

Coordinator-General's Report

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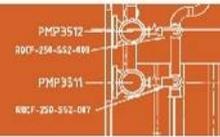
ENVIRONMENTAL IMPACT STATEMENT

For the proposed

Northern Pipeline Interconnector Stage 1 Landers Shute to Morayfield

Under Part (4) of the *Queensland State Development and Public Works
Organisation Act 1971*

Released: 10 October 2007



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Coordinator-General's Report - synopsis

The Northern Pipeline Interconnector (NPI) is an emergency drought measure to link existing supplies of water on the Sunshine Coast and enable the transfer of a target 65 megalitres per day (ML/day) of bulk water to the greater Brisbane area by 31 December 2008, as required under the *Water Regulations 2002* amendment introduced in 2006.

The NPI is part of the South East Queensland Water Grid, which is under development to transfer water from areas with surplus to those in need. As such, it is being designed with a capacity to accommodate future volumes of water from alternative sources of water and with a reverse flow capability.

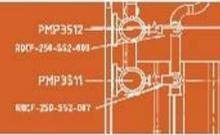
The NPI will be developed in stages. The NPI - Stage 1 Project that is the subject of this Report, is approximately 47km in length and extends from the Landers Shute Water Treatment Plant (WTP) main supply line near Eudlo to the Morayfield water reservoirs, where it will link with the existing Caboolture and Brisbane water supply network. The balance of the NPI works (Stage 2) are generally between Landers Shute and the existing Noosa WTP.

The proponent for the NPI is the Southern Regional Water Pipeline Company Pty Ltd (SRWP Co), a wholly government-owned company, incorporated under the *Corporations Act 2001*.

On 4 April 2007, the Northern Pipeline Inter Connector – Stage 1 (Landers Shute water treatment plant to Morayfield reservoirs) (“the Project”) was declared to be a ‘significant project’ for which an Environmental Impact Statement (EIS) is required, under s.26(1)(a) of the *State Development and Public Works Organisation Act 1971* (SDPWO Act).

On 19 April 2007, the Australian Government Minister for the Environment and Water Resources determined that the Project is not a ‘controlled action’ under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This decision was confirmed on 28 June 2007, following a formal process to reconsider the original decision under the EPBC Act, as a consequence of submissions from community conservation organisations. As such, the Project does not require assessment and approval under Australian Government legislation.

The EIS was released for public review and comment on 30 June 2007 and a Supplementary Report to the EIS (SEIS) prepared on 31 August 2007 to address matters raised in submissions on the EIS. This Report has been prepared pursuant to s.35 of the SDPWO Act to evaluate the environmental effects of the Project.



In evaluating the environmental effects, I have considered: the EIS, SEIS and detailed construction Environmental Management Plans (EMPs) prepared by the Proponent; public submissions received on the EIS; comments on the EIS and other advice provided by state and local government authorities (Advisory Agencies); and other relevant information.

I have determined that on balance there is a significant positive net benefit to the community from the development of the Project and that it can proceed, subject to a number of specific recommendations (detailed in Appendix 1 of this Report) to manage potential impacts associated with the following matters: current land use; vegetation clearing; waterway crossings; soil erosion; dust; noise and vibration; traffic and land access; waste water disposal; and community consultation.

I note that the Project will only transfer water that is surplus to current demand from existing entitlements held by Aquagen under an interim Resource Operations Licence for the Baroon Pocket Dam and that all current environmental flow objectives under this licence will be met. I am therefore satisfied that there will be no increase in impacts to the downstream environment in the Mary River catchment as a result of the Project.

I further note that the potential impacts associated with extraction of water from the Mary River catchment via the Traveston Crossing Dam Stage 1 and any additional water not included in existing allocations necessary for the NPI Stage 2 are being assessed as part of these project's EISs.

.....
Colin Jensen
Coordinator-General
Date: 10 October 2007

1.0 Introduction

This Report has been prepared pursuant to s.35 of the Queensland *State Development and Public Works Organisation Act 1971* (SDPWO Act) to evaluate the environmental effects of the Northern Pipeline Interconnector (NPI) Stage 1, which links the main supply line from the Landers Shute Water Treatment Plant (WTP) near Eudlo to the Morayfield water reservoirs (“the Project”).

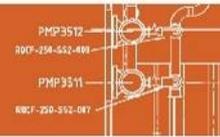
The Project was declared to be ‘significant project’, for which an Environmental Impact Statement (EIS) is required, under s.26 of the SDPWO Act on 4 April 2007.

On 14 March 2007, the Proponent referred the Project to the Australian Government Minister for the Environment and Water Resources under the provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Referral No 2007/3359). On 19 April 2007, the Minister determined that the Project does not constitute a ‘controlled action’ pursuant to s.75 of EPBC Act.

However, on 21 May 2007, the Department of the Environment and Water Resources (DEW) initiated a formal process to re-consider this decision under s.87 of the EPBC Act, following submissions from two community conservation groups. These submissions claimed that the original decision did not consider the impact of the extraction of water from the Mary River catchment on matters of national environmental significance, as defined under the EPBC Act.

The Proponent, the former Department of Infrastructure (DoI) and the Department of Natural Resources and Water (NRW) provided formal responses to DEW about the Project and the water resource planning process. The Minister for the Environment and Water Resources subsequently decided on 28 June 2007 to confirm the original decision that the Project is not a ‘controlled action’. Consequently, the Project does not require environmental impact assessment and approval under Australian Government legislation.

For the purpose of this Report, the EIS comprises the following documents: “Northern Pipeline Interconnector Project, Environmental Impact Statement, June 2007” and “Northern Pipeline Interconnector Project, Supplementary Report to the Environmental Impact Statement, August 2007”. Both documents were prepared by the Proponent.



In making my evaluation, I have drawn on the information contained in the EIS and in detailed construction Environmental Management Plans (EMP) prepared by the Proponent to address specific environmental issues associated with each element of the Project. In addition, I have considered all properly made submissions on the EIS; comments on the Supplementary EIS (SEIS) from Advisory Agencies; matters raised in correspondence with the Proponent, state government agencies and government-owned corporations, local government authorities, legal advice and other material relevant to the Project.

The objective of this Report is to summarise the key issues associated with the impact assessment of the Project on the existing physical, social and economic environments at the local, regional, state and national levels. It is not intended to record all the matters that were addressed during the EIS process. The Report focuses on those key issues that were identified, some of which require specific recommendations for the Project to proceed.

2.0 Project Description

2.1 The Proponent

The Proponent for the Project is the Southern Regional Water Pipeline Company Pty Ltd (SRWP Co), a wholly government-owned company, incorporated under the *Corporations Act 2001*.

The Proponent was established to build the Southern Regional Water Pipeline and has since been tasked with building other pipeline projects in South East Queensland (SEQ) that form part of the SEQ Water Grid.

2.2 The Project

2.2.1 Overview

The draft South East Queensland Regional Water Supply Strategy (SEQRWSS) identified the need for a SEQ Water Grid that will allow water to be transferred from areas with surplus to those in need. The SEQ Water Grid includes the construction and operation of the NPI.

The NPI will ultimately comprise approximately 100km of pipeline and is being developed in several stages to link existing water supplies on the Sunshine Coast. The NPI will also be:

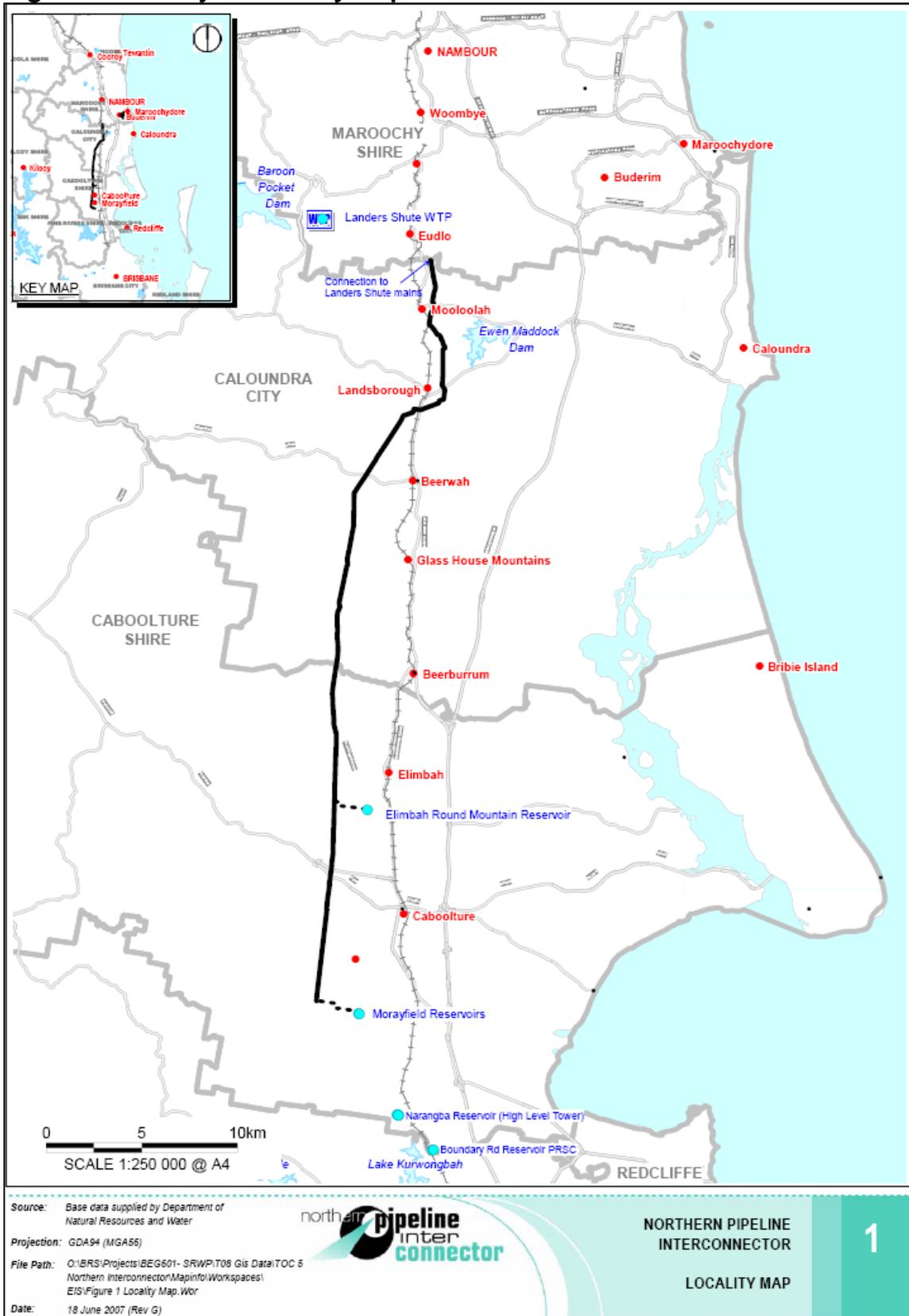
- Designed with a future reverse flow capability that will enable water to be transferred to the Sunshine Coast from elsewhere on the SEQ Water Grid.
- Constructed to accommodate future water sources in the Sunshine Coast region.

Whilst the NPI is part of the proposed SEQ Water Grid, it is capable of being developed as a stand alone water pipeline to transfer up to 65 megalitres/day (ML/d) of potable water from the Sunshine Coast to Brisbane.

The NPI - Stage 1 Project that is the subject of this Report, is approximately 47km in length and extends from the Landers Shute WTP main supply line near Eudlo to the Morayfield water reservoirs, where it will link with the existing Caboolture and Brisbane water supply network. A map showing the proposed Project is provided as Figure 1.

The balance of the NPI works (Stage 2) are generally between Landers Shute and the existing Noosa WTP and are not considered further in this Report.

Figure 1 Project Locality Map



The NPI will be available to accept water from alternative supplies, such as the proposed Traveston Crossing Dam, although any future alternate supplies would need to undergo legislatively required environmental assessment and approval processes prior to connection to the NPI.

The NPI Stage 1 (the Project that is the subject of this Report), will utilise unused water from existing allocations, under the interim Resource Operations Licence for the Baroon Pocket Water Supply Scheme. The water will be treated at the Landers Shute WTP near Eudlo on the Sunshine Coast before being transferred to the Morayfield water reservoirs, near Caboolture. This does not involve any changes to the existing water allocations from Baroon Pocket Dam or other sources within the Mary River catchment.

2.2.2 Water Pipeline

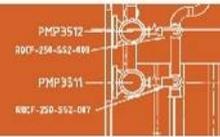
The pipeline traverses Caboolture and Caloundra Shires and comprises two off-takes: one at Elimbah; and one at Morayfield to link the main pipeline with existing water reservoirs. To minimise impacts on unencumbered private property owners, the pipeline route is aligned predominately within existing public utility power easements and public open spaces.

The pipeline will be buried with a cover of between 900 to 1200 mm for the bulk of its alignment and consists of pipe ranging from 1290 mm (main line) to 750 mm (off-takes) in diameter. It is expected that the pipe will be supplied in 12 m lengths. The pipeline will cross up to 15 freshwater creeks, three freshwater rivers, and road and rail assets of the state and local governments. The construction activity is entirely outside of the Coastal Management District and above the highest astronomical tide limit.

2.2.3 Pump Stations

The emergency requirement of the pipeline is to allow the transfer of up to 65 ML/d from the Sunshine Coast to Brisbane. The hydraulic grade line will allow water to gravitate to the existing Caboolture system without requiring pumps.

The NPI is being designed with a potential future reverse flow capability to allow water from Brisbane to be delivered to the Sunshine Coast. In this mode, the Stage 1 pipeline would require the construction and operation of at least one pump station, the impacts of which have been assessed as part of the EIS for the Project.



2.3 Project Rationale

The NPI will provide a direct response to the current drought emergency in South East Queensland as well as long-term primary mechanism to support expected increased demands in urban water consumption. The NPI is an essential element of the SEQ Water Grid that will enable the transfer of water from areas that have plentiful supplies to those that are experiencing water shortages. The SEQ Water Grid is part of the Queensland Government's \$9 billion commitment to substantially up-grade water supplies to meet the needs of an expanding urban population in the region, as well as to 'drought-proof' the community through a range of initiatives. The primary objectives of the SEQ Water Grid are to:

- Ensure that Brisbane and surrounding metropolitan areas have continuity of essential supplies while the current drought continues.
- Establish supply networks that ensure the reciprocal security of supply in the event that a water supply shortage occurred on the Sunshine Coast.
- Integrate the long-term delivery of water from potential future sources, including the proposed Traveston Crossing Dam, should they be approved.

2.4 Alternatives

2.4.1 Project Alternatives

The Proponent considered a number of alternatives in Section 1.4 of the EIS. These included a range of water demand management strategies such as: rainwater tanks and water efficiency measures; and water supply diversification and alternates such as: recycled water; desalination; stormwater harvesting; increased groundwater harvesting; and new dams.

As previously referred to in Section 2.2.1 of this Report, the draft SEQRWSS identified the SEQ Water Grid as a key element in improving the reliability of water supplies across the SEQ region. This conclusion was reached after research and investigation of demand versus supply options and consultation with key stakeholders. The NPI is an essential element of the larger SEQ Water Grid that will enable the transfer of water from areas that have plentiful supplies to those that are experiencing water shortages.

2.4.2 Route Alternatives

Alternative pipeline routes were also considered in the optimisation of the pipeline alignment. In late 2006, NRW, commissioned two reports to develop business cases for pipelines that could form part of the SEQRWSS. One report by John Wilson & Partners (JWP 2006) investigated options and recommended a preferred route for the NPI. The second report by Kellogg Brown & Root Pty Ltd (KBR 2006) also investigated options and recommended a preferred route for the Northern Regional Water Pipeline to bring water from the proposed Traveston Crossing Dam to the North Pine Dam.

It became apparent during these studies that the corridor identified for the Northern Regional Water Pipeline was also suitable for the emergency NPI route between the Sunshine Coast and Brisbane. This route mainly followed power line easements and was subsequently adopted in preference to an alternative route for the NPI proposed by other consultants at the time (JWP 2006). The adoption followed a process of risk management/assessment, an independent land access study by Land Access Australia (2006) and a workshop of the Queensland Water Commission and DoI in late 2006.

Further refinement of the preferred pipeline alignment has occurred in order to minimise its effects in consideration of a range of social and environmental objectives. The Proponent has attempted, where practicable, to minimise environmental impacts by aligning a majority of the pipeline in existing easements and road reserves.

3.0 Impact Assessment Process

3.1 Declaration of a Significant Project

The Proponent lodged an Initial Advice Statement (IAS) on 2 April 2007 requesting that the Project be considered for declaration as a significant project under part 4 of the SDPWO Act. After consideration of the matters under s.27 of the Act, the Project was declared, on 4 April 2007, to be a 'significant project for which an EIS is required', pursuant to s.26(1)(a) of the SDPWO Act.

The declaration was publicly notified in the Queensland Government Gazette on 13 April 2007 (Gazette No. 89) and on the DoI website, at:

http://www.infrastructure.qld.gov.au/major_projects/northern_pipeline.shtm.

3.2 Terms of Reference for EIS

Draft Terms of Reference (ToR) for the EIS were prepared and advertised for public comment on 16 April 2007. Comments were accepted until the close of business (cob) on 14 May 2007. The final Terms of Reference for the EIS were approved on 28 June 2007, following the consideration of public and Advisory Agency comments. A total of 27 submissions on the draft ToR were received, including: 16 from Advisory Agencies; 7 from local stakeholders and community groups; and 4 from private individuals. Comments on the draft ToR were received from the following:

Advisory Agencies

- Caboolture Shire Council
- Caloqua – Caloundra City Council
- Department of Communities
- Department of Emergency Services
- Department of Main Roads
- Department of Mines and Energy
- Department of Natural Resources and Water
- Department of Premier and Cabinet
- Department of Primary Industries and Fisheries
- Department of State Development
- Energex
- Environmental Protection Agency
- PowerLink
- Queensland Police
- Queensland Rail
- Queensland Treasury

Stakeholder/Community Groups

- Conondale Range Committee
- Lower Obi Obi Water Advisory Committee
- Manduka Community Settlement Cooperative
- Mary River Catchment Coordination Committee
- Save The Mary River Coordinating Group
- Save the Valleys, Conondale
- Sunshine Coast Environment Council Inc.

Private Individuals

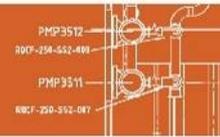
- Helga Hill
- Lin Fairlie
- Lyndon DeVantier
- Victor Hill

3.4 Public Review of the EIS

Once the Proponent had prepared an EIS to the satisfaction of the Coordinator-General (CG) it was approved for public release. The EIS was advertised on Saturday 30 June 2007 in the Courier Mail and the Sunshine Coast Daily newspapers, inviting submissions from the public until cob on Monday 30 July 2007. The EIS was also made available on the Proponent's web site and the printed version of the EIS could be purchased for \$150 and the CD-ROM edition for \$10.00 from the Proponent. The Executive Summary of the EIS was made available on the DoI's web site.

The EIS was publicly displayed at:

- Beerwah Library
- Brisbane City Council Chambers
- Caboolture Central Library
- Caboolture Shire Council Chambers
- Caloundra City Council Chambers
- Maroochydore Shire Council Chambers
- State Library of Queensland
- State Development Centres, Caboolture and Maroochydore



Following a 20 business-day public review of the EIS a total of 14 submissions were received from the Advisory Agencies as follows:

- Brisbane City Council*
- Caloundra City Council
- Department of Communities
- Department of Emergency Services*
- Department of Local Government, Planning, Sport and Recreation
- Department of Natural Resources and Water
- Department of Main Roads
- Department of Mines and Energy*
- Department of State Development*
- Department of Primary Industries and Fisheries
- Environmental Protection Agency
- Maroochy Shire Council
- Queensland Police Service
- Queensland Treasury*

* Note: these Agencies were satisfied that the EIS adequately addressed their interests.

Twelve submissions were received from interested community and other stakeholder groups as follows:

- Burnett Mary Regional Group
- Conondale Range Committee
- Independent Trawler Association Inc.
- Lake Macdonald Catchment Care Group
- Manduka Community Settlement Cooperative
- Mary River Catchment Coordinating Committee
- Queensland Conservation Council
- Save the Mary River Coordinating Group
- Save the Valleys, Conondale
- Sunshine Coast Environmental Council Inc.
- Tiaro and District Landcare Group Inc.
- Wildlife Preservation Society of Queensland

Seven submissions were received from members of the public as follows:

- Andrew Usher
- Dan Ball
- Dave Milligan
- David Parks
- Gabrielle Luft and Mark Taylor
- Lyndon DeVantier
- Nick Clancy

The substantive issues raised in these submissions (above) were as follows:

- Impacts of crossing waterways on water quality and riparian vegetation
- Impacts on flora and fauna in the construction corridor
- Access restrictions during construction
- Impacts of construction and associated traffic on road pavement, traffic congestion and road safety
- Route determination and alternatives
- Water allocation and downstream impacts on Mary River catchment
- Project costs, benefits and alternatives

All responses to the EIS were forwarded to the Proponent for consideration. Following discussions with the Proponent's representatives and technical consultants it was determined that the preparation of a SEIS was necessary to address issues raised in the submissions on the EIS.

3.5 Review of EIS Supplementary Report

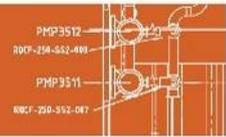
The Proponent provided additional information or clarification of specific matters in a document entitled: "Northern Pipeline Interconnector Project, Supplementary Report to the Environmental Impact Statement", which was lodged on 30 August 2007. The SEIS included copies of the submissions to the EIS with a cross reference to the relevant section in the Report against each issue raised in the submission.

On 31 August 2007, the SEIS was forwarded to Advisory Agencies, to assess if the SEIS addressed the issues raised in their submissions and requesting their specific comments or advice for consideration in preparing this Report. Comments were requested by 10 September 2007. Agencies' responses to the SEIS were forwarded to the Proponent for further clarification as required.

The SEIS was also forwarded to other respondents to the EIS for their information and was made publicly available on the DoI's and the Proponent's web sites.

The following Advisory Agencies advised that they were satisfied that their interests had been adequately addressed:

- Department of Communities
- Department of Mines and Energy
- Department of Primary Industries and Fisheries
- Department of State Development
- Environmental Protection Agency
- Queensland Police Service



The following Agencies provided advice on: the adequacy of the SEIS in addressing matters raised in their submissions on the EIS; and/or the Project or EIS generally for consideration in preparing this Report:

- Department of Natural Resources and Water
- Department of Main Roads
- Caloundra City Council

4.0 Evaluation of Environmental Effects

4.1 Introduction

The SDPWO Act defines 'environment' to include:

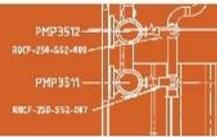
- (a) ecosystems and their constituent parts, including people and communities; and
- (b) all natural and physical resources; and
- (c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and
- (d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

'Environmental effects' means "the effects of development on the environment, whether beneficial or detrimental". These effects can be direct or indirect, of short, medium or long-term duration and cause local or regional impacts.

The NPI is a water supply emergency measure set down in the *Water Regulation 2002*, as amended under *Water Amendment Regulation (No.6) 2006*. The Water Regulation requires the NPI to be completed by 31 December 2008. Further, a regulation under s.100 and s.109 of the SDPWO Act was made in July 2007 authorising the Proponent to undertake works for the NPI.

Schedule 9 of the *Integrated Planning Act 1997* (IPA) sets out the criteria for development that is exempt from assessment against a planning scheme. In particular, Table 5 in Schedule 9 refers to "all aspects of development a person is directed to carry out under a notice, order or direction made under a State law". As the NPI is a measure directed under the Water Regulation and the NPI works were made "authorised works" under the *State Development and Public Works Organisation Regulation Amendment Regulation (No5) 2007*, the Project is exempt from assessment against planning scheme assessment. That is, there is no requirement for an application for a development approval for a material change of use of premises.

The Project was declared a 'significant project', for which an EIS is required, under s.26(1)(a) of the SDPWO Act on 4 April 2007. As a result, I am required under s.35(3) of the SDPWO Act to prepare a report evaluating the EIS. In evaluating the EIS, I may under s.35(4)



- (a) evaluate the environmental effects of the project and any other related matters; and
- (b) state conditions under section 39, 45, 47C, 49 or 49B; and
- (c) make recommendations under section 43 or 52; and
- (d) if division 8 applies to the project – impose, under that division, conditions for the undertaking of the project.

My ability to state conditions under s.39 of the SDPWO Act does not apply as the Project is exempt from development approval for a material change of use, and/or is not subject to other development approvals that require impact assessment. Similarly, ss. 45, 47C, 49 and 49B of the SDPWO Act are not relevant as the Project does not involve a proposed mining lease under the *Mineral Resources Act 1989*, or a proposed petroleum activity under the *Petroleum and Gas (Production and Safety) Act 2004*. Further, Division 8 of Part 4 of the SDPWO Act does not apply as the Project would require a material change of use, if it were not exempt development as a consequence of the directions made under the Water Regulation and SDPWO Regulation. Finally, ss. 43 and 52 are not relevant as the Project is not intended for designation as community infrastructure under IPA, nor does it require approval under an act other than the IPA or Chapter 4A of the *Environmental Protection Act 1994* that requires the preparation of an EIS or similar statement to address environmental effects.

In evaluating the environmental effects of the Project, I have made findings on the major environmental effects identified during the EIS process. In order to be satisfied that unavoidable adverse environmental effects can be adequately managed, I have made specific recommendations for other Agencies to consider in granting the necessary approvals, licences and permits for the Project development to proceed.

In making these recommendations, I have considered the following:

- Information provided in the EIS, the SEIS and detailed Environmental Management Plans prepared by the Proponent.
- Comments in formal submissions on the EIS.
- Comments from Advisory Agencies on the SEIS.
- Specific advice sought from Agencies.

The Proponent presented a List of Commitments as Appendix C in the EIS. These commitments include actions beyond those required to meet statutory approvals and their implementation would enhance the mitigation of potential adverse environmental impacts of the Project. Further, the Proponent has prepared detailed construction EMPs to address specific environmental issues identified during the EIS process that are associated with each element of the Project. I have considered these EIS commitments and EMPs. Where necessary, I have extended particular commitments or component of an EMP and recommend that the Proponent implements specific actions, in accordance with best practice environmental management.



Table 1 below, summarises the key environmental issues, grouped into 11 categories, which I have addressed in detail in the following sections of this Report. The Table also identifies where these matters were raised in submissions on the EIS from Advisory Agencies and other stakeholders and private individuals.



Table 1. Summary of Key Environmental Issues

	Land Use	Soil Erosion	Vegetation Clearing	Waterway Crossings	Air Quality	Noise & Vibration	Traffic	Cultural Heritage	Waste	Social & Economic	Water Resources
Advisory Agencies											
Dept of Mines & Energy*											
Dept. of Emergency Services*											
Dept. of State Development *											
Maroochy Shire Council											✓
Queensland Police Service							✓				
Caloundra City Council	✓		✓	✓			✓	✓	✓	✓	✓
Dept. of Communities						✓	✓			✓	
Dept. of Local Govt, Sport & Recreation	✓		✓								
Dept. of Natural Resources & Water		✓									✓
Environmental Protection Agency			✓	✓							✓
Dept. of Primary Industries & Fisheries	✓		✓	✓							
Dept. of Main Roads			✓				✓				
Brisbane City Council *											
Qld. Treasury *											
Community Groups											
Save the Valleys, Conondale				✓							
Tiaro & District Landcare Group			✓	✓							
Independent Trawler Association											✓
Save the Mary River Coordinating Group	✓		✓							✓	✓
Manduka Community Settlement Coop.											
Conondale Range Cttee.			✓								✓
Queensland Conservation Council			✓		✓						✓
Mary River Catchment Coordinating Cttee.			✓							✓	✓
Burnett Mary Regional Group											✓
The Wildlife Preservation Society of Qld.	✓		✓								
Sunshine Coast Environment Council	✓		✓							✓	
Lake Macdonald Catchment Care Group											✓
Private Individuals											
Andrew Usher	✓						✓			✓	
Dave Milligan	✓									✓	
Lyndon DeVantier			✓	✓						✓	✓
Nick Clancy	✓									✓	
Gabrielle Luft / Mark Taylor										✓	
David Parkes			✓								
Dan Ball	✓		✓								

* These Agencies were satisfied that the EIS adequately addressed their interests

4.2 Land Use

EIS Findings and/or Key Points

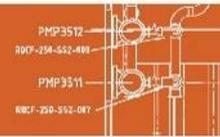
The EIS identified that that over 60% of the Project area is on private freehold land. Other tenure types include leasehold, state-owned lands and roads. The mid sections of the pipeline corridor around Elimbah and Glass House Mountains intersect existing areas of primary production, principally pineapple and macadamia nut growers. There are no significant industrial activities, apart from the forestry and quarrying activities in the Glass House Mountains area. There are residential subdivisions in close proximity to the corridor in the area to the north and north-west of Caboolture and to the south of Landsborough. The corridor passes through the Glass House Mountains National Park (Coochin Hills section) and the Beerburrum Forest Reserve, however in these areas the route is within cleared power line easements. Permits under the *Forestry Act 1959* and *Nature Conservation Act 1992* will need to be obtained to enable work to be undertaken in these areas.

The construction impacts of the Project on land use are mostly localised and temporary in nature and may include road closures, temporary disruption to structures, such as fences, or access restrictions. Where such impacts to residents cannot be mitigated the Proponent has committed to consulting with landowners to find a suitable solution prior to the commencement of work in that area, which may include, for example, the temporary relocation of affected residents during the period of construction near their residence.

A co-use agreement has been developed with Energex for where the pipeline is to be located within its power line easements. It will be necessary to establish easements over the other sections of the pipeline that are outside existing easements. This may restrict some land use activities within these easements to maintain the integrity of the pipeline.

The EIS identified the potential for temporary impacts on good quality agricultural land through erosion and site disruption to agronomic systems. Once pipeline construction activities are complete, agricultural activities can resume along the corridor provided the activity does not impact on the integrity of the pipeline. Restrictions, such as no planting of deep rooted agricultural crops or vegetation over the pipeline, will apply. Financial compensation will be paid to individual landholders affected by such restrictions or encumbered by an easement.

Several issues were raised in submissions received on the EIS from Advisory Agencies on the issue of land use. The Caloundra City Council expressed the desire to be consulted should the final pipeline route affect Pioneer Park, an all-abilities playground near Landsborough. Similarly, the Department of Mines and Energy requested that a copy of the co-use agreement for the easements with Energex be provided.



The Department of Primary Industries and Fisheries drew attention to the potential commercial impacts on pineapple and macadamia growers, whose properties and/or commercial activities would be affected by the pipeline construction. Compensation for matters affecting land holdings is claimable in accordance with the land acquisition process being undertaken for the Project.

Acid sulphate soils (ASS), which include possible acid sulphate soils, occur naturally within SEQ. If ASS are disturbed and exposed during construction activities they may produce sulphuric acid, which could enter waterways and cause adverse impacts on aquatic plants and animals. Due to the elevation of the pipeline corridor (not less than 5m above Australian Height Datum (AHD)), it is unlikely that ASS will be encountered during construction of the pipeline in the proposed corridor. However, the Proponent has committed to manage any ASS encountered in accordance with the Management Principles outlined in NRW's "Soil Management Guidelines (2002)".

There is one site on the Environmental Protection Agency's (EPA's) Environmental Management Register for contaminated land within the proposed pipeline route. This is land owned by Queensland Rail that accommodates an abandoned railway line, adjacent to the D'Aguilar Highway. This site has been listed on the Environmental Management Register due to historic arsenic weed spraying on the railway track. I note that construction activities at this site will be bored at depth and, due to the likely confinement of any contaminated soil to the top 500mm of the track bed, is unlikely to disturb contaminated soil.

Conclusions

I find that the restriction on use of some good quality agricultural land would be an unavoidable consequence of the development of the Project and that this loss would be minimised through the location of the majority of the pipeline in existing Energex power line easements and the payment of financial compensation to affected property owners for the disruption to their use and enjoyment of land. I also find that in accordance with "State Planning Policy 1/92: Development and Conservation of Agricultural Land" there is an overriding need for the Project in terms of the benefit to the community of a secure water supply.

To ensure impacts on affected landowners, including primary producers, are minimised, I make the following recommendation:

Recommendation 1

The Proponent should consult with landowners directly affected by construction activities throughout the planning and construction phases of the Project. Issues for consultation should include: likely and potential impacts to landowners; minimisation or mitigation strategies; timeframes for construction activities; access restrictions; and rehabilitation or reinstatement of impacted land and infrastructure, or appropriate compensation.

4.3 Soil Erosion

EIS Findings and/or Key Points

There is potential for soil erosion and sediment releases to watercourses along the construction route during the construction and rehabilitation stages due to the removal of vegetation, excavation and general disturbance associated with construction activities. This could occur until rehabilitation measures stabilise the affected soils. Sediment releases to watercourses can result in adverse impacts to aquatic flora and fauna as well as impacts on downstream water users due to increases in turbidity. Intense rainfall events on areas of disturbance also have the potential to cause significant sediment releases.

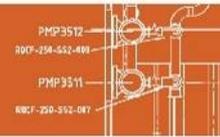
I note that the Proponent has committed to putting in place proper and effective sediment and erosion control measures, minimising the area of disturbance and initiating revegetation of cleared areas as soon as possible after construction has been completed.

Conclusions

I find that the construction of the pipeline and associated activities has the potential to cause soil erosion and sediment release to water courses. To ensure that the potential impacts from erosion or sediment releases do not cause environmental harm, I make the following recommendation:

Recommendation 2

The Proponent should ensure that all land disturbance construction activities comply with the requirements set out in the “Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites (The Institution of Engineers, Australia (Qld), 1996, or later version)”.



4.4 Vegetation Clearing

EIS Findings and/or Key Points

The EIS identified 21 Regional Ecosystem types along the length of the pipeline route. Of these, 7 are classified as “not of concern”; 10 are classified as “of concern” and 4 are “endangered”. Riparian vegetation is an important feature of the vegetation along the route. These narrow corridors provide sufficient vegetation to act as corridors between intact habitat patches.

The major impacts on vegetation and ecological communities result from the removal of vegetation. This can cause loss or fragmentation of habitat resulting in reduced areas of suitable habitat for plant species and reductions in food resources, suitable shelter or breeding sites for fauna. There is also the potential loss of significant species and regional ecosystems.

The Proponent has developed a Vegetation Management Plan that outlines the strategies to minimise the impacts on vegetation, regional ecosystems and areas of environmental significance. This includes the development of Sensitive Area Plans for specific environmentally sensitive areas and for locations where the presence of listed threatened species is confirmed and is designated as ‘no go zones’. These plans determine the best strategy in terms of exclusion zones, relocation of individual plants and seed collection for propagation, as appropriate. Under the Vegetation Management Plan, there is a requirement for the construction corridor to be constrained to 15-20m when working in areas of endangered flora, and where practicable within other sensitive areas.

A number of submissions on the EIS provided details of additional regional ecosystems and areas of environmental significance. I am satisfied that the ‘Green Tag’ system, referred to in the Vegetation Management Plan, of inspecting the route prior to construction for environmentally sensitive areas, will identify these regional ecosystems and areas of environmental significance. This identification will allow for route refinement that will avoid or minimise impacts. The ‘Green Tag’ system will also assist with rehabilitation to ensure that where regional ecosystems and areas of environmental significance are disturbed they are appropriately reinstated.

The Weeds and Disease Management Plan developed by the Proponent describes the process for the management and control of pestiferous plant species and disease during and after the construction of the Project. This involves:

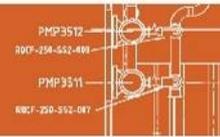
- working cooperatively with Project stakeholders;
- ensuring the most appropriate measures are implemented to mitigate potential negative impacts of infestation by pest plant species and animal and plant diseases;
- ensuring that Project activities are conducted in accordance with the requirements of the *Land Protection (Pest and Stock Route Management) Act 2002*, the *Land Protection (Pest and Stock Route Management) Regulation 2003*, and other relevant legislation; and
- defining the roles, responsibilities and the tasks to be performed, in regard to the control and monitoring of weed infestations.

I note that the Project area includes streams and ecological systems that may provide habitat features that are suitable for a number of species of significance and the establishment of a linear construction corridor may temporarily impact on habitat availability and breeding populations where these are present. Given that suitable habitat in the Project area typically occurs as long narrow strips along streams, the use of waterway crossing methods that minimise disturbance to stream beds, banks and riparian vegetation, such as micro-tunnelling, must be considered.

The Fauna Management Plan has measures designed to mitigate the potential impacts of construction activity on fauna within the Project area, and to ensure that works are carried out in accordance with the requirements of the EPBC Act, *Nature Conservation Act 1992* and *Environmental Protection Act 1994* and other relevant legislation. I note that the 'Green Tag' system will assist to minimise construction impacts to fauna by identifying susceptible fauna prior to construction and taking action to relocate the fauna. The Fauna Management Plan has several mitigation measures, such as exclusion fencing, trench plugs and ramps, shade cloth over open trenches to protect trapped animals, and fauna monitors to remove animals trapped in trenches.

Conclusions

I find that the construction of the Project has the potential to impact regional ecosystems and sensitive areas. In order to reduce the impacts on vegetation and ecosystems, it is essential to have a comprehensive management plan that minimises vegetation clearing and disturbance. I accept that the proposed Vegetation Management Plan will minimise vegetation clearing and disturbance and develop a monitoring and inspection schedule to ensure that the mitigation plans are effective.



I find that the construction of the Project would result in the clearing of remnant native vegetation, including relatively small areas of vegetation communities of conservation significance. I note that the Proponent has committed in the EIS to minimising the disturbance of these vegetation communities through the design and location of the pipeline predominately in an existing power line easement. In addition, the implementation of the Weeds and Disease Management Plan and the Vegetation Management Plan should minimise the impacts to flora while the Rehabilitation and Revegetation Plan will address the clearing of remnant native vegetation, including small areas of vegetation communities of conservation significance.

I find that the construction of the Project has the potential to cause injuries to fauna during all stages of Project construction. I accept that the proposed Vegetation Management Plan and the Fauna Management Plan are the appropriate mechanisms for addressing any such potential injuries.

I note the Proponent's commitment to ensuring that the construction activities will not adversely affect species of national or state significance.

In order to minimise impacts to sensitive regional ecosystems and to manage unavoidable impacts associated with clearing vegetation, I recommend the following:

Recommendation 3

The Proponent should comply with the Vegetation Clearing Conditions set down in Appendix 2 of this Report, as required by NRW in relation to the issuing of Vegetation Clearing Permits, pursuant to the *Vegetation Management Act 1999*.

Recommendation 4

The Vegetation Management Plan should include a baseline monitoring and inspection schedule of the effected ecosystems against which the effectiveness of the rehabilitation and conservation criteria can be assessed.

Recommendation 5

The Proponent should ensure that progressive rehabilitation, including re-contouring, topsoil replacement, and re-vegetation that is consistent in species composition and density with the pre-construction state, occurs as soon as construction activities are completed in each area disturbed. Rehabilitation should be monitored for success against the design criteria and corrective actions taken if rehabilitation is not proving successful.

Recommendation 6

The Proponent should establish “offset areas” for the loss of remnant vegetation that is listed as “Of Concern” or “Endangered” under the *Vegetation Management Act 1999*, as part of its applications for permits to clear vegetation required under this Act. The nature and extent of the “offset areas” should be developed in consultation with NRW.

4.5 Waterway Crossings

EIS Findings and/or Key Points

The EIS has identified that the pipeline will cross the Caboolture and Mooloolah Rivers and several creeks. A description of the site characteristics and ecological condition for the rivers and the main creek crossings were provided in the EIS.

The Water Crossing Management Plan developed as part of the EIS deals with:

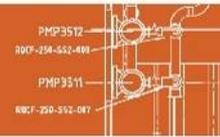
- water flow and quality management;
- riparian vegetation management;
- creek/river bank and bed management; and
- acid sulphate soils issues, if required.

I am satisfied that the Proponent, through the EIS and SEIS, has demonstrated that pipeline construction may have a localised impact but will not have a noticeable effect on water quality within the water courses or the adjacent marine environment.

Key potential impacts on water crossings may include the effects of erosion from corridor clearing and siltation. Both issues are addressed in the Water Crossing Management Plan.

A range of pipeline watercourse crossing techniques will be utilised during the construction of the pipeline. In general, the method chosen to install the pipeline at watercourse crossings will depend on environmental factors, geotechnical and other construction constraints. In smaller creeks and streams where no significant environmental issues have been identified, pipeline installation will generally involve the use of open trenching methods, while for larger streams and rivers, flow diversion or trench-less techniques will be used.

I note that in response to the EIS, Caloundra City Council indicated a preference for the pipeline to be bored under the Mooloolah River. The Water Crossing Management Plan submitted by the Proponent now shows that the pipeline will be bored under the Mooloolah River.



The Wildlife Presentation Society of Queensland submitted that clearing of riparian vegetation should be kept to an absolute minimum to avoid siltation, pollution and eutrophication of waterways. In response, the Water Crossing Management Plan submitted by the Proponent supports this suggestion by stating the following actions:

- Minimise clearing of riparian vegetation.
- No clearing between bore entry and exit points.
- Where a temporary vehicle watercourse crossing is required, no clearing within a minimum of 20m from the waterline until the crossing is imminent.
- Where practical, preserve large riparian trees.
- Fall trees away from the watercourse and immediately remove any substantial vegetation debris, which falls in the watercourse.

Operational works that involve the destruction of vegetation, excavation or the placing of fill in a water course, as defined by the *Water Act 2000*, normally require a riverine protection permit. However, under s.4(2) of the Water Act, persons undertaking activities authorised under the SDPWO Act are not bound by the requirements of the Water Act. riverine protection permit requirements of the Water Act do not apply to my powers under the SDPWO Act. I have authorised the Proponent under s.136 the SDPWO Act to undertake works associated with the Project and therefore riverine protection permit requirements of the Water Act do not apply.

Conclusions

I find that construction of the pipeline across waterways could adversely affect the environment through removal of riparian vegetation, potential scour and erosion of stream banks, disturbance of the stream bed, and associated reduction in water quality downstream. I am satisfied that the Water Crossing Management Plan, Soil and Water Management Plan and Rehabilitation Management Plan will mitigate potential adverse environmental impacts on the waterways being crossed.

Although the Proponent is not required to obtain riverine protection permits, I recommend the following to ensure that best practice environmental management outcomes are achieved for all watercourse crossings:

Recommendation 7

The Proponent should comply with the Watercourse Crossing Conditions set down in Appendix 3 of this Report for all watercourse crossings that would normally require a Riverine Protection Permit under the *Water Act 2000*.

4.6 Air Quality

EIS Findings and/or Key Points

The main impact on air quality from the Project could be as a result of dust generation during construction. Construction activities identified as a specific potential source of dust generation include:

- Vegetation clearing.
- Earthmoving activities and excavation.
- Movement of vehicles and construction machinery on unsealed surfaces.
- Transport of construction materials, fill, rubble and waste.
- Stockpiling of materials.
- Build-up of material around erosion and sedimentation controls.

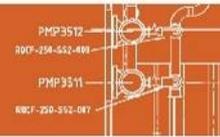
Most of these activities will occur for a limited period at any location along the pipeline route, and will typically be restricted to daylight hours (nominally 7 am to 6 pm). No direct dust impacts are likely as a result of tunnelling or boring activities, as these works are conducted below the surface.

The generation and impact of construction dust emissions will be minimised by the use of appropriate management techniques, especially the minimisation of cleared areas and the use of watering to bind the surface layer.

The Queensland Conservation Council, in a submission on the EIS, sought information on how greenhouse gas emissions from the Project will be avoided, reduced and mitigated. I am satisfied that the construction and operation of the Project will not result in significant greenhouse gas emissions and that any emissions will be minimised through:

- route selection that reduces maximum head consumption and overall materials consumption;
- pipe diameters that minimise head loss (within water supply and economic limitations);
- the use of bio-fuels for vehicles during construction; and
- the use of high efficiency pumps and motors during future reverse flow operations.

Vegetation “off-set areas” that are to be developed in consultation with NRW for the loss of remnant vegetation will also significantly off-set greenhouse gas emissions generated as a result of the implementation of the Project.



Conclusions

I find that the construction and ongoing operation of the Project could have short-term air quality impacts. The Air Quality Management Plan will minimise any impacts and provide an appropriate monitoring regime. In addition, the vegetation “off-set areas” will significantly off-set greenhouse gas emissions generated as a result of the implementation of this Project.

Recommendation 8

The Proponent should implement the Air Quality Management Plan to ensure that there is no significant impact to air quality, particularly from dust generation caused by construction activities.

4.7 Noise and Vibration

EIS Findings and/or Key Points

The pipeline construction will generate noise emissions from activities such as excavation, blasting, rock breaking and truck movements. Construction of the pipeline will be carried out mostly in rural areas that have typically low background noise levels. Consequently, careful consideration needs to be given to ensure proper and effective noise abatement strategies and measures are developed and implemented.

I find that once construction works for Stage 1 are completed, the operation and use of the pipeline itself should not generate any excessive noise. Future pump stations, required when Stage 2 of the pipeline is operational, will be located away from sensitive receptors and will be fitted with noise attenuation measures.

The most significant noise sources for the Project are likely to be the operation of machinery such as excavators, generators, rock breakers, piling and drilling rigs used during construction, as well as noise associated with haulage vehicles. The Proponent has committed to limiting construction, including haulage activities, to daytime hours, from 7am to 6pm Monday to Friday and 8am to 1pm on Saturdays, as much as practicable to avoid or minimise any impacts on sensitive receptors. I note that some night time works are required for micro-tunnelling or tunnel boring.

The Proponent has developed a Noise Management Plan designed to address the issues identified above. The Proponent has also set up a 24 hour freecall hotline to receive any complaints about the construction activities, such as noise, from affected persons. All complaints will be registered and investigated by the Environmental Manager or Environmental Officer and corrective and preventative actions undertaken where practical.

There is potential for construction activities to result in vibration impacts, particularly associated with blasting, rock breaking, ripping, dynamic compaction, micro-tunnelling, piling and heavy vehicle movement. Impacts could include damage to vulnerable buildings, as well as human discomfort. I find that blasting is likely to be the greatest source of vibration, but will only occur where the geology is too hard for the use of an excavator, such as in the middle sections of the Project area at the base of the Glass House Mountains and in hard sandstone north of the Mooloolah Valley. The Proponent has developed a Blast Management Plan to specifically manage potential impacts arising from any blasting activities. The Proponent also proposes that all piling be bored to reduce noise and vibration impacts.

Conclusions

Due to the nature of the construction of the pipeline, I am satisfied that any noise impacts experienced by persons in proximity to the construction corridor will be temporary in nature. I note that the first performance criteria of the Construction Noise and Vibration Management Plan that the Proponent has developed is for “no noise complaints from nearby residences”. I am satisfied that through the development and implementation of a Noise Management Plan that ensures this criteria is met, the Proponent will either avoid noise impacts or mitigate such impacts on receptors so that they do not cause a noise nuisance.

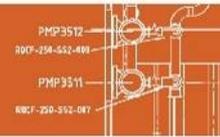
I also find that vibration associated with blasting activities during the construction phase has potential to cause damage to nearby buildings. I am satisfied that implementation of the Blast Management Plan should reduce this risk to an acceptable level.

In order to ensure that the performance criteria in relation to management of noise and vibration are achieved, I recommend the following:

Recommendation 9

The Proponent should:

- 1. Undertake a risk assessment of likely noise and vibration impacts of activities on surrounding premises and implement actions to minimise and/or mitigate any impacts;**
- 2. Develop and implement a Noise Management Plan that ensures there is no noise nuisance caused by the construction activities;**
and



- 3. Consult with potentially affected residents about the timing, duration and likely impact of works, at least one week prior to the works commencing. Where noise impacts are likely to cause unavoidable nuisance, (e.g. residential premises in close proximity to night works) and abatement measures cannot adequately reduce the noise level, the Proponent should implement an appropriate mitigation response, such as possible temporary alternative accommodation arrangements for affected residents.**

Recommendation 10

The Proponent should:

- 1. Undertake structural inspections of buildings in proximity to the pipeline route prior to the commencement of any potential damaging construction activities (such as blasting, rock breaking, pile driving, or dynamic compaction);**
- 2. Ensure that all blasting operations are carried out in accordance with the Australian and New Zealand Environment and Conservation Council guideline “Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC, 1990)”; and**
- 3. Establish a system to monitor potentially affected buildings for any impacts caused by vibration or over blast pressure from construction activities. If any impact, such as structural damage to buildings, is identified, then the Proponent should undertake appropriate corrective action, which may include compensation to the owner for such impacts.**

4.8 Traffic

EIS Findings and/or Key Points

The pipeline route has been designed to avoid major existing road infrastructure as far as practicable. However, the construction of the pipeline is likely to have an impact on road pavements, traffic flow, road safety performance and road access caused by heavy vehicle haulage, increased vehicle movements, and temporary access or road use restrictions. It is expected that there will be one truck movement required for every 7 metres of trench excavated for the removal of spoil, as well as significant traffic involved with the delivery of pipe and quarry materials used in the bedding of the pipeline.

The Proponent discussed potential haulage routes in the EIS. Access and haulage routes will be finalised during the final planning process, in conjunction with the relevant controlling authorities (the Department of Main Roads (DMR) for state controlled roads or the local government authority for local roads). The transport access plan will consider the potential impact of site access routes and construction traffic on school bus routes and other community traffic.

The Proponent has committed in the EIS that all state-controlled roads will be tunnel bored and will be maintained at 100% traffic carrying capacity. Open trench crossings will be utilised for construction across local roads with lower volumes of traffic and this is expected to result in temporary losses of road capacity of between 10% and 20%.

In submissions received on the EIS, the DMR raised concerns about decreases in carrying capacity and impacts of haulage trucks on road pavements. Similarly, the Caloundra City Council raised concern about the potential impacts on local roads. The Department of Communities raised the concern about the potential impact of construction traffic on school bus routes, school zones and other traffic sensitive locations.

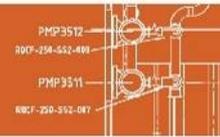
Conclusions

I am satisfied that temporary traffic delays as a result of construction of the pipeline would be restricted and relatively minor in nature and that the Proponent's commitment to implementing a Traffic Management Plan in consultation with the relevant agencies will ensure that such impacts are minimised. I find that the Proponent needs to consult with the appropriate controlling authority in regard to remedial actions for affected road pavements, as committed to in the EIS.

To ensure that all potential impacts associated with the transport task for the construction of the pipeline are properly managed, I recommend the following:

Recommendation 11

The Proponent should complete a Road Impact Assessment study and develop and implement a Road Use Management Plan in consultation with the relevant controlling authority (DMR or the local government authority) to fully address any project-related impacts on roads at least one month before the commencement of heavy vehicle transport on affected roads. The Proponent should also consult with the Queensland Police Service and the relevant local government authorities during the development and implementation of the Traffic Management Plan.



Recommendation 12

The Proponent should rehabilitate all temporary access roads and other areas of disturbance resulting from the construction of the pipeline to a state equivalent to or better than the pre-construction state, unless otherwise agreed with the landowner or relevant authority.

4.9 Cultural heritage

EIS Findings and/or Key Points

The Project has the potential to affect objects or places of Aboriginal and non-indigenous cultural heritage through physical disturbance of such sites during construction activities, or changes to cultural heritage values associated with development of the Project.

The Proponent has determined that there is no registered Aboriginal cultural heritage body for the Project area and that the Gubbi Gubbi #2 people are the relevant 'native title party' for all areas within the external boundaries of that claim as there are no current registered native title claims. As such the Gubbi Gubbi #2 is the 'Aboriginal party', as defined under the Aboriginal Cultural Heritage Act 2003 (ACH Act). No registered Aboriginal cultural heritage sites were identified within the proposed pipeline corridor.

Apart for the general 'duty of care' provisions under the ACH Act to ensure that activities do not harm Aboriginal cultural heritage, the Proponent is required to develop a Cultural Heritage Management Plan (CHMP), through consultation and in partnership with the relevant Aboriginal party, for approval by the Chief Executive administering the Act. A CHMP was agreed to between SRWP Co and the Gubbi Gubbi #2 people and subsequently approved by NRW on 8 May 2007.

I note from the EIS, that three non-indigenous cultural heritage sites are registered on the Environmental Protection Agency (EPA) Heritage Register and/or the Australian Heritage Places Inventory, but they are unlikely to be impacted by the Project due to pre-existing land use activities or being outside the proposed pipeline corridor

The Proponent acknowledges that there exists potential for cultural and archaeological sites to be uncovered during construction activities within the Project area. The potential cultural heritage impacts associated with the proposed water pipeline project are largely associated with the construction phase. Clearing or excavation works may uncover potential artefacts or sites currently buried just beneath the surface and not previously recorded. Apart from the registered CHMP, the Proponent has developed a Heritage Management Plan to avoid or minimise any adverse impacts to non-indigenous cultural heritage that might be identified during construction activities.

Conclusions

I am satisfied that the CHMP and Heritage Management Plan will minimise and effectively manage any impacts that the Project may have on Aboriginal and non-indigenous cultural heritage. I note that the CHMP has been approved by NRW, in accordance with the requirements under s.87 of the ACH Act.

4.10 Waste

EIS Findings and/or Key Points

The volume and type of waste generated by the Project will be reasonably small compared to waste generated by similar scale construction projects. The primary sources of waste will be generated during construction, with only minor amounts of waste being generated during the operational phase of the pipeline. Waste generated during construction will be from site offices (such as domestic waste and sanitary system waste), work sites (including green waste/mulched timber, concrete wastes) and maintenance areas (waste oil and chemical wastes).

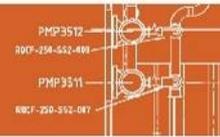
The Proponent has committed in the EIS and the Waste Management Plan to implementing waste management practices for the Project that are consistent with the waste management hierarchy outlined in the Environmental Protection (Waste Management) Policy 2000. For example, extracted material will be reused on site or off site and, where possible, cut and fill earthworks will be balanced to ensure maximum reuse of fill material on site, which will minimise the need for stockpiling, transport and importation of material. Similarly, all recycled materials will be considered for use in concrete and other construction materials, such as road base.

Significant volumes of waste water will also be generated during pressure hydro-testing of the pipeline. The EPA highlighted, in its submission on the EIS, the need for proper management and careful disposal of this hydro-test water, which may contain high levels of chlorine.

Conclusions

I find that the potential for adverse impacts caused by waste from the Project are unlikely, however there is a need for the Proponent to ensure that the Project follows best practice environmental management principles in relation to waste management. The implementation of the Waste Management Plan, including the early planning of construction activities to maximise waste reuse opportunities and the training of employees in the waste hierarchy and waste management principles, is essential to achieving this outcome.

I find that the disposal of hydro-test water from the pipeline commissioning phase has the potential to cause environmental harm. I therefore recommend the following:



Recommendation 13

The Proponent should ensure that no environmental harm occurs in relation to the disposal or reuse of water used in the commissioning of the pipeline and must take all reasonable and practicable measures to ensure that it complies with the general environmental duty, as defined under the *Environmental Protection Act 1994 (Qld)*.

4.11 Social and Economic Environment

EIS Findings and/or Key Points

There are potential adverse impacts on the social environment and public amenity of the area related to the construction phase of the Project. The primary social impacts are likely to be associated with: traffic disruptions; access to residences and services; impacts on visual amenity, due to the presence of machines and construction workers; and potential dust and noise emissions. All such impacts would be temporary in nature. Issues associated with restrictions to ongoing use of land directly affected by the pipeline are addressed in section 4.2 *Land Use* of this Report and traffic issues are addressed in section 4.8 *Traffic*.

Conversely, beneficial socio-economic impacts also occur as a result of the Project, as the construction phase of the pipeline will generate direct employment for approximately 150 people with associated local employment opportunities. Indirect employment and business opportunities are also likely to result from manufacturing of the pipe and associated pipeline materials and the provision of other goods and services to the Project.

I find that the construction workforce is unlikely to result in any noticeable impacts to the availability or affordability of accommodation in the region, or the availability of community and social services. The Proponent does not intend to house its construction workforce in temporary camps due to the relatively short-term duration of the construction phase and the ready availability of suitable accommodation in the vicinity of the Project.

The Department of Communities, in its submission on the EIS, raised the need to ensure that community engagement occurred during all phases of the Project, and that community well-being was addressed to ensure that Indigenous issues were included. I find that the social impact assessment process has been sufficiently comprehensive and inclusive for a such a relatively transient construction project, with minimal operational impacts.

There are a number of community facilities located close to the pipeline corridor that may be temporarily affected by the physical proximity to the pipeline construction activities and the usage of local roads for access to construction areas.

The areas along the pipeline from Elimbah southwards and from Beerwah northwards are expected to have continued residential growth over the coming years. The provision of potable water will be essential to the ongoing economic development of these areas and of great benefit to the region.

Submissions were received from individuals and stakeholder groups expressing concern that the cost-benefit analysis for the Project required more detail than was provided in the EIS. I find that, as this is a regulated drought emergency response project, the level of detail provided in the EIS is appropriate.

The Project would deliver an important component of the SEQ Water Grid to supply water into the northern suburbs of the greater Brisbane area. The Project will be designed with a reverse flow capacity that will enable water from other sources connected to the Water Grid to be directed to the Sunshine Coast if required under different drought or demand management conditions in the future. In addition to providing for increased demands in urban water use, there are significant economic benefits to the State in ensuring a secure water supply to the greater SEQ region, such as industry attraction and development and the associated economic development of the regions.

Conclusions

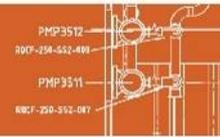
The need for an expanded source base for water supply to SEQ has been identified due to an increase in population and prolonged drought conditions. The Government has mandated, through regulation that the pipeline is to be operational by 31 December 2008. As this is a construction project of short duration, I am satisfied that the Proponent has assessed the social and economic impacts arising from this Project adequately in the EIS.

I find that the Project will create short term employment opportunities and flow on economic benefits, through the provision of indirect employment opportunities and support services, for the Caboolture – Eudlo region.

To minimise any potential adverse impacts of the construction of the pipeline on the community, I make the following recommendations:

Recommendation 14

The Proponent should develop and implement a Community Consultation Plan. The Plan should include a detailed communication strategy to ensure that community members, including those in sensitive groups identified in the EIS, are informed of the Project and its impacts. All landowners or business owners directly or potentially affected by the construction activities should be consulted at least one week before the commencement of such activities to identify potential issues, concerns and appropriate mitigation strategies.



Recommendation 15

The Proponent should establish a complaints response management system that provides for the receipt, recording and timely investigation and response to complaints, including the implementation of preventative or corrective actions and communication with the person who made the complaint to inform them of the actions undertaken.

4.12 Water Resources

EIS Findings and/or Key Points

A number of submissions received from individuals and community stakeholder groups stated that the EIS did not assess the cumulative impacts on the Mary River catchment of the current Project, the proposed Stage 2 of the NPI and the proposed Traveston Crossing Dam. In relation to these matters I find the following:

The objective of the Project is the development of a pipeline to transfer bulk water from the Landers Shute water treatment plant near Eudlo on the Sunshine Coast to the Morayfield reservoirs north of Brisbane. The water will be sourced from existing entitlements that are currently surplus to requirements utilising existing water allocations under the “Water Resource (Mary Basin) Plan 2006”.

Whilst the Project is being designed to accommodate the transfer of water between the Sunshine Coast and Brisbane from other sources, including the Traveston Crossing Dam (should it be approved), as part of the long-term water supply strategy for SEQ, it is being developed in the first instance as an emergency drought contingency project. The potential impacts associated with extraction of water from the Mary River catchment via the Traveston Crossing Dam – Stage 1, is currently being assessed as part of that Project’s Environmental Impact Statement.

Development of the NPI Stage 2 project to connect with existing water supplies between Landers Shute and the Noosa WTP, will be subject to a separate EIS process that will consider the environmental impacts of the abstraction of any additional water not included in existing allocations.

The existing water allocations under the “Water Resource (Mary Basin) Plan 2006” were deemed under Orders in Council and the Baroon Pocket Dam entitlement has subsequently been converted to Interim Resource Operation Licences (IROL) under the Water Act. These Orders in Council relate to approvals that pre-date the EPBC Act and hence have not been referred for assessment and approval under that legislation.

The allocation of the water within a catchment is a separate statutory process to the approval for specific infrastructure to abstract a water allocation. The Water Act requires the preparation of a Water Resource Plan (WRP) and Resource Operations Plan (ROP) under a process to ensure that water is equitably managed to preserve the quality of life and our aquatic ecosystems. It is within this prescribed process that the impacts on species, ecosystems and other environmental and socio-economic matters of the water extraction from the catchment are considered and assessed.

The “Water Resource (Mary Basin) Plan 2006”, which is subordinate legislation to the Water Act, was approved in July 2006, following consideration of submissions on the draft WRP. The associated community consultation report summarises the issues raised by the public and how they have been dealt with in finalising the Mary Basin WRP. The WRP identifies the availability of water and defines principles and objectives for the sustainable management and taking of water in the Mary Basin. The WRP states the ecological outcomes for particular parts of the plan area, including Obi Obi Creek.

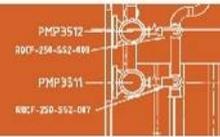
The ROP is the primary instrument for implementing the WRP. It states the day to day operating rules so that the management of dams, weirs and other water infrastructure will meet the objectives of the WRP, including the environmental flow objectives. The ROP also details the monitoring required to ensure that the objectives of the WRP are met. The monitoring and reporting requirements are designed to ensure that any adjustment or review of the WRP can be addressed promptly.

The Mary Basin ROP is currently being developed and will be released later this year in draft form for public review and comment before being finalised. There is an opportunity to review the environmental flow provisions for the Baroon Pocket Dam, including under reduced flow conditions associated with possible climate change, through this process.

The IROL for the Baroon Pocket Dam sets specific flow release criteria to ensure that environmental flows to Obi Obi Creek are maintained when there is no flow over the dam spillway, based on a full utilisation of the existing entitlement. The supply of part of this water entitlement to the NPI will not change these environmental flow requirements in any way.

Conclusions

I find that the NPI Stage 1 Project is being developed as an emergency drought response to transfer water from existing entitlements held in relation to the Baroon Pocket Dam, which is surplus to current demand on the Sunshine Coast, to Morayfield north of Brisbane. The pipeline is being designed with a reverse flow capability and a capacity to accommodate water from other sources of bulk supply to fulfil the longer-term water supply strategy for region, as part of the SEQ Water Grid. I am satisfied that the Project itself will not contribute to any increased environmental impacts in the Mary River catchment, in particular Obi Obi Creek.



5.0 Conclusion

The NPI is an essential element of the SEQ Water Grid that will enable the transfer of water from areas that have plentiful supplies to those that are experiencing water shortages.

The Project is designed to transfer a target of 65ML/day of water from the Sunshine Coast to the greater Brisbane area in the short-term, but is being designed as an essential component of the SEQ Water Grid with the capacity to accommodate future bulk water supplies, such as from Traveston Crossing Dam, and with a reverse flow capability, to provide long-term water supply security to the SEQ region.

The Project is part of a key water supply strategy to meet both the short-term and long-term needs of the region due population growth and the impacts of climate change. As such, the Project will contribute directly to the general economic and social well-being of the region, which would otherwise be seriously constrained without the security of essential water supply.

Having regard to the documentation and information provided during the EIS process for the proposed NPI Stage 1 project, I am satisfied that the requirements of the Queensland Government for impact assessment in accordance with the provisions of Part 4 of the SDPWO Act have been met. The EIS process has provided sufficient information to all stakeholders to allow for an evaluation of the potential impacts that could be attributed to the Project.

The Proponent presented a schedule of Project Commitments in Appendix C of the EIS. These commitments include actions beyond those required to meet statutory approvals and their implementation will enhance the mitigation of potential adverse environmental impacts of the Project. Further, The Proponent has developed detailed EMPs to address specific environmental issues identified during the EIS process associated with each element of the Project.

In reaching a conclusion on the acceptability or otherwise of the management of potential impacts of the Project I have considered these Project Commitments and EMPs. Where necessary, I have extended particular commitments or component of an EMP and made specific recommendations that the Proponent should implement in accordance with best practice environmental management.

Thus, on the basis of the information provided, including advice from Advisory Agencies, I am satisfied that the adverse environmental impacts associated with the Project are able to be addressed through:

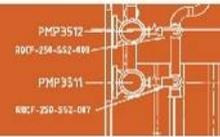
- Implementation of the commitments in the EIS;
- Implementation of the construction EMPs; and
- Implementation of specific recommendations set down in Appendix 1 of this Report.

I consider that, on balance, there is an over-riding need for the Project in terms of its role in the SEQ Water Grid and the expansion of the source base for water supply to the Brisbane area for urban and industrial use. I therefore recommend that the Project, as described in detail in the EIS and SEIS, and summarised in Section 2 of this Report, can proceed, subject to the qualifications above.

The Proponent and its agents, lessees, successors and assigns, as the case may be, must implement the recommendations in this Report and all commitments presented in the EIS, SEIS and Environmental Management Plans.

A copy of this Report will be issued to the Proponent pursuant to s.35(5)(a) of the SDPWO Act.

A copy of this Report will be provided to all Advisory Agencies and will also be made available on the Department of Infrastructure and Planning web site, at: http://www.infrastructure.qld.gov.au/major_projects/northern_pipeline.shtm



APPENDIX 1

List of Recommendations

Recommendation 1

The Proponent should consult with landowners directly affected by construction activities throughout the planning and construction phases of the Project. Issues for consultation should include: likely and potential impacts to landowners; minimisation or mitigation strategies; timeframes for construction activities; access restrictions; and rehabilitation or reinstatement of impacted land and infrastructure, or appropriate compensation.

Recommendation 2

The Proponent should ensure that all land disturbance construction activities comply with the requirements set out in the “Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites (The Institution of Engineers, Australia (Qld), 1996, or later version)”.

Recommendation 3

The Proponent should comply with the Vegetation Clearing Conditions set down in Appendix 2 of this Report, as required by NRW in relation to the issuing of Vegetation Clearing Permits, pursuant to the *Vegetation Management Act 1999*.

Recommendation 4

The Vegetation Management Plan should include a baseline monitoring and inspection schedule of the effected ecosystems against which the effectiveness of the rehabilitation and conservation criteria can be assessed.

Recommendation 5

The Proponent should ensure that progressive rehabilitation, including re-contouring, topsoil replacement, and re-vegetation that is consistent in species composition and density with the pre-construction state, occurs as soon as construction activities are completed in each area disturbed. Rehabilitation should be monitored for success against the design criteria and corrective actions taken if rehabilitation is not proving successful.

Recommendation 6

The Proponent should establish “offset areas” for the loss of remnant vegetation that is listed as “Of Concern” or “Endangered” under the *Vegetation Management Act 1999*, as part of its applications for permits to clear vegetation required under this Act. The nature and extent of the “offset areas” should be developed in consultation with NRW.

Recommendation 7

The Proponent should comply with the Watercourse Crossing Conditions set down in Appendix 3 of this Report for all watercourse crossings that would normally require a Riverine Protection Permit under the *Water Act 2000*.

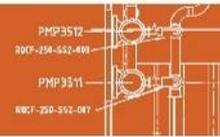
Recommendation 8

The Proponent should implement the Air Quality Management Plan to ensure that there is no significant impact to air quality, particularly from dust generation caused by construction activities.

Recommendation 9

The Proponent should:

1. Undertake a risk assessment of likely noise and vibration impacts of activities on surrounding premises and implement actions to minimise and/or mitigate any impacts;
2. Develop and implement a Noise Management Plan that ensures there is no noise nuisance caused by the construction activities; and
3. Consult with potentially affected residents about the timing, duration and likely impact of works, at least one week prior to the works commencing. Where noise impacts are likely to cause unavoidable nuisance, (e.g. residential premises in close proximity to night works) and abatement measures cannot adequately reduce the noise level, the Proponent should implement an appropriate mitigation response, such as possible temporary alternative accommodation arrangements for affected residents.



Recommendation 10

The Proponent should:

1. Undertake structural inspections of buildings in proximity to the pipeline route prior to the commencement of any potential damaging construction activities (such as blasting, rock breaking, pile driving, or dynamic compaction);
2. Ensure that all blasting operations are carried out in accordance with the Australian and New Zealand Environment and Conservation Council guideline “Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC, 1990)”; and
3. Establish a system to monitor potentially affected buildings for any impacts caused by vibration or over blast pressure from construction activities. If any impact, such as structural damage to buildings, is identified, then the Proponent should undertake appropriate corrective action, which may include compensation to the owner for such impacts.

Recommendation 11

The Proponent should complete a Road Impact Assessment study and develop and implement a Road Use Management Plan in consultation with the relevant controlling authority (DMR or the local government authority) to fully address any project-related impacts on roads at least one month before the commencement of heavy vehicle transport on affected roads. The Proponent should also consult with the Queensland Police Service and the relevant local government authorities during the development and implementation of the Traffic Management Plan.

Recommendation 12

The Proponent should rehabilitate all temporary access roads and other areas of disturbance resulting from the construction of the pipeline to a state equivalent to or better than the pre-construction state, unless otherwise agreed with the landowner or relevant authority.

Recommendation 13

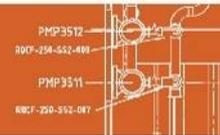
The Proponent should ensure that no environmental harm occurs in relation to the disposal or reuse of water used in the commissioning of the pipeline and must take all reasonable and practicable measures to ensure that it complies with the general environmental duty, as defined under the *Environmental Protection Act 1994* (Qld).

Recommendation 14

The Proponent should develop and implement a Community Consultation Plan. The Plan should include a detailed communication strategy to ensure that community members, including those in sensitive groups identified in the EIS, are informed of the Project and its impacts. All landowners or business owners directly or potentially affected by the construction activities should be consulted at least one week before the commencement of such activities to identify potential issues, concerns and appropriate mitigation strategies.

Recommendation 15

The Proponent should establish a complaints response management system that provides for the receipt, recording and timely investigation and response to complaints, including the implementation of preventative or corrective actions and communication with the person who made the complaint to inform them of the actions undertaken.



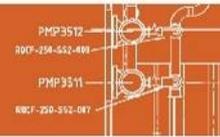
APPENDIX 2

Vegetation Clearing Conditions

The following conditions will apply to the issuing of a Vegetation Clearing Permit by the Department of Natural Resources and Water, pursuant to the *Vegetation Management Act 1999* for the Northern Pipeline Interconnector – Stage 1 Project, hereinafter known as “the Project”.

1. A vegetation management offset that meets the requirements of the “Policy for Vegetation Management Offsets (23 August 2007)”, must be legally secured within 12 months of the date of the issue of a permit from the Department of Natural Resources and Water to clear assessable vegetation on any State Land subject to the Project. Where applicable, any changes to the clearing footprint must be assessed in accordance with the “Regional Vegetation Management Code for Southeast Queensland Bioregion” and the “Policy for Vegetation Management Offsets” to determine any implications for the total area required for offsets.
2. Clearing shall only occur to the extent that is necessary for the construction phase and operational phase of the Project.
3. Any clearing or activities associated with clearing within the subject properties must be by mechanical methods only.
4. Any clearing or activities associated with clearing within the subject properties must not adversely impact on native vegetation outside the subject properties.
5. Only designated tracks must be used when entering and exiting the subject properties during construction and operation of the Project.
6. All disturbed and excavated soil must either be contained within the project route boundaries or alternatively securely stockpiled or respread in a location where its placement will not result in the clearing of vegetation that is regulated under the *Vegetation Management Act 1999*.
7. All vegetation mechanically cleared must be stockpiled in a location where its placement will not result in the clearing of vegetation that is regulated under the *Vegetation Management Act 1999*.
8. Land clearing debris must not be pushed into gullies, watercourses, other drainage lines or waterlogged areas.

9. Clearing must be undertaken in accordance with the following conditions in relation to the clearing of remnant and non-remnant vegetation on State Land:
- (a) The supervising NRW Forest Products Officer is to be contacted by the Proponent of impending start dates and schedules and an onsite meeting organised in order to establish any requirements or issues. The contact officer for NRW Forest Products is Lance Stumm, (07) 4160 4205.
 - (b) The NRW Forest Products officers will paint-mark any forest product of merchantable size prior to pushing or clearing of vegetation. This will be delineated by the marking of an “S” on trees containing sawlogs with yellow tree marking paint.
 - (c) The NRW Forest Products officer is to initiate the sale of the merchantable timber in accordance with appropriate guidelines and procedures.
 - (d) The Proponent will ensure that the forest products are appropriately merchandised and placed in a cleared storage area on State Land, which must be accessible and provide a safe place to load the forest products for extraction. To remove any doubt, the forest products are not to be placed on adjacent non-State Land.
 - (e) All butting and heading of logs shall be undertaken by the Proponent at their expense in accordance with NRW Forest Products utilisation standards. NRW Forest Products staff will provide some assistance via training to the Proponent’s cutters during an onsite meeting. Logs must be cut at a minimum length of 2.4 metres and increase in intervals of 0.3 metres with a top end diameter of no less than 30 centimetres under bark.
 - (f) Where it is possible, all miscellaneous timbers shall be cut prior to the clearing of vegetation in order to meet NRW Forest Products utilisation standards. Following consultation with the Proponent, there may be some areas which may be able to be harvested by a NRW Forest Products accredited cutter. All available other miscellaneous forest products will be delineated using yellow tree marking paint with the following markings: “R” denoting Round Timber and “SP” denoting Split Posts.
 - (g) NRW Forest Products will endeavour to take prompt salvage action to remove the forest products and ensure that the sawlog purchaser is aware of the Proponent’s Workplace, Health and Safety procedures.

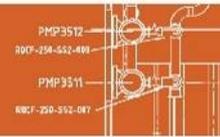


10. Where contractors, employees, subcontractors, agents or any other person, that is not the applicant are to be engaged or employed to carry out the clearing of any vegetation on the subject site, the Proponent is to provide them with a copy of these conditions to ensure that they are aware of what clearing is authorised.
11. The Proponent shall ensure that any and all employees, contractors, subcontractors, agents or any other person engaged or employed to carry out the clearing of any vegetation on the subject site comply at all times with the requirements of these conditions and do not clear any vegetation that is not approved to be cleared.
12. Any clearing or activities associated with clearing within State Land subject to the Project, and not specifically addressed within the preceding conditions set out above in condition numbers 1 to 11, must be undertaken in accordance with the following management plans, which have been prepared in accordance with the Environmental Management Plan:
 - (a) Water Quality;
 - (b) Terrestrial Flora;
 - (c) Terrestrial Fauna;
 - (d) Rehabilitation Management;
 - (e) Pest Management;
 - (f) Weed Management;
 - (g) Aquatic Ecology;
 - (h) Geology and Soils;
 - (i) Surface Water; and
 - (j) Waste Minimisation and Management of Hazardous Substances.

13. Additional Information

- (a) This Development Permit does not authorise the clearing of any vegetation that would constitute a contravention of other laws. This includes:
- the *Coastal Protection and Management Act 1995*;
 - the *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003*;
 - the *Environmental Protection Act 1994* which regulates environmentally relevant activities;
 - the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) regarding the protection of listed threatened species and ecological communities;
 - the *Fisheries Act 1994* regarding the management of marine plants including mangroves;
 - Local laws established by local government under the *Local Government Act 1993*;
 - the *Nature Conservation Act 1992* regarding the management of protected plants and animals;
 - the *Queensland Heritage Act 1992* which regulates the management of heritage sites;
 - the *Soil Conservation Act 1986*; and
 - the *Water Act 2000* regarding the removal of vegetation from the bed and banks of a watercourse.
- (b) It is recommended that the Proponent check with relevant authorities including the local government authorities before undertaking any clearing to ensure compliance with other laws.

END OF CONDITIONS



APPENDIX 3

Watercourse Crossings Conditions

1. These conditions relate to all crossings of watercourses as defined under the *Water Act 2000* associated with construction of pipelines associated with Stage 1 of the Northern Pipeline Interconnector Project (“the Project”).
2. Activities for and associated with watercourse crossings will be carried out in accordance with relevant provisions of any environmental management plan implemented for the Project.
3. The Proponent will give written notice to the chief executive of the Department of Natural Resources and Water of the completion of activities within 5 business days after completing operations at each of the watercourse crossing sites at which activities are undertaken.
4. Activities for and associated with watercourse crossings will be carried out in a way that does not impound water or otherwise unduly interfere with the flow of water in the watercourse. Provision will be made for the maintenance of low flows past the site of the activities.
5. Natural controls creating waterholes in the bed of the watercourse will not be lowered or otherwise destabilised by the activities.
6. The existing course of the low flow channel of the watercourse is not to be altered by the activities.
7. Vehicle access tracks constructed within the watercourse will not exceed the minimum width necessary for the safe passage of vehicles and equipment using the crossings.
8. Where practicable, cuttings in watercourse banks necessary for vehicle access tracks will be aligned in the downstream direction.
9. Native vegetation in the watercourse will be destroyed only to the extent that is reasonable and necessary for access and construction purposes. Where native vegetation is to be destroyed, it will be cut off at ground level and the ground and root mass will not be disturbed, except as required for excavation.
10. Material may be excavated and fill may be placed in the watercourse only to the extent that is reasonable and necessary for access and construction purposes.

END OF CONDITIONS

Appendix 4

Abbreviations

ACH Act	<i>Aboriginal Cultural Heritage Act 2003 (Qld)</i>
AHD	Australian Height Datum
ASS	Acid sulphate soils
Cob	Close of business
CG	Coordinator-General
CHMP	Cultural Heritage Management Plan
DEW	Department of the Environment and Water Resources (C'th)
Dol	(former) Department of Infrastructure
DMR	Department of Main Roads
EPA	Environmental Protection Agency
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (C'th)</i>
EIS	Environmental Impact Statement
IAS	Initial Advice Statement
IPA	<i>Integrated Planning Act 1997 (Qld)</i>
IROL	Interim Resource Operations Licence
JWP 2006	John Wilson & Partners
KBR 2006	Kellogg Brown & Root Pty Ltd
ML/d	megalitres per day
NPI	Northern Pipeline Interconnector
NRW	Department of Natural Resources and Water
ROP	Resource Operations Plan
SEQ	South East Queensland
SEQRWSS	South East Queensland Regional Water Supply Strategy
SEIS	Supplementary Environmental Impact Statement
SDPWO Act	<i>State Development and Public Works Organisation Act 1971 (Qld)</i>
SRWP Co	Southern Regional Water Pipeline Company Pty Ltd ("the Proponent")
ToR	Terms of Reference
Water Act	<i>Water Act 2000 (Qld)</i>
WRP	Water Resource Plan
WTP	Water Treatment Plant