

The Coordinator-General's Change Report

on the

Environmental Impact Statement

for the

Southern Regional Water Pipeline

May 2007

**UNDER PART (4) OF THE QUEENSLAND
STATE DEVELOPMENT AND PUBLIC WORKS
ORGANISATION ACT 1971**



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1.0 INTRODUCTION

This is the Coordinator-General's Change Report for the Southern Regional Water Pipeline Project prepared in accordance with section 35I of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). Its purpose is to evaluate the environmental effects of the Proposed Change to the project which was the subject of an evaluation in the Coordinator-General's Report signed 9 August 2006.

1.1 Background

The project Proponent, the Southern Regional Water Pipeline Company Pty Ltd (SRWPCo), is constructing the Southern Regional Water Pipeline (SRWP) from the Cameron's Hill Reservoirs at Mt Crosby in western Brisbane to Helensvale on the Gold Coast. A continuation of the pipeline beyond Helensvale to Molendinar was foreshadowed in the project scope.

The SRWP comprises:

- An initial 86 kilometres of high pressure water transmission pipeline;
- Four pump stations (Bundamba, Swanbank, Chambers Flat and Coomera);
- Two balance tanks (North Beaudesert and Stapylton);
- Provision for integrating supplies from new water storage infrastructure proposed for the Logan River catchment (Wyaralong Dam and Cedar Grove Weir);
- Connection to existing supply networks (Brisbane, Ipswich, Beaudesert, Logan and the Gold Coast regions); and
- A planned 8.5 kilometre extension of the pipeline between Helensvale and Molendinar with associated works, subject to identified need.

On 28 September 2005 the SRWP Project (Cameron's Hill to Molendinar) was declared to be a significant project for which an Environmental Impact Statement (EIS) is required in accordance with Part 4 of the SDPWO Act. The EIS would describe the alignment from Cameron's Hill to Helensvale with a subsequent assessment process required for the extension between Helensvale and Molendinar.

The draft EIS was advertised for public comment for a period of four weeks from 29 April 2006 and public and Advisory Agency submissions were received.

In response to the issues raised in submissions about the draft EIS the Proponent prepared a Supplementary EIS in June 2006. The draft EIS and the Supplementary EIS can be viewed and downloaded along with other related documentation via the SRWP web site at www.srwpalliance.com.au

An evaluation of the EIS under section 35 of the SDPWO Act was completed in August 2006 and it was determined that the project should proceed, subject to a number of conditions. It was concluded that the impacts described in the draft EIS and Supplementary EIS were able to be mitigated and managed effectively through implementation of the conditions set out in the Coordinator-General's Report. The Report may be viewed at www.coordinatorgeneral.qld.gov.au

1.2 Request for Project Change

Part 4, Division 3A of the SDPWO Act provides that the Coordinator-General can evaluate changes made to a project by a proponent of a significant project following completion of the Coordinator-General's report evaluating the EIS.

Section 35C of the SDPWO Act enables the Coordinator-General to evaluate the environmental effects of the proposed change, its effects on the project and any other related matters.

By letter dated 9 October 2006, SRWP Co. provided a written notice in accordance with section 35D of the SDPWO Act. The *"Report on a Proposed Change and its Effects to the Southern Regional Water Pipeline Project"* dated February 2007 details the proposed changes to the project, the environmental values of the study area, the effects of the changes on these values and potential mitigation measures.

2.0 DESCRIPTION OF THE PROPOSED CHANGE

The SRWP is an integral component of the South East Queensland Water Grid.

Initially it was proposed for the SRWP to link with the Gold Coast supply system by connecting into the Helensvale-Molendinar reticulation network at Helensvale. However, subsequent to the significant increase in the design capacity of the proposed desalination plant at Tugun, additional pipeline infrastructure is needed to accommodate the larger output from this new supply source. As identified during the development of the SRWP project, the extension of the pipeline to Molendinar provides the necessary augmentation to maximise the overall transfer capability of the regional network.

The Proposed Change to the project involves works associated with the continuation of the SRWP to Molendinar and essentially represents a duplication of similar elements of the reference Project which were subject to the EIS in 2006.

Proposed changes to the SRWP reference Project are:

- An additional 8.5 km section of pipeline extending from Helensvale to Molendinar;
- Pump station at Molendinar;
- Terminal storage tank at Molendinar; and
- Connection to pipework supplying the existing Helensvale Reservoir and the existing Molendinar Water Treatment Plant.
- Miscellaneous pipeline structures.

2.1 Helensvale to Molendinar Pipeline Extension

The 8.5 km extension to Molendinar was identified in the original project scope and represents about a 10% increase on the initial 86km Cameron's Hill to Helensvale proposal.

The Helensvale to Molendinar section has similar characteristics to the majority of the Cameron's Hill alignment. The pipeline will comprise steel pipe of approximately 900mm diameter buried to a nominal depth of between 750 - 900mm with additional cover provided to suit design or specific approval requirements.

The extension commences within the Wet n' Wild car park and then follows the Energex power line easement southwards before entering Studio Drive and Universal Street. At present, a subterranean crossing of the Binstead Way roundabout is proposed to avoid disruption to traffic and existing services before the alignment continues along Pacific Pines Boulevard.

The proposed corridor rejoins the Energex power line easement south of Glade Drive and follows it south across Hymix Road and Smith Street, below which it diverts away from the Energex easement to run along the north-bound off-ramp of the Pacific Highway at the Smith Street interchange.

The crossing point of the Pacific Highway and Gold Coast railway line is proposed at the southern end of the off-ramp where it joins the Pacific Highway at Gaven. Once east of the highway, the alignment runs to the north of Keen Road to rejoin the power line easement. It then crosses Keen Road and Kingsway Drive to enter the Molendinar Water Treatment Plant (WTP) from the north.

The alignment follows the existing Energex transmission line easement wherever practicable and responds to a significant number of constraints imposed by heavily populated residential areas, congested service corridors, existing transport corridors and future infrastructure upgrades, remnant vegetation, geology and landforms. It traverses a number of land use types and existing features including waterway, services, roads and railways.

The extension of the SRWP to Molendinar provides the additional network capacity to link with pipeline infrastructure from the desalination plant at Tugun for the delivery of water into the South East Queensland Water Grid.

This change results in an overall improvement in the transfer capability between existing and new supply sources on the Gold Coast and Brisbane supply sources.

2.2 Pump Station at Molendinar

A pump station is required as part of the Helensvale-Molendinar extension to maintain the dual flow capability of the SRWP.

The pump station is to be constructed within the boundaries of the Molendinar Water Treatment Plant (WTP) site and will have approximate dimensions of 27 metres by 15 metres and a maximum height of just over 10 metres. It will be similar to other pump stations proposed for the project and will be designed for automatic unmanned operation and low noise impact.

The Molendinar WTP is an industrial site with no sensitive users closer than 200 metres in proximity which will limit the potential for the pump station to impact on local amenity values.

2.3 Terminal Storage Tank at Molendinar

A 35 megalitre capacity storage tank comparable in size and similar to proposed balance tanks along the alignment from Cameron's Hill is to be constructed on the Molendinar WTP site.

There will be limited clearing of vegetation associated with the tank footprint as extensive vegetation removal has occurred in the past in developing the site for industrial purposes.

2.4 Pipeline Connections to the Helensvale Reservoir and the Molendinar Water Treatment Plant

An offtake to connect to the Gold Coast Water infrastructure at the Helensvale Reservoir will be within the Energex power easement. A small building (floor area approx 50m²) will be required to house the control valve on the offtake.

The offtake pipework continues eastward towards Entertainment Road to connect into an existing Gold Coast 900mm trunk main approximately 200 metres to the east of the SRWP.

2.5 Miscellaneous Pipeline Structures

Minor ancillary structures such as air valves, pegs marking the pipeline location and other small communication ports may be visible in the easement once the pipeline is constructed.

3.0 PUBLIC NOTICE/CONSULTATION

In December 2006, information letters about the proposed Helensvale to Molendinar extension were distributed by SRWPCo to residents within the vicinity of the pipeline corridor. Residents were advised that detailed surveys were to be undertaken for a new pipeline as part of the investigations into the number of potential alignments within Studio Village, Pacific-Pines, Gaven and Molendinar.

Community information stalls were held at the Studio Village Community Centre and Helensvale Plaza on 7 and 9 December 2006. Invitations were mailed to:- residents in proximity of the proposed route, local community groups, sports clubs, schools and businesses, and press advertisements were placed to advise the wider community. A total of 110 people attended across the two events.

Local councillors and elected representatives were also briefed on the project.

Pursuant to sections 35E, 35F and 35G of the Act, the Coordinator-General may require the proponent to publicly notify the change to the project in a way described by the Coordinator-General. Accordingly SRWPCo were advised by letter dated 7 February 2007 that the company should publicly notify the Proposed Change to the project in the Courier Mail and any other way the company decides and set a four (4) week submission period commencing on 10 February 2007 and concluding on 10 March 2007.

On 10 February 2007 the Proposed Change was publicly notified in *The Courier Mail* and *Gold Coast Bulletin* and written submissions about the Proposed Change and its effect on the project were invited. The Notice and the *“Report on a Proposed Change and its Effects to the Southern Regional Water Pipeline Project”* were also made available on The Coordinator-General’s website and the SRWP project website.

During the submission period details of the Proposed Change were also made available for review at nominated libraries, various Gold Coast City Council offices, as well as Information and Community Centres across the Gold Coast area.

Respondents were able to contact a Community Information Line (telephone service) for further information.

No written submissions about the Proposed Change were received by the close of the submission period on 10 March 2007.

The proponent has engaged with relevant agencies that have a direct interest in the Proposed Change and consultation will be ongoing with the relevant stakeholders about statutory processes associated with the various clearances, permits and approvals required for the pipeline.

4.0 EVALUATION OF ENVIRONMENTAL EFFECTS

Section 35H of the SDPWO Act identifies the matters which the Coordinator-General must consider in evaluating the environmental effects of the change, its effect on the project and any other related matters. It is not intended that the effects of the entire project be re-evaluated, rather only the effects of the change relative to the project that was the subject of evaluation in the Coordinator-General's Report of August 2006.

In accordance with section 35H of the SDPWO Act, in evaluating the environmental effects of the proposed changes and their effects on the project, I have considered:

- the nature of the Proposed Change and its effect on the project;
- the project as evaluated in the Coordinator-General's report under section 35; and;
- the environmental effects of the Proposed Change and its effect on the project.

I have also considered whether any of the Coordinator-General's conditions and recommendations set out in Attachment A of the Coordinator-General's Report should be amended in accordance with section 35I(2) in order to effectively manage the impacts of the Proposed Change.

In making my evaluation I have had regard to the following material:

- Applicable sections relevant to the Proposed Change in the EIS, study reports supporting the EIS and the Supplementary Report to the EIS;
- *SRWP Project – Construction Environmental Management Plan* and associated Management Plans that address specific environmental issues;
- *Report on a Proposed Change and its Effects to the Southern Regional Water Pipeline Project – February 2007*;
- Conditions applying to the reference project as provided in Attachment A of the Coordinator-General's Report (August 2006);

The following sections evaluate the Proposed Change, its impacts and the suitability of the Coordinator-General's conditions to adequately mitigate potential adverse impacts of the Proposed Change, its effect on the project or any other related matters.

4.1 Helensvale to Molendinar Pipeline Extension

The Proposed Change involves an approximate 8.5 km continuation of the SRWP from Helensvale to Molendinar. The pipeline traverses highly modified environs for most of this length with land use types primarily dominated by urban, industrial and road landscapes and utilities easements. The preferred pipeline alignment utilises the existing Energex transmission easement wherever possible to minimise disruption to individual property owners and reduce potential impacts on fauna and flora.

A full description and impacts of the change are described in detail in the *“Report on the Proposed Change and its Effects to the Southern Regional Water Pipeline Project – February 2007”*.

4.1.1 Impacts on matters of National Environmental Significance

The reference Project was declared to be a ‘controlled action’ by the Department of the Environment and Heritage (DEH) in February 2006. In August 2006 the project was approved with conditions that included the management of activities that had potential to impact on matters of National Environmental Significance (NES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The methodology used to identify and assess NES issues for the reference Project has been adopted for the Helensvale to Molendinar section. The desk top searches of species databases identified the potential for NES species as well as species having high conservation significance to be present in the wider area.

A field vegetation survey was conducted but no rare or threatened plant species were recorded on or near the proposed alignment. I note the comment in the report that this is not surprising given the pipeline travels easements or road reserves that have been previously cleared and existing vegetation is in a highly disturbed and degraded state.

Similarly not all the significant fauna species identified from various databases were detected during current surveys of the local area. Evidence of Koala was recorded and the species is considered as having high potential to be present during works. Also the Grey-headed Flying-fox is considered a common species in the local landscape but no camps were found. Other significant species predicted likely to occur in the study area but not recorded during the surveys include the Powerful Owl (*Ninox strenua*), Glossy Black Cockatoo (*Calyptorhynchus lathami*), Grey Goshawk (*Accipiter novaehollandiae*), Tusked Frog (*Adoletus brevis*), Short-Beaked Echidna (*Tachyglossus aculeatus*) and the Platypus (*Ornithorhynchus anatinus*). Five migratory bird species are also likely to occur on the alignment:- the Clamorous Reed Warbler (*Acrocephalus stentoreus*), White-throated Needletail (*Hirundapus caudacutus*), Spectacled Monarch (*Monarcha trivirgatus*), Satin Flycatcher (*Myiagra cyanoleuca*) and Great Egret (*Ardea alba*).

I am satisfied that the vegetation and fauna survey reports adequately explain that the surrounding landscapes provide for the requirements of these species. I support the assertion that the Proposed Change is not expected to have a detrimental effect on the long-term survival of any populations or endanger a safe future for species that frequent the local area, given the combination of:- a highly disturbed alignment; the very small amount of habitat clearing to be undertaken; and the mitigation strategies that are available to minimise and manage impacts.

Despite the highly disturbed nature of the proposed Helensvale to Molendinar corridor six sites along the route were identified as retaining valuable native vegetation and landscape features that provide valuable habitat for a range of fauna species.

The Report on the Proposed Change suggests that the proposed works can be conducted with little or no significant ecological impacts if works are conducted in accordance with approved SRWP management procedures. Existing fauna habitat values can be maintained and/or enhanced.

Suitability of Existing Conditions

I acknowledge that the selection of the alignment essentially avoids areas of environmental value and there are mitigation measures available to manage impacts and minimise habitat loss through existing procedures that cover specific sensitive area management, vegetation removal, erosion control, weed control, and revegetation.

I am satisfied that the impacts of the Proposed Change on matters of National Environmental Significance can be managed effectively through the application of existing conditions.

4.1.2 Terrestrial Flora and Fauna

Biological features along the proposed route were assessed by desktop and field studies to determine the likely impacts on species of flora and faunas well as ecological communities in the vicinity of the alignment. The methodology adopted for these studies is similar to the approach taken in determining potential impacts for the larger project.

The *Vegetation Survey Report* and the *Fauna and Habitat Report* contained in the Proponent's report (February 2007) detail the survey methods and findings of the various assessments on the terrestrial environment.

The effects of constructing the pipeline are:

- Potential impacts on flora although the overall impact on native flora and plant communities is minimised as the alignment is located in cleared areas and disturbed regrowth along powerlines and roads;
- Low likelihood of impacting on endangered Regional Ecosystem identified at locations:- Coombabah Creek to Hymix Road; south of Smith Street (west of Pacific Hwy; Sommadatta Court; and north of Keen Road (east of Pacific Hwy);
- Medium-low likelihood of impacting on endangered Regional Ecosystem identified at Banyula Drive;
- Little impact on native plant diversity which in general is very low in vegetated areas;
- Low and avoidable impact on seven (7) areas of remnant vegetation identified in the vicinity of the alignment;
- Potential to impact on valuable habitat in portions of the study area that retain native vegetation and landscape features such as remnant bushland and wet areas including Galapagos Way wetland, Navua Court wetland, Smith Street habitat trees, Banyula Drive habitat trees; Banyula Drive ponds; and Keen Road drainage line;
- Potential to impact on species having special conservation significance that were detected or predicted likely to occur in the study area but were not recorded;

- Potential to impact on specific fauna groups such as nesting birds, koalas and other arboreal mammals, and reptiles.
- Potential to impact on five migratory bird species likely to occur on the alignment; and
- A temporary loss of visual and landscape amenity along the alignment during construction through the removal/disturbance of remnant and planted vegetation.

Suitability of Existing Conditions

Areas of environmental significance are essentially avoided by locating the pipeline in existing cleared areas such as power line easements and roads. There are only two areas where clearing is required, and where practical, clearing will be restricted to the edges of established communities.

I consider that the management of potential vegetation impacts can be adequately mitigated in the assessment of an operational approval to clear vegetation under the *Vegetation Management Act 1999*.

The proposed impacts of the removal, destruction and damage of native vegetation in the pipeline corridor can be adequately managed and the impacts mitigated through the implementation of the approved SRWP Project – Construction Environmental Management Plan (EMP) and the associated Vegetation Management Plan, as required by Condition 19, Attachment A of the Coordinator-General’s Report.

Implementation of the Vegetation Management Plan can effectively mitigate the potential impacts on endangered Regional Ecosystems and the areas of remnant vegetation identified by the assessment studies through measures outlined in the Plan such as the establishment of “no-go” zones, selective clearing and restricting corridor widths.

The protection of local habitat by minimising clearing and habitat disturbance can be managed by implementing sediment and erosion control as appropriate and through reinstatement of disturbed areas. These activities can be guided by the Soil and Water Management Plan, Rehabilitation Plan and Weed Management Plan referenced in the Construction EMP.

Specific management recommendations in relation to Koala management are contained in the *Fauna and Habitat Assessment Report* (prepared by consultant Biodiversity Assessment and Management Pty Ltd) and I note SRWP’s commitment to incorporate these into the SRWP Fauna and Management Plan of the Construction EMP.

Potential impacts on flora and fauna can be further addressed in the detailed design by judiciously locating pipeline infrastructure to minimise local and downstream impacts to habitat.

I am satisfied that the impacts of the Proposed Change on flora and fauna can be managed effectively through the application of existing conditions with an amendment of Condition 19 to reflect the inclusion of conditions specific to Koala .

4.1.3 Aquatic Environment

The three (3) watercourses of interest to be crossed by the alignment were assessed on the same methodology as developed for the EIS. These watercourses are: - Coombabah Creek, Galapagos Way and a drainage line north of Keen Road.

The catchment area of Coombabah Creek includes a number of areas of conservation value. Lake Coombabah some 5km downstream of the crossing point is classified as a 'conservation' and 'habitat' zone under the Marine Parks (Moreton bay) Zoning Plan 1997, is a declared fish habitat area under the *Fisheries Act 1994* value and has status under Ramsar, the China-Australia Migratory Bird Agreement (CAMBA) and the Japan-Australia Migratory Bird Agreement (JAMBA).

Coombabah Creek is approximately 10 meters wide at the crossing point and is upstream of the Pacific Highway (tidal limit), between Galapagos Way and Hymix Road. At the crossing point the riparian zone in the immediate vicinity of the Energex easement has experienced significant disturbance as a result of clearing under the transmission line and is heavily overgrown with exotic species. Also both Coombabah Creek and Lake Coombabah have experienced elevated sediment and nutrient loads as a result of rapid development within the catchment.

As such, I note the Proponent's commitment that construction management will focus on avoiding the release of sediment and other pollutants and maintaining or bettering current water quality in the creek.

The drainage line at Galapagos Way is a small freshwater drainage line and although it retains narrow riparian vegetation that provides habitat opportunities, the riparian condition reflects a history of disturbance commonly associated with highly urbanised landscapes.

The Keen Road drainage line is a narrow gully that also provides potential fauna habitat at the base of a footslope that supports regrowth vegetation.

The proposed method of open trenching through the bed of the three waterways is considered suitable for each location and the ephemeral nature of these watercourses provides the added advantage of least time for construction and hence minimal opportunity to impact on water quality and rapid turn around in reinstating disturbed banks.

Generally the crossing locations have been previously cleared and this has resulted in significant degradation of the riparian area. Potential exists for flow to be interrupted during construction and temporary sediment and erosion control measures will be required to prevent downstream sediment transfer during construction. Effective rehabilitation of disturbed areas will be essential to eliminate erosion risk when flow recommences.

Suitability of Existing Conditions

I consider that the management of potential impacts on the aquatic environment from activities in the watercourses can be adequately mitigated in the assessment of a riverine protection permit to undertake works in a watercourse under the *Water Act 2000*.

The Soil and Water Management Plan, Rehabilitation Plan and Weed Management Plan attached to the Construction EMP provide appropriate measures to mitigate the risks on the aquatic environment created by construction activities within, and adjacent to, watercourse crossings.

I am satisfied that the impacts of the Proposed Change on the aquatic environment can be managed effectively through the application of existing conditions.

4.1.4 Landholders

Where practicable the alignment is located within existing easements or road reserves to minimise the disruption to individual property owners. However approximately 40 properties will be affected by the grant of easement for pipeline construction.

SRWPCo has a Land Acquisition Policy that supports a comprehensive process to engage with landholders to inform, address issues and explain the processes relating to accessing land or acquiring easement and/or tenure over land. SRWPCo aims to obtain voluntary agreement on securing timely access to land and/or acquiring easements/tenure through commercial negotiations. A large proportion of the land requirements for the referenced Project have been successfully secured through this process.

Although construction impacts on landowners are considered temporary the Proponent is committed to engaging with owners to meet both their short and long term expectations and concerns. The Construction EMP will guide site activities to address and mitigate construction impacts including maintenance and rehabilitation of disturbed areas.

SRWPCo has already undertaken preliminary discussions with various entities on co-locating the pipeline within existing easements and is committed to working closely with all parties that have an interest in land that is impacted by the project.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change on landholders can be managed effectively through the application of existing conditions.

4.1.5 Erosion and Sedimentation

Activities associated with vegetation clearing, preliminary works, construction and operation all have potential to contribute to or cause adverse impacts through erosion and sedimentation transfer. The erosion risk for soil types within the study area is influenced more by slope than soil type with the areas at greatest risk being stream banks at pipeline crossing points and where general terrain slopes exceed 10%.

The Sediment and Water Management Plan and the Rehabilitation Plan in the Construction EMP include comprehensive methods for utilising best practice management techniques and appropriate revegetation measures to ensure that the pipeline development does not initiate or exacerbate soil erosion.

Appropriate choice of alternatives such as micro-tunnelling over open trenching at crossings provides alternatives that potentially can avoid or minimise impacts in erosion prone areas.

Suitability of Existing Conditions

I believe good management techniques are proposed to minimise sediment impacts resulting from pipeline works. I acknowledge the Proponent's intentions to progressively remediate sites post-construction at the earliest opportunity to minimise impacts in the construction areas.

I am satisfied that the impacts of the Proposed Change in regard to erosion and related sedimentation transfer can be managed effectively through the application of existing conditions.

4.1.6 Site Rehabilitation

The Proponent recognises the rehabilitation stage as an important component of the construction phase and one that can provide a positive impact for pipeline development.

The Rehabilitation Management Plan in the Construction EMP provides best practice guidance for remediating sites post-construction to minimise impacts on the construction areas.

The Proponent has committed to revegetating all cleared sites with species endemic to the area and to restore work fronts progressively as construction proceeds.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change in regard to rehabilitation of disturbed areas can be managed effectively through the application of existing conditions.

4.1.7 Contaminated Land

Two registered sites on the Environmental Protection Agency's (EPA) Environmental Management Register (EMR) (for landfill and chemical storage) are located directly on the pipeline extension, though neither appears on the Contaminated Land Register (CLR).

However the current management of these registered sites means that it is unlikely that the development of pipeline works will provide an opportunity for the spread or migration of contaminants from the site.

All on-site impacts associated with contaminated land will be managed through the SRWP Contaminated Land Management Plan in the Construction EMP. All dealings with contaminated land shall involve consultation with the EPA.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change on contaminated land can be managed effectively through the application of existing conditions.

4.1.8 Acid Sulphate Soils

Given the Helensvale to Molendinar alignment traverses low-lying coastal areas the potential exists for acid sulphate soils (ASS) to be encountered on coastal lowlands predominantly below 5m Australian Height Datum (AHD). The EIS identified the area around the Wet 'n' Wild Entertainment precinct as an ASS sensitive area where disturbance could trigger acid sulphate generation which would require appropriate management and disposal.

Where ASS or Potential acid sulphate soils (PASS) are identified reference should be made to the Acid Sulphate Soil Management Plan in the Construction EMP. The plan has been developed in accordance with the EPA *“Instructions for the treatment and management of acid sulphate soils (2001)”* in consultation with the EPA.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change on acid sulphate soils can be managed effectively through the application of existing conditions.

4.1.9 Air, Noise and Vibration

For large sections of the Helensvale to Molendinar traverse the pipeline route is in close proximity to urban or rural residential areas.

The reference Project is being undertaken under an approved EIS which identified the general impacts on air quality, noise and vibration arising from various construction elements and the Proposed Change will generate similar impacts.

The impact of the Proposed Change on air quality is likely to result from dust generation during construction typically from mechanical operations, transport activities, vegetation clearing, earthwork operations and wind. These impacts are generally of short duration as the construction team works through the area and can be mitigated by minimisation of cleared areas and the use of watering applications.

I am satisfied the application of the SRWP Air Quality Management Plan in the Construction EMP is appropriate to manage air quality issues arising from the Proposed Change.

Noise levels during construction will be highly dependent on the type of construction activities undertaken, their duration and location with the most significant noise source being the operation of mechanical plant and equipment, blasting operations and rock breaking activities.

To address noise impacts construction times will be tailored to generally occur during daylight hours with further limitations on weekends. Strategies for noise minimisation and management include:- notifications to residents on dates and times of construction activities; ensuring plant is properly attenuated to muffle noise; and scheduling noisy activities singularly rather than concurrently.

Blasting operations may be necessary to assist in excavating material when hard rock is encountered. Both noise and vibration will be associated with blasting and as such the application of the SRWP Noise and Vibration Management Plan provides the measures to mitigate the effects, measure and monitor vibration levels and include methods to ensure blasting vibrations remain within acceptable criteria for any nearby residents and the environment. This will include a process that involves community consultation in determining the time of day of blasting activities, provision of advanced notice and tailoring blast design to minimise impacts.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change relating to air, noise and vibration can be managed effectively through the application of existing conditions, notably Condition 8 (Noise Management) and Condition 9 (Blasting).

4.1.10 Cultural Heritage

The Proponent has advised that a Cultural Heritage Management Plan (CHMP) for the Helensvale to Molendinar alignment has been developed and approved under the *Aboriginal Cultural Heritage Act 2003*.

Implementation of the CHMP provides for amongst other things the management of construction activities to avoid potential harm to heritage. The management of two sites recorded on the cultural heritage database as being within a 50 metre buffer of the proposed alignment has been included in the CHMP.

Suitability of Existing Conditions

I am satisfied that Condition 10 (Cultural Heritage) of the Coordinator-General's Report remains relevant and that the impacts of the Proposed Change on cultural heritage can be managed effectively through the application of existing conditions.

4.1.11 Native Title

In November 2006 SRWP commenced preparations for informing and engaging relevant interested parties for the Helensvale to Molendinar alignment as per Part 7 of the *Native Title (Queensland) Act 1993*. In the absence of a native title party for the section, SRWPCo will consult with an endorsed party to ensure the project meets its duty of care requirements.

I note the Proponent's commitment that where native title is found to exist or potentially exist along the pipeline corridor, SRWPCo will meet its legal obligations and fulfil the procedural rights of native title parties.

4.1.12 Non-Indigenous Cultural Heritage

Given the relatively short pipeline length involved in the Proposed Change and the disturbed nature of the existing transmission easement which will be used for much of the traverse it is considered unlikely that any previously unrecorded items of historical interest will be found.

I note that searches of the local, state and national registers to identify any historical sites that could be potentially impacted upon by the pipeline did not reveal any records of heritage sites of interest or affected lots on the proposed alignment.

The SRWP's Heritage Management Plan in the Construction EMP requires the identification and significant sites, places and landscapes and I note that the alignment will be walked to audit and verify any unrecorded items of cultural interest which may be impacted. An outcome of these searches will include the production of a report that assesses the significance of any sites etc and identifies any potential impacts that development in the area may have and recommendations for the avoidance and/or minimisation of impact.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change on non-indigenous cultural heritage can be managed effectively through the application of existing conditions.

4.1.13 Traffic, Transport and Access Arrangements

The pipeline has the potential to become an encumbrance on major transport infrastructure proposed in the vicinity of the Smith Street Motorway and Pacific Motorway interchange including:-

- the Gold Coast Rapid Transport Corridor;
- a possible station on the Gold Coast Rail Line;
- the proposed Inter Regional Transport Corridor running parallel to the Gold Coast Rail Line; and
- the proposed extension of the Smith Street Motorway to the west of the Pacific Motorway with the associated alteration to the existing motorway on and off ramps.

However the selection of a pipeline alignment which will not conflict with construction of future transport infrastructure has been undertaken in consultation with the Department of Main Roads.

Pipeline construction activities will have a number of effects on the road network that will require localised and temporary closure of lanes on several roads under the control of the Gold Coast City Council. A section of the M1 north-bound off-ramp to the Smith Street Motorway (controlled by the Department of Main Roads) interchange with the Pacific Motorway will also need to be closed.

I note that the route and the possible and proposed traffic management arrangements to implement the lane closures have been discussed and agreed in principle by the Gold Coast City Council and Department of Main Roads. The accepted approach to deal with transport issues is through the preparation of Traffic Control Plans which need to be submitted for approval of the relevant road authority prior to the commencement of works. I am satisfied that the SRWP Traffic Management Plan in the Construction EMP addresses this element which includes the preparation of Traffic Control Plans as part of the overall Traffic Management Plans which are required by the Department of Main Roads.

The construction method used for road crossings will be influenced by the degree of impact on traffic with micro-tunnelling preferred where disruptions to traffic operations are unacceptable in terms of delay and congestion. Open trench construction will be undertaken on roads with low traffic volumes where the disruption to motorists can be managed to within acceptable limits.

Haulage of construction materials can impact on road pavements and procedures have been established to assess any accelerated deterioration of road surfaces. Accelerated pavement deterioration on State Controlled Roads will be assessed in accordance with the Department of Main Roads '*Guidelines for Assessment of Roads Impacts of Development*'. Roads under the control of the Gold Coast City Council will be assessed prior to construction with follow-up inspections taken if required to determine any appropriate remedial treatments that would be negotiated with Council.

Suitability of Existing Conditions

I am confident that the impacts associated with the management of local area traffic during construction can be managed satisfactorily through the requirement for Traffic Management Plans.

Condition 15 in Attachment A of the Coordinator-General's Report requires the preparation and implementation of a Traffic Management Plan to avoid where practicable, or minimise and mitigate traffic impacts, attributable to the project. This condition is considered adequate to address the likely impacts associated with the Proposed Change.

Accordingly I am satisfied that the impacts of the Proposed Change with respect to traffic management can be managed effectively through the application of existing conditions.

4.1.14 Waste Management

The Proposed Change will generate similar types of construction and domestic waste as identified in the EIS for the referenced Project. Waste may include cleared vegetation, concrete waste, reinforcement off-cuts, packaging, water and chemicals used in pigging, oils and plant maintenance wastes as well as drink / food wrappings.

I believe the Proponent has demonstrated positive and workable strategies for the minimising, handling and disposal of waste as addressed in the Construction EMP and associated Waste Management Plan.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change with respect to waste management can be managed effectively through the application of existing conditions.

4.2 Pump Station at Molendinar

The Molendinar Pump Station is to be constructed within the existing Molendinar Water Treatment Plant site.

Pump station construction essentially comprises typical building type work and internal fit-out and as such it is expected that any impacts from site preparation and construction activities can be appropriately managed through the application of the appropriate Management Plan in the Construction EMP.

From an operational perspective the pump station is designed for noise attenuation and with no residences or other sensitive receptors within 200 meters of the pump station no noise impact is expected.

Ongoing operations will be managed in accordance with relevant Management Plans that will be prepared as part of the development of an Operation EMP.

Condition 20 in Attachment A of the Coordinator-General's Report requires the preparation of the Operation EMP in consultation with the Environmental Protection Agency, Queensland Health, the Department of Primary Industries and the Department of Natural Resources and Water (formally the Dept of Natural Resources, Mines and Water).

The Operation EMP must be submitted to the Environmental Protection Agency prior to the completion of construction activities.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change in relation to the new pump station can be managed effectively through the application of existing conditions.

4.3 Terminal Storage Tank at Molendinar

The Proposed Change to the project also requires the construction of a large storage tank within the existing Molendinar Water Treatment Plant to assist with overall operation of the pipeline.

The tank is comparable to the balance tanks proposed at two other locations along the reference Project and the impacts from construction will be similar, given the same construction methodology and techniques will be employed. However as significant vegetation clearing occurred at the time of the initial development of the Molendinar industrial site, it is unlikely that any preparatory clearing work for the tank footprint poses any threat to critical ecological processes.

It is expected that the impacts from construction activities associated with this infrastructure can be appropriately managed by application of the appropriate Management Plan in the Construction EMP.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change in respect of the Molendinar storage tank can be managed effectively through the application of existing conditions.

4.4 Pipeline Connections to the Helensvale Reservoir and the Molendinar Water Treatment Plant

Connections to major infrastructure components primarily involve pipe laying related activities which are guided by the relevant Management Plans contained in the construction EMP.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change can be managed effectively through the application of existing conditions.

4.5 Miscellaneous Pipeline Structures

Miscellaneous pipeline structures such as air valves, pegs marking the pipeline location and other small communication ports are a typical feature of water pipeline infrastructure. These items assist with operational functionality and any impacts will be addressed by the Operation EMP which is required to be developed for the Project.

Suitability of Existing Conditions

I am satisfied that the impacts of the Proposed Change can be managed effectively through the application of existing conditions.

5.0 CONCLUSION

I have evaluated the environmental effects of the proposed changes and their effects on the project according to Part 4 of the SDPWO Act. I have considered the matters outlined in section 35H of the SDPWO Act and as outlined in section 4.0 Evaluation of Environmental Effects.

The *“Report on a Proposed Change and its Effects to the Southern Regional Water Pipeline Project” (Feb 2007)* identified and assessed a range of environmental impacts associated with the planning, design and construction of the SRWP between Helensvale and Molendinar.

I consider that the nature of impacts that may result from the Proposed Change to the project are similar to the range of impacts as assessed in the Coordinator-General’s Report of August 2006 for the referenced Project, namely:

- Matters of National Environmental Significance
- Terrestrial Flora and Fauna
- Aquatic Environment
- Landholders
- Erosion and Sedimentation
- Site Rehabilitation
- Contaminated Land
- Acid Sulphate Soils
- Air, Noise and Vibration
- Cultural Heritage
- Native Title
- Non-indigenous Cultural Heritage
- Traffic, Transport and Access Arrangements
- Waste Management

The majority of the Helensvale to Molendinar alignment is within existing disturbed public easements or road reserves and as such poses no significant constraint to the long-term functioning of critical ecological processes.

However the nature and duration of construction activities required to implement this part of the project has the potential to impact community activities and a high level of community consultation is required to manage these disruptions.

The comprehensive Construction Environmental Management Plan developed for the project contains detailed Management Plans for specific environmental issues. The Construction EMP will guide construction activities associated with the Proposed Change to minimise and manage impacts.

An Operational Environmental Management Plan shall be prepared and approved prior to completion of construction activities.

I am confident that the potential impacts arising from a continuation of the pipeline to Molendinar and the ancillary works relating to this extension can be effectively managed through the collective application of:-

- the existing or amended Project Conditions applying to the project which requires the implementation and compliance with the approved Construction EMP and its series of specific Management Plans;
- the implementation of an approved Operational EMP; and
- the Proponent fulfilling the commitments made to the Project.

In accordance with section 35J of the SDPWO Act, a copy of this report will be provided to the Proponent and will be made publicly available on the Coordinator-General's website.

Ken Smith
Coordinator-General

6.0 CONDITIONS

In the Coordinator-General's Report I recommended conditions for the undertaking of the Southern Regional Water Pipeline project. In accordance with Division 8 of the Act, these conditions are taken to be imposed for the undertaking of the project and apply to anyone that undertakes the project.

After considering the matters set out in s35H of the Act I am of the opinion that, for the most part, the conditions of the Coordinator-General's Report remain appropriate and sufficient to ensure that impacts arising from the construction and operation of the project are minimised and/or managed appropriately.

For the purposes of s54B, the project is the SRWP reference Project evaluated in the Coordinator-General's Report as modified by the changes described in the "*Report on a Proposed Change and its Effects to the Southern Regional Water Pipeline Project*". The effect of the Coordinator-General's Change Report (May 2007) is that conditions imposed for the undertaking of the project in the Coordinator-General's Report apply in addition to the conditions imposed and amended here.

Unless amended here, the conditions imposed in the Coordinator-General's Report apply for the undertaking of the Project.

Condition 19: Environmental Management Plan: Construction

In compliance with Condition 19 a Construction Environmental Management Plan (Doc number: BEG601-A-PLN-013) has been developed for the Project and approved by the Environmental Protection Agency.

A series of Management Plans attached to the Construction EMP address specific environmental issues associated with each element of the Project including a Fauna Management Plan (BEG601-A-PLN-037).

Amend the Fauna Management Plan (BEG601-A-PLN-037) prior to the commencement of construction of the Helensvale to Molendinar extension to include the following specific requirements relating to Koalas to support the policy intent of the *Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006-2016*.

- Ensure Koalas can safely leave the site of clearing and relocate to adjacent habitat;
- Ensure that Koalas are not pressured, through loss of habitat, to cross roads or move through developed or disturbed areas, or areas that require movement over cleared ground to reach suitable habitat;
- Ensure that there is no clearing of vegetation between the hours of 6pm and 7am;
- Ensure that a fauna spotter is on site prior to the commencement of and during clearing operations. The fauna spotter will check and clear vegetation prior to its being cleared. In the case of a Koala being present the fauna spotter will not physically move Koalas from a tree in which they are residing. Rather, the tree and immediate surrounds will be marked and the tree will not be felled, damaged or interfered with until the Koala has moved from the tree of its own volition;
- maintain construction sites as dogfree areas for the life of the project;
- Implement a suitable rehabilitation program to enhance the value of the subject land for the local and surrounding Koala populations using appropriate habitat

species. Species selection should be consistent with pre-clearing vegetation and seed stock should be preferably sourced from known on-site food trees prior to removal:

- Provide for the planting of trees at a density to mirror surrounding undisturbed areas;
- Plants used should comprise 70% of native plants of which 50% are native to the locality and include trees of the genera *Eucalyptus*, *Corymbia*, *Angophora*, *Lophostemon* or *Melaleuca*;
- Provide a range of understorey and groundcover species in addition to canopy species to provide a natural environment and ecosystem function of plants to the site. Koalas commonly shelter in shadier understorey species such as *Casuarina*, *Banksia*, *Melaleuca* and *Acacia*;
- Plant trees well space (minimum of 3 m apart) in groupings rather than dense mass plantings;
- Allow for adequate monitoring and maintenance of planting sites including watering, mulching and weeding until the plants are able to survive without human intervention; and
- Provide for restoration of degraded areas to mirror former landscape.