy requires all States to look at the costs of managing water and the value that should be placed on it.

The NWI represents the Australian Government's and state and territory governments' shared commitment to water reform in recognition of:

- the continuing national imperative to increase the productivity and efficiency of Australia's water use;
- the need to service rural and urban communities; and
- the need to ensure the health of river and groundwater systems, including by establishing clear pathways to return all systems to environmentally sustainable levels of extraction (NWI 2004, para. 51).

Just under half of the NWI's 70 or so actions involve national actions or other action by governments working together. This reflects not just the emphasis in the Agreement on greater national compatibility in the way Australia measures, plans for, prices, and trades water. It also represents a greater level of cooperation between governments to achieve this end.

The National Water Initiative signifies:

- a commitment to identifying over-allocated water systems, and restoring those systems to sustainable levels
- the expansion of the trade in water, resulting in the more profitable use of water and the more cost-effective and flexible recovery of water to achieve sustainable environmental outcomes
- more confidence for those investing in the water industry due to more secure water access entitlements together with better registry arrangements, monitoring, reporting and accounting of water use, and improved public access to information
- more sophisticated, transparent and comprehensive water planning , and
- more effective and efficient management of water in urban environments, for example through the increased use of recycled water and stormwater.

The NWI assigns a number of responsibilities to the Natural Resource Management Ministerial Council (NRMCC). These include the development of a comprehensive national set of performance indicators for the NWI and overseeing implementation of the NWI, particularly for actions that require national coordination. In December 2004, the Australian Government established the National Water Commission to assist with implementation of the NWI.

The following extract is taken from the Queensland Water Plan (2005). The plan sets out the strategies that the state government is putting into effect to meet its commitment to the NWI and water reform in general.

The Queensland Water Plan 2005-2010 is the Queensland Government's program to meet future water needs for consumption and the environment. It outlines strategies and actions to ensure Queensland's economic growth is underpinned by sustainable water resource management. Significant actions include:

- statutory, catchment-based, water resource plans to provide secure water allocations for farms, businesses and homes
- legally protected environmental flows to ensure the health of our rivers and groundwater systems
- water trading agreements to provide access to water and encourage high value use
- Wild Rivers legislation to protect our pristine rivers
- pricing water to reflect the costs of supply and encourage people to invest in efficient water supply and use
- liaison with local government and the community to develop regional plans to ensure long term water supply, including new infrastructure
- programs and financial incentives to encourage smarter use of our existing supplies through more efficient use, reuse, and recycling of water
- development of regional strategies to set water quality objectives and to better manage pollution sources and rivers
- monitoring and research to underpin sustainable water management.

In addition, the NPI is a drought contingency project necessary to provide emergency water supplies. The project is directed under the *Water Act 2000* and must be completed by a statutory date of 31 December 2008.

The philosophy underlying the NPI is the provision of an interconnected water system linking existing reservoirs and pipelines to new water infrastructure in the region. In the long term, this will result in sustainable water resource management outcomes for the lifetime of the project by establishing a framework for transfer of new and proposed water sources.

The NPI will provide both a primary mechanism to support expected increased demands in urban water consumption as well as the infrastructure required to minimise the impact of extended dry periods. The pipeline has been designed with a dual-flow capability in order to facilitate these objectives for water movement.

The construction of the NPI Stage 1 by late 2008 will provide an integrated water infrastructure network for the south-east Queensland region taking into account:

- a 2050 time horizon
- South East Queensland Regional Plan 2005-2026
- South East Queensland Infrastructure Plan and Program 2005-2026

- South East Queensland Regional Water Supply Strategy
- future growth and regional development nodes.

The NPI creates an opportunity to develop a true regional bulk water supply system in south-east Queensland, which can be owned and operated across the region. This has the potential to provide greater flexibility, increased efficiency and improved reliability for customers and consumers.

4 Amendments to the EIS corridor

In response to issues arising from ongoing consultation with stakeholders and affected landholders, some key changes have been made to the NPI Stage 1 corridor. This section addresses recent modifications to the route and the environmental values and potential impacts associated with the new sites. Amendments to the previously published corridor are shown in Figures 4.1 to 4.7.

4.1 CORRIDOR AMENDMENTS

4.1.1 Morayfield offtake

The route of the Morayfield offtake has been modified along Nairn Road, between Muscat Circuit and Burgundy Drive, Morayfield (see Figure 4.1). This change is necessary to avoid existing drainage infrastructure within the road reserve. The revised route will require clearing of some trees adjacent to a tributary of Sheep Station Creek; however, the clearing required will be minimal. The community along this waterway was previously recorded as RE 12.3.5/12.5.3 although the vegetation is not mapped for the purposes of the Vegetation Management Act. Replanting will occur following construction to replace any vegetation cleared from the site, as appropriate.

4.1.2 South Wararba Creek

The previous route under the transmission line required three crossings of South Wararba Creek and significant disturbance of the riparian zone due to the north-south orientation of the creek near the crossing point. The revised route leaves the existing easement and diverts east to cross the creek once before returning to the easement near Faye Road (see Figure 4.2). This route minimises damage to the unmapped 'endangered' RE 12.3.1 growing along the creek line and avoids unnecessary damage to the bed and banks of the waterway.

4.1.3 Lagoon Creek

Investigations undertaken for detailed design have identified the need to avoid existing electricity infrastructure at the confluence of two power lines. This requires a diversion to the west of the easement into an existing area of regrowth vegetation along Lagoon Creek (see Figure 4.3). This vegetation is unmapped, but forms part of a habitat corridor and would be expected to provide habitat for Wallum Froglet and Koala. Additional surveys are being conducted to determine the ecological values of this location and, if necessary, the construction corridor will be constrained to

minimise damage to the local environment. Revegetation will be undertaken with local provenance species.

4.1.4 Elimbah offtake

The route of the Elimbah offtake has been modified to avoid two 90 degree bends in the pipeline (see Figure 4.4). The new route traverses slightly to the north of a dam on the affected property, which supports some good quality (albeit non-remnant) vegetation. This route change was adopted with a recommendation for a restricted corridor to minimise the damage to this vegetation as appropriate.

4.1.5 Bluegum Street, Landsborough

Where the route previously diverted to the east of the power easement to the south of White Gums Road, the pipeline now traverses directly along the easement and through Bluegum Street, Landsborough (see Figure 4.5). This provides a more direct route and avoids the need to clear high quality remnant vegetation adjacent to Mooloolah Street. This route also avoids the need for disturbance to trees and the all-abilities playground in Pioneer Park. The revised route will require the use of a constrained corridor to minimise the impact on residents and existing services and careful construction and traffic management to minimise the inconvenience. All residents will be consulted prior to construction to fully inform them of the timing and duration of works.

4.1.6 Tunnel Ridge Road diversion

A minor diversion of the route adjacent to Tunnel Ridge Road (see Figure 4.6) is required to create safe working conditions in steep terrain. The change shifts the corridor 5 m further west and will require limited clearing on the edge of mapped ('of concern') vegetation in a council reserve. This diversion occurs in the vicinity of a small waterway and will require a constrained corridor to avoid tree loss and minimise damage to riparian vegetation.

4.1.7 South Mooloolah River

The area around the South Mooloolah River is significantly constrained by residences on Benzara Lane, endangered remnant vegetation and the environmental values of the watercourse itself. The SRWP Alliance completed an internal review of this crossing, which included field investigations and detailed survey. The review concluded that an alternative route was required on the basis of overriding environmental and engineering constraints. As shown in Figure 4.7, the alternative solution is located higher on the eastern bank of the river than originally proposed.

The revised corridor avoids damage to remnant vegetation of high conservation value (RE 12.3.1) and minimises disturbance to the bed and banks of the river. The property at 36 Mooloolah Connection Road, Mooloolah Valley is no longer affected by the corridor.

4.1.8 Water quality facility at Nobels Road

Investigations into potential sites for housing current (a water quality dosing facility) and future operations and maintenance facilities (a balance tank, pump station) for the NPI system have identified a ridge on the west side of Eudlo Road. The siting of this infrastructure is constrained by the need to locate balance tanks at specific elevations to provide head points. While the balance tank and pump station will not be constructed as part of the Stage 1 works, the water quality facility will be required for Stage 1, and it is considered appropriate to locate all facilities at one site. As such, early planning has commenced to ensure the overall NPI can function as required when complete. The siting of the facility in an uncleared road reserve also avoids the need for use of private property, such as the adjacent land owned by Mr Clancy. This private property was originally included as being affected in the EIS corridor and will no longer be required by the NPI Stage 1 project.

Further field investigations are required to determine the ecological values of the proposed area and the level of mitigation necessary to manage impacts. A final determination will require assessment of all relevant land, environmental, engineering and construction elements.

4.2 REVISION H CORRIDOR—ENVIRONMENTAL VALUES

Additional work has been undertaken by qualified flora and fauna consultants to ensure that the environmental values of all new sites are understood and appropriately managed.

Table 4.1 Environmental values of new sites

Site	RE type (status)	Environmental values
South Wararba Creek	Unmapped 12.3.1 (endangered); 12.3.11 (of concern)	Restrict clearing to a minimum, especially on west side of creek.
Lagoon Creek	Unmapped 12.3.6 (not of concern); 12.3.11 (of concern) mixed with 12.5.3 endangered)	Also habitat for Wallum Froglet (<i>Crinia tinnula</i>) and potential for Wallum Sedge Frog (<i>Litoria olongburensis</i>). Restrict clearing widths to a minimum outside power easement.
Elimbah offtake	Non-remnant 12.3.5 on private property; RE 12.8.20 near Elimbah Round Mountain Reservoir	Minimise clearing and implement appropriate vegetation management in accordance with mitigation measures in EIS and EMP.
Tunnel Ridge Road diversion (Rose Road)	RE 12.9-10.14/12.9-10.17 Unmapped RE 12.3.1/12.3.2 in gully	Minimise clearing and implement appropriate vegetation management in accordance with mitigation measures in EIS and EMP.
South of Nobels Road	RE 12.9-10.14	Site is located within a regional wildlife corridor. No access for physical survey obtained to date. Physical survey to be completed prior to finalising design.

Figure 4.1
Alignment change—Morayfield offtake

Figure 4.2
Alignment change—South Wararba Creek

Figure 4.3
Alignment change—Lagoon Creek

Figure 4.4
Alignment change—Elimbah offtake

Figure 4.5
Alignment change—Bluegum Street

Figure 4.6
Alignment change—Tunnel Ridge Road

Figure 4.7
Alignment change—South Mooloolah River

5 References

Aquagen 2007, *Water Treatment Process*, Aquagen Water and Renewable Energy, Queensland, viewed 6 August 2007 <http://www.aquagen.qld.gov.au/>.

National Water Initiative, www.nwc.gov.au/NWI/index.cfm#overview

Office of Urban Management 2006, *South East Queensland Infrastructure Plan and Program 2006-2026*, Department of Local Government, Planning, Sport and Recreation, Queensland.

Queensland Government 2005, *Queensland Water Plan 2005-2010*, Department of Natural Resources and Mines, Brisbane, www.nrm.qld.gov.au/water/queensland_water_plan.html
www.nrm.qld.gov.au/water/reform/index.html

Southern Regional Water Pipeline Alliance 2007, *Northern Pipeline Interconnector Project Environmental Impact Statement*, Southern Regional Water Pipeline Co, Brisbane.

Appendix A

LIST OF CONTRIBUTORS

Appendix A
List of contributors

Mark Breitfuss	Corridor Manager
Kate Rigg	Environmental Scientist and Author
Michele Mills	Environmental Scientist and Author
David Elton	Construction Environment Manager
Kevin McAlpine	Construction Manager
Anna West	Design Technical Leader
Erin Cini	Pipeline Engineer
Nat Dixon	Community Liaison
Colin Townes	Land Liaison
Ruth McKeown	GIS Specialist