

5.0 POTENTIAL IMPACTS & MANAGEMENT – OPERATION AND MAINTENANCE

5.1 PIPELINE FAILURE

During pipeline construction the integrity joints and the pipe itself will be assessed through Non Destructive Testing (NDT) e.g. radiography or ultrasonic inspection) and hydrotesting. A cathodic protection system will be installed. Successful completion of these phases will ensure that the potential for leaks from the buried pipeline will be low. A key component of the operation of the pipeline will be an ongoing integrity management program. As such the risk of failure will be remote.

The potential impacts from failure or accidental rupture of the pipeline depend on the scale of the failure. A risk assessment in accordance with AS 4680 will be undertaken as part of the EIS process. Safeguards for such a failure will be incorporated into the Safety Management Plan.

5.2 EROSION

Areas along the proposed corridor traverse a range of soil types including clay and sand. The erosion potential of these different soils will be assessed as part of the EIS process and appropriate soil conservation works will be identified. It will be imperative that ROW maintenance be regularly undertaken to ensure that the integrity of soil conservation works installed during restoration are maintained and vegetative cover is promoted to ensure minimal soil loss.

The EMP will detail appropriate maintenance requirements with regards to sediment and erosion control requirements for the ROW. The implementation and maintenance of erosion control will be in accordance with best practice.

5.3 FRAGMENTATION

The environmental effects of operation and maintenance of the proposed pipeline are considered to be low. A maintenance track (generally only light vehicles) will be required and the ROW will be kept clear of large vegetation (trees and bushes) to a width of 6 metres. Grasses will be re-established in the ROW using native varieties.

Effects on ecosystem of a 6 m wide grassed corridor are not considered significant relative to the natural spacing of trees in the eucalypt woodlands and grasslands within the study area. A 6 m wide corridor is not considered to constitute fragmentation of those ecosystems or to result in any inhibition of natural ecosystem function or fauna movement in these ecosystems.



5.4 PEST SPECIES

Another threat to ecosystems and native flora and fauna is the introduction and spread of pest species. Pest plant species can displace native species, which in turn can impact on fauna habitat and food sources, thereby altering ecosystem function. Where vehicles are travelling over distances particularly from weed infested areas to weed free areas, weed introduction can be a serious issue.

It will be a requirement that for the life of the proposed project, a Weed Management Plan will be formulated and implemented to prevent the spread of declared and environmental weeds along the proposed pipeline route. Requirements and responsibilities for the maintenance program will be outline in the EMP.

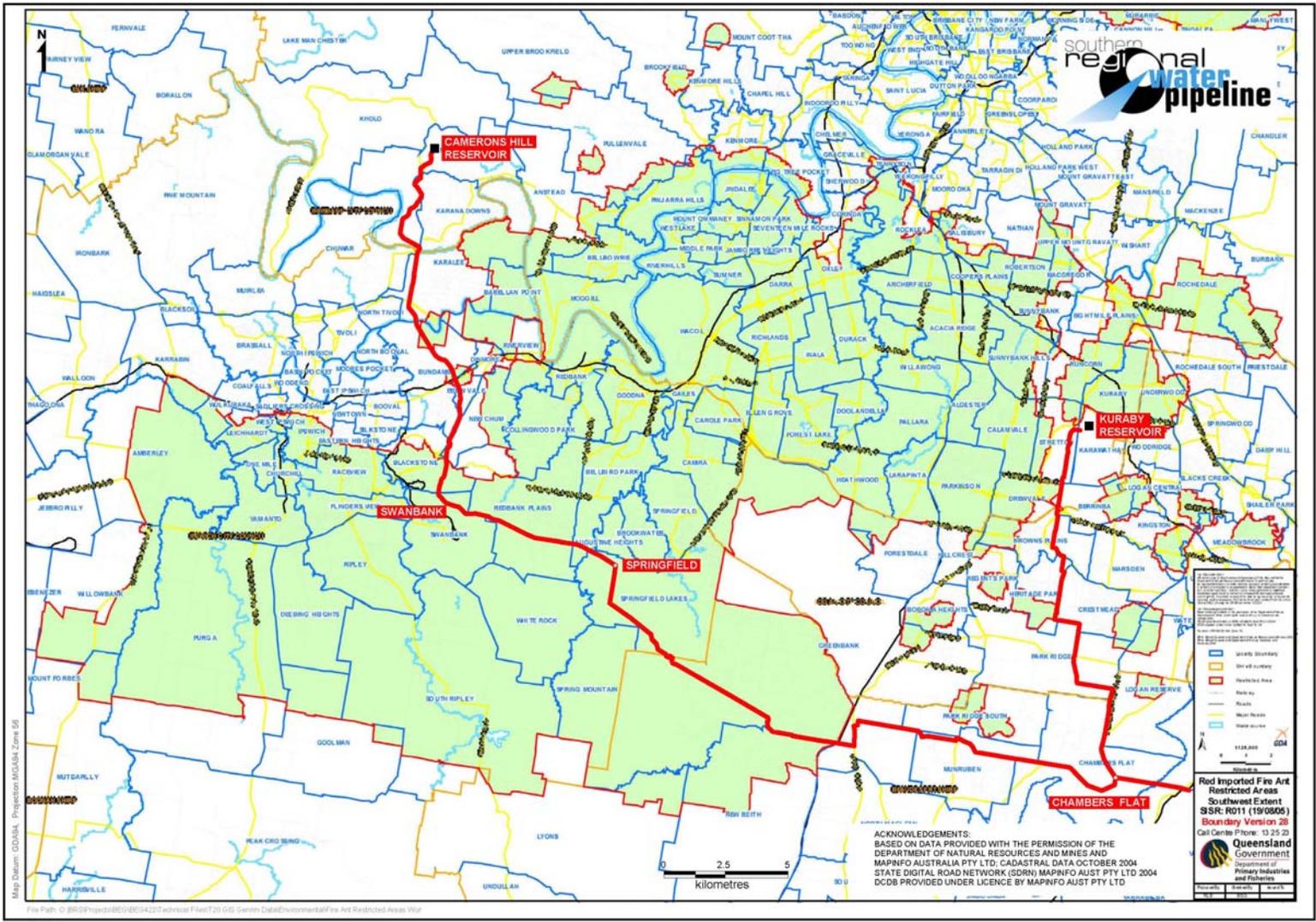
The section of the pipeline between Redbank Plains Road and the Brisbane Sydney Rail Line, the Bundamba and Swanbank pump stations and the Beaudesert balance tank are within the South-West Fire Ant Restricted Area. An approved Risk Management Plan will be developed and implemented for all construction, rehabilitation and maintenance activities in accordance with DPI requirements.

5.5 NOISE AND VIBRATION

The only noise generated in the operation the pipeline will be that emanating from the pump stations. As described in Section 4.9 above, the pump stations will be isolated from residential areas and be surrounded by vegetated bunds. In addition the stations will have acoustic doors and vents to reduce noise.

Modelling of the impacts of these facilities will be undertaken as part of the EIS and amelioration of noise will included in the final design as necessary.





August 2005

FIRE ANT RESTRICTED AREAS



6.0 COMMUNITY CONSULTATION

A well designed, strategic and executed community consultation program is essential to the overall success of this project. To this end SRWPCo will implement a comprehensive community consultation and awareness program which will inform communities about the nature of the project; the construction and operational impacts; and the derived benefits.

Furthermore the consultation program will seek input from the community and this information will be taken into account during deliberations in order to achieve the optimal outcome for all parties.

It should be noted that preliminary route identification has already focussed on avoiding residential areas where possible and maximizing the use of existing infrastructure corridors in an effort to minimize impact on the community.

6.1 PURPOSE

The purpose of the Communication Stakeholder Management Plan (CSMP) will be to facilitate input from stakeholders by:

- Providing them with a clear understanding of the project; the potential impact and benefits; and the timelines
- Providing information exchange mechanisms and suitable methods of identifying and servicing their concerns.

6.2 AIMS

The Aims of the Communication Stakeholder Management Plan will be to:

- Identify all stakeholders and provide them with information that meets their needs.
- Promote understanding of how the pipeline forms part of the regional water planning infrastructure.
- Provide the community with accurate, relevant and timely information on the project enabling them to provide informed comment throughout the EIS process.
- Build understanding of how this pipeline will benefit the community and the region as a whole.
- Establish effective relationships with each local authority's communication personnel to ensure they direct enquiries to an appropriate member of the consultation team.
- Ensure all government agencies are appraised of the progress of the project and the regulatory processes.



- Proactively engage the media to promote accurate and balanced reporting on the pipeline and SRWPCo.

6.3 PROGRAM

The CSMP will be undertaken in a strategic and ordered fashion. The elements of the program are described below:

- **Identification of Key Stakeholders** – SRWPCo is currently identifying all stakeholders who may be impacted by the project (e.g. landowners, mining interests, community and environmental groups). Preliminary discussions have been held with the relevant Local Authorities and the Department of State Development and Innovation. An appropriate database of stakeholders will ensue.
- **Community Consultation Process** – SRWPCo is committed to taking a proactive approach to seeking community views and to ensuring that adequate means of communication are provided. To this end a consultation team comprising people with expertise in community consultation, the environment, cultural heritage, land valuation, engineering and public relations be established to work with the technical design team to implement an appropriate strategy for the project. (It should be noted that a detailed CSMP forms part of the documentation associated with the Business Case of the SRWP.

Stakeholders will be provided with a clear understanding of the nature of the project, its parameters, its benefits, its timelines and impacts. They will be kept informed of the progress of the project through regular and advertised public meetings, personal contact, correspondence, fact sheets, a website, and a Free Call Hotline. During this campaign the stakeholders will be given every opportunity to express their concerns and requirements.

- **EIS Consultation** – The SRWPCo will follow the very specific requirements of the relevant Act to conduct regulatory consultation in the EIS process as coordinated by DSDI.
- **Cultural Heritage & Native Title** – Similarly the consultation team will seek expert input on Cultural Heritage and Native Title issues with the assistance of the Cultural Heritage Coordination Unit of DNRM. Appropriate interest groups will be identified and negotiations undertaken.
- **Land Acquisition** – It is intended that the SRWPCo will privately negotiate with all landowners for access to land following the consultation and negotiation procedures of the *State Development and Public Works Organization Act 1971* (SDPWOA). If negotiations are not successful, it is intended that the powers under the SDPWOA will be used for compulsory acquisition.



7.0 AUTHORITIES, PERMITS AND SURVEY REQUIREMENTS

7.1 GENERAL

SRWPCo will be seeking designation of the SRWP, pursuant to this IAS, as a Significant Project under the SDPWOA. This Act sets out the requirements for environmental assessment and public review of the EIS.

IN addition SRWPCo will be seeking gazettal by Governor in Council, pursuant to the SDPWOA that this project be designated as an Infrastructure Facility of Significance to enable resumption of land, if that is necessary.

7.2 OTHER LEGISLATION

The SRWP is potentially assessable under a range of State, Federal and Local Government approval processes. The extent of these processes is fully enunciated in the SRWP REF. These include, but are not limited to:

Federal

- *Environment Protection and Biodiversity Conservation Act 1999*
- *Australian Heritage Council Act 2003*

State

- *Integrated Planing Act 1997*
- *Aboriginal Cultural Heritage Act 2003*
- *Water Act 2000*
- *Environmental Protection Act 1994 and Regulation*
- *Vegetation Management Act 1999*
- *Acquisition of Land Act 1967*
- *Native Title (Queensland) Act 1993*
- *Local Government Act 1993*

7.3 CODES OF PRACTICE

Australian Pipeline Industry Association Code of Environmental Practice

This document demonstrates industry Best Practice Management to mitigate environmental impacts from construction and operation of pipelines. The Association advocates this document as an appropriate Code of Practice for the industry. Section 4 of the Code details mitigation strategies that should be incorporated in an EMP for the project.



8.0 COMPLEXITY OF LOCAL, STATE AND COMMONWEALTH REQUIREMENTS

The project is expected to involve a high level of complexity, including:

- Negotiations with five local authorities and a corporate entity
- Variety of land tenures including:
 - Freehold
 - Leasehold
 - State land
 - Mining tenures
 - Existing easements
- Negotiations with numerous infrastructure providers including:
 - Powerlink
 - Energex
 - Main Roads
 - Queensland Rail
 - Water Authorities
- The need to address Local and State Government approvals and/or legislative requirements (e.g. local approvals for temporary road closure, State Government licenses and permit applications)
- Numerous environmental approvals and licences from agencies such as the EPA, DEH, DNRM and DPIF eg:
 - Permit to undertake works in a watercourse (Water Act 2000-DNRM)
 - Environmental Authorities (Environment Protection Act -EPA)
- Negotiations with up to five Aboriginal Groups
- Negotiations with approximately 200 landowners.



9.0 COSTS AND BENEFITS

The establishment of the SRWP will give rise to a number of benefits including:

- Providing a regional network that complements existing water supply infrastructure.
- Allowing for the efficient integration of future bulk water supplies into the south-east Queensland region such as the proposed Wyaralong Dam-Cedar Weir project.
- Ensuring a diversity of supply for the impacted councils in the longer term.
- Providing a system that will result in greater flexibility, increased efficiency, contingency supply and improved reliability.
- Meeting the needs of the States Regional Development Plan and allowing for supply of water to growth nodes and industrial developments.



10.0 CONCLUSIONS

A desktop assessment, combined with some limited field inspections and surveys in specific areas of sensitivity has been undertaken of the potential impacts of the construction and operation of the proposed SRWP. This IAS has identified that potential impacts could include:

- Removal and modification of flora and fauna habitat
- Potential impact on wildlife protected under the *Nature Conservation (Wildlife) Regulation 1994*
- Potential impact on small sections of fragile soils , including Acid Sulfate Soils
- Weed dispersion
- Dust generation
- Traffic impacts
- Noise and vibration impacts
- Water quality
- Dislocation to rural activities

As set out in the introduction to this document, the purpose of an Initial Advice Statement is to highlight issues relating to the proposed development and make recommendations as to the need for further studies, in particular an EIS. With the implementation of an appropriate EMP, overall impacts from the proposal are expected to be low. However this will be investigated in greater detail in the EIS process.



Appendix A
REGIONAL ECOSYSTEMS

Table 5.2 Short description and conservation significance of regional ecosystem types likely to occur on the proposed pipeline alignment

Location in study area	RE type	Short description	Significance	Likelihood of impact—recommendations
Camerons Creek (Mt Crosby)	12.3.3	<i>Eucalyptus tereticornis</i> woodland to open forest on alluvial plains	Endangered	Low-medium—avoid clearing of riparian vegetation
Rea Road (Karalee)	12.9-10.2	<i>Corymbia citriodora</i> , <i>E. crebra</i> open forest on sedimentary rocks	Not of Concern	Low—remain in cleared easement
Cunningham Highway (New Chum)	12.9-10.19	<i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> open forest on sedimentary rocks	Not of Concern	Low—remain in cleared easement
East of Swanbank Power Station (Swanbank)	12.9-10.2	<i>Corymbia citriodora</i> , <i>E. crebra</i> open forest on sedimentary rocks	Not of Concern	Low—remain in cleared easement and avoid unnecessary clearing or damage to edges of remnant communities
	12.9-10.3	<i>Eucalyptus moluccana</i> on sedimentary rocks	Of Concern	
	12.9-10.7	<i>Eucalyptus crebra</i> , <i>E. tereticornis</i> ± <i>C. tessellaris</i> , <i>Angophora</i> spp., <i>E. melanophloia</i> woodland on sedimentary rocks	Of Concern	
	12.9-10.19	<i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> open forest on sedimentary rocks	Not of Concern	
East of School Road (Swanbank)	12.8.24	<i>Corymbia citriodora</i> , <i>E. crebra</i> ± <i>E. moluccana</i> open-forest	Endangered	Avoid any damage to community
East of Keidges Road	12.9-10.2	<i>Corymbia citriodora</i> , <i>E. crebra</i> open forest on sedimentary rocks	Not of Concern	Low—remain in cleared easement and avoid unnecessary clearing or damage to edges of remnant communities
	12.9-10.7	<i>Eucalyptus crebra</i> , <i>E. tereticornis</i> ± <i>C. tessellaris</i> , <i>Angophora</i> spp., <i>E. melanophloia</i> woodland on sedimentary rocks	Of Concern	
	12.9-10.19	<i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> open forest on sedimentary rocks	Not of Concern	
West of Augusta Parkway (Springfield)	12.9-10.2	<i>Corymbia citriodora</i> , <i>E. crebra</i> open forest on sedimentary rocks	Not of Concern	Low—remain in cleared easement and avoid unnecessary clearing or damage to edges of remnant communities
	12.9-10.7	<i>E. crebra</i> , <i>E. tereticornis</i> ± <i>C. tessellaris</i> , <i>Angophora</i> spp., <i>E. melanophloia</i> woodland on sedimentary rocks	Of Concern	
	12.9-10.19	<i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> open forest on sedimentary rocks	Not of Concern	
Opossum Creek and floodplain	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low-medium—minimise or avoid clearing of riparian vegetation; remain in cleared easement
	12.9-10.17a	<i>Lophostemon confertus</i> dominated open-forest	Not of Concern	
	12.9-10.19a	Open-forest of <i>C. henryi</i> ± <i>E. fibrosa</i> subsp. <i>fibrosa</i> , <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. crebra</i> and other coastal mesic variants of this regional ecosystem	Not of Concern	
	12.9-10.2	<i>Corymbia citriodora</i> , <i>E. crebra</i> open forest on sedimentary rocks	Not of Concern	
	12.9-10.7	<i>Eucalyptus crebra</i> , <i>E. tereticornis</i> ± <i>C. tessellaris</i> , <i>Angophora</i> spp., <i>E. melanophloia</i> woodland on sedimentary rocks	Not of Concern	
	12.9-10.19	<i>Eucalyptus fibrosa</i> subsp. <i>fibrosa</i> open forest on sedimentary rocks	Not of Concern	
Greenbank Military Camp	12.9-10.12	<i>Eucalyptus seeana</i> , <i>C. intermedia</i> , <i>A. leiocarpa</i> woodland on sedimentary rocks	Endangered	Avoid any damage to community. Restrict pipeline to road reserve Minimise clearing of riparian vegetation; remain in cleared easement
	12.9-10.19a	Open-forest of <i>C. henryi</i> ± <i>E. fibrosa</i> subsp. <i>fibrosa</i> , <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. crebra</i> and other coastal mesic variants of this regional ecosystem	Not of Concern	
	12.9-10.2	<i>Corymbia citriodora</i> , <i>E. crebra</i> open forest on sedimentary rocks	Not of Concern	
	12.9-10.3	<i>Eucalyptus moluccana</i> on sedimentary rocks	Of Concern	



Table 5.2 (cont'd)

Location in study area	RE type	Short description	Significance	Likelihood of impact—recommendations
Oxley Creek (Greenbank)	12.3.11	<i>E. tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low-medium —reduce riparian vegetation clearing to minimum or directional drill
	12.3.6	<i>Melaleuca quinquinervia</i> , <i>E. tereticornis</i> , <i>L. suaveolens</i> woodland on coastal alluvial plains	Not of Concern	
Stoney Camp Road (Greenbank)	12.9-10.12	<i>Eucalyptus seeana</i> , <i>C. intermedia</i> , <i>A. leiocarpa</i> woodland on sedimentary rocks	Endangered	Avoid any damage to community. Restrict pipeline to road reserve; remain in cleared easement
	12.9-10.7a	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> and/or <i>E. crebra</i> , <i>C. intermedia</i> and <i>L. suaveolens</i> woodland	Of Concern	
Norris Creek, Stoney Camp Road (Greenbank)	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low-medium —reduce riparian vegetation clearing to a minimum
	12.3.6	<i>Melaleuca quinquinervia</i> , <i>E. tereticornis</i> , <i>L. suaveolens</i> woodland on coastal alluvial plains	Not of Concern	
Chambers Flats	12.3.6	<i>Melaleuca quinquinervia</i> , <i>E. tereticornis</i> , <i>L. suaveolens</i> woodland on coastal alluvial plains	Not of Concern	Reduce riparian vegetation clearing to a minimum. Remain in cleared easement. Avoid any damage to community
	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	
	12.9-10.7a	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> and/or <i>E. crebra</i> , <i>C. intermedia</i> and <i>L. suaveolens</i> woodland	Of Concern	
	12.9-10.12	<i>Eucalyptus seeana</i> , <i>C. intermedia</i> , <i>A. leiocarpa</i> woodland on sedimentary rocks	Endangered	
Buccan Conservation Park (Buccan)	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low —minimise clearing of riparian vegetation; remain in cleared easement
	12.11.5	Open forest complex with <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. major</i> on metamorphics ± interbedded volcanics	Not of Concern	
	12.11.10	Notophyll vine forest ± <i>Araucaria cunninghamii</i> on metamorphics ± interbedded volcanics	Not of Concern	
	12.9-10.19a	Open-forest of <i>C. henryi</i> ± <i>E. fibrosa</i> subsp. <i>fibrosa</i> , <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. crebra</i> and other coastal mesic variants of this regional ecosystem	Not of Concern	
	12.9-10.17	Open forest complex often with <i>E. acmenoides</i> , <i>E. major</i> , <i>E. siderophloia</i> ± <i>C. citriodora</i> on sedimentary rocks	Not of Concern	
	12.9-10.4	<i>Eucalyptus racemosa</i> woodland on sedimentary rocks	Not of Concern	
	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	
Western banks of Albert River	12.3.7	<i>Eucalyptus tereticornis</i> , <i>Callistemon viminalis</i> , <i>Casuarina cunninghamiana</i> fringing forest	Not of Concern	Low-medium —minimise clearing of riparian vegetation; remain in cleared easement
	12.11.8	<i>Eucalyptus melanophloia</i> , <i>E. crebra</i> woodland on metamorphics ± interbedded volcanics	Not of Concern	
North of Paterson Road	12.3.3	<i>Eucalyptus tereticornis</i> woodland to open forest on alluvial plains	Endangered	Low —avoid any damage to vegetation by restricting pipeline to road reserve
	12.11.18	<i>Eucalyptus moluccana</i> open forest on metamorphics ± interbedded volcanics	Not of Concern	
Foothills east of Peachey Road	12.11.5k	Open forest of <i>C. henryi</i> , <i>E. fibrosa</i> subsp. <i>fibrosa</i> ± <i>C. citriodora</i> , <i>A. leiocarpa</i> , <i>E. carnea</i> , <i>E. tindaliae</i> , <i>E. propinqua</i> , <i>C. intermedia</i>	Not of Concern	Low —remain in cleared easement and avoid clearing of riparian vegetation
	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	
Halfway Creek East Peachey Road South of Peachey Road	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low —remain in cleared easement
	12.11.5	Tall-open forest complex <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. major</i> on metamorphics ± interbedded volcanics	Not of concern	
	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	
	12.11.9	<i>Eucalyptus tereticornis</i> open forest on metamorphics ± interbedded volcanics	Of Concern	
	12.11.5j	Open forest of <i>E. racemosa</i> , <i>E. seeana</i> and <i>L. suaveolens</i> ± <i>C. intermedia</i> , <i>E. siderophloia</i> , <i>C. citriodora</i> , <i>E. pilularis</i> on low-altitude coastal metamorphics around Brisbane	Not of Concern	



Table 5.2 (cont'd)

Location in study area	RE type	Short description	Significance	Likelihood of impact—recommendations
Hotham Creek area	12.11.5a	Open forest of <i>E. tindaliae</i> , <i>E. carnea</i> ± <i>C. citriodora</i> , <i>E. crebra</i> , <i>E. major</i> , <i>C. henryi</i> , <i>A. woodsiiana</i> , <i>C. trachyphloia</i> (away from coast) or <i>E. siderophloia</i> , <i>E. microcorys</i> , <i>E. racemosa</i> , <i>E. propinqua</i> (closer to coast)	Not of Concern	Low-medium—minimise clearing of riparian vegetation; remain in cleared easement or road reserve
	12.11.5j	Open forest of <i>E. racemosa</i> , <i>E. seeana</i> and <i>L. suaveolens</i> ± <i>C. intermedia</i> , <i>E. siderophloia</i> , <i>C. citriodora</i> , <i>E. pilularis</i> on low-altitude coastal metamorphics around Brisbane	Not of Concern	
	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of concern	
Yaun Creek	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low—avoid any damage to vegetation community
	12.3.1	Gallery rainforest (notophyll vine forest) on alluvial plains	Endangered	
Kuraby Reservoir/ Karawatha Forest	12.3.11	<i>Eucalyptus tereticornis</i> , <i>E. siderophloia</i> , <i>C. intermedia</i> open forest on alluvial plains near coast	Of Concern	Low-medium—avoid clearing complex regrowth, remain in cleared easement or unsealed tracks/roads; no damage to perched swamps or wetland vegetation
	12.11.5	Tall-open forest complex <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. major</i> on metamorphics ± interbedded volcanics	Not of Concern	
Browns Plains Road	12.3.6	<i>Melaleuca quinquinervia</i> , <i>E. tereticornis</i> , <i>L. suaveolens</i> woodland on coastal alluvial plains	Not of Concern	Low—minimise damage to mature trees and limit clearing to within road reserve or easement
	12.9-10.4	Open-forest to woodland with <i>E. racemosa</i> locally prominent	Not of Concern	
	12.9-10.12	<i>Eucalyptus seeana</i> , <i>C. intermedia</i> , <i>A. leiocarpa</i> woodland on sedimentary rocks	Endangered	
Clarke Road and Park Reserve (north to Browns Plains Road)	12.9-10.4	Open-forest to woodland with <i>E. racemosa</i> locally prominent	Not of Concern	Low—minimise damage to mature trees and limit clearing to within open parkland, road reserve or easement
	12.3.6	<i>Melaleuca quinquinervia</i> , <i>E. tereticornis</i> , <i>L. suaveolens</i> woodland on coastal alluvial plains	Not of Concern	
Park Ridge Road	12.9-10.4	Open-forest to woodland with <i>E. racemosa</i> locally prominent	Not of Concern	Low—minimise damage to mature trees and limit clearing to within road reserve or easement
Chambers Flat Road	12.9-10.4	Open-forest to woodland with <i>E. racemosa</i> locally prominent	Not of Concern	Low—minimise damage to mature trees and limit clearing to within road reserve or easement
Ormeau	12.11.5	Tall-open forest complex <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. major</i> on metamorphics ± interbedded volcanics	Not of Concern	Low—remain in cleared easement
Coomera area (power easement)	12.11.5	Tall-open forest complex <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. major</i> on metamorphics ± interbedded volcanics	Not of Concern	Low—remain in cleared easement
Molendinar area (easement)	12.11.5	Tall-open forest complex <i>C. citriodora</i> , <i>E. siderophloia</i> , <i>E. major</i> on metamorphics ± interbedded volcanics	Not of Concern	Low—remain in cleared easement

Bold highlights Endangered RE types. Source: 2001 Remnant Regional Ecosystem Mapping (V4.1) Queensland Herbarium. Descriptions and significance sourced from Environmental Protection Agency (2004). Regional Ecosystem Description Database (REDD). Version 4.1. Updated August 2004.



Appendix B
PROTECTED FLORA AND FAUNA SPECIES

Table 5.3 Summary of desktop survey of database records for significant species that may occur in the project area

Taxa	Common Name	EPBC		Records			Likely occurrence
		Status	Habitat	Birds Atlas	WildNet	HERBREC	
Birds							
<i>Anaseranus semipalmata</i>	Magpie Goose	M OM	✓	✓	✓		high
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's Fig-Parrot	E M	✓		✓		medium
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	M OM	✓	✓	✓		high
<i>Erythrotriorchis radiatus</i>	Red Goshawk	V	✓		✓		medium
<i>Hirundapus caudacutus</i>	White-throated Needletail	M OM	✓	✓	✓		high
<i>Apus pacificus</i>	Fork-tailed Swift	M OM	✓	✓	✓		high
<i>Ardea alba</i>	Great Egret	M OM	✓	✓	✓		high
<i>Ardea ibis</i>	Cattle Egret	M OM	✓	✓	✓		high
<i>Geophaps scripta scripta</i>	Squatter Pigeon (southern)	V	✓	✓			low
<i>Merops ornatus</i>	Rainbow Bee-eater	M OM	✓	✓	✓		high
<i>Monarcha melanopsis</i>	Black-faced Monarch	M OM	✓	✓	✓		high
<i>Monarcha trivirgatus</i>	Spectacled Monarch	M OM	✓	✓	✓		high
<i>Lathamus discolor</i>	Swift Parrot	E OM	✓	✓	✓		high
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	M OM	✓	✓	✓		high
<i>Rhipidura rufifrons</i>	Rufous Fantail	M OM	✓	✓	✓		high
<i>Poephila cincta cincta</i>	Black-throated Finch (southern)	V	✓				low
<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe	M OM	✓	✓	✓		high
<i>Rostratula australis</i>	Australian Painted Snipe	V	✓				low
<i>Rostula benghalensis s. lat.</i>	Painted Snipe	M OM	✓	✓	✓		high
<i>Nettapus coromandelianus albipennis</i>	Australian Cotton Pygmy-goose	M OM	✓	✓	✓		high
<i>Turnix melanogaster</i>	Black-breasted Button-quail	V	✓	✓	✓		high
<i>Xanthomyza phrygia</i>	Regent Honeyeater	E M	✓	✓	✓		high
Amphibians							
<i>Litoria olongburensis</i>	Wallum Sedge Frog	V	✓				low
<i>Mixophyes fleayi</i>	Fleay's Frog	E	✓		✓		medium
<i>Mixophyes iteratus</i>	Southern Barred Frog, Giant Barred Frog	E	✓		✓		medium
Insects							
<i>Phyllodes imperialis</i>	a moth	E	✓				low
Fish							
<i>Neoceratodus forsteri</i>	Australian Lungfish, Queensland Lungfish	V	✓		✓		medium



Table 5.3 (cont'd)

Taxa	Common Name	EPBC		Records			Likely occurrence
		Status	Habitat	Birds Atlas	WildNet	HERBREC	
Mammals							
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat	V	✓				low
<i>Dasyurus maculatus maculatus</i>	Spotted-tail Quoll	E	✓		✓		medium
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	V	✓		✓		medium
<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo	V	✓		✓		medium
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	✓		✓		medium
Reptiles							
<i>Coeranoscincus reticulatus</i>	Three-toed Snake-tooth Skink	V	✓		✓		medium
<i>Delma torquata</i>	Collared Delma	V	✓		✓		medium
<i>Furina dunmalli</i>	Dunmall's Snake	V	✓				low
Plants							
<i>Acacia perangusta</i>	Erapah Wattle	V	✓				low
<i>Arthraxon hispidus</i>	Hairy-joint Grass	V	✓				low
<i>Austromyrtus gonoclada</i>	Angle-stemmed Myrtle	E	✓				low
<i>Baloghia marmorata</i>	Marbled Baloghia, Jointed Baloghia	V	✓			✓	medium
<i>Bosistoa selwynii</i>	Heart-leaved Bosistoa	V	✓				low
<i>Bosistoa transversa</i>	Three-leaved Bosistoa	V	✓				low
<i>Bulbophyllum globuliforme</i>	Miniature Moss-orchid	V	✓				low
<i>Corchorus cunninghamii</i>	Native Jute	E	✓			✓	medium
<i>Cryptocarya foetida</i>	Stinking Cryptocarya, Stinking Laurel	V	✓			✓	medium
<i>Cryptostylis hunteriana</i>	Leafless Tongue-orchid	V	✓				low
<i>Cupaniopsis shirleyana</i>	Wedge-leaf Tuckeroo	V	✓			✓	medium
<i>Cupaniopsis tomentella</i>	Boonah Tuckeroo	V	✓			✓	medium
<i>Cyperus semifertillis</i>		V	✓				low
<i>Diploglottis campbellii</i>	Small-leaved Tamarind	E	✓				low
<i>Endiandra floydii</i>	Floyd's Walnut	E	✓			✓	medium
<i>Endiandra hayesii</i>	Rusty Rose Walnut, Velvet Laurel	V	✓				low
<i>Floydia praealta</i>	Ball Nut, Possum Nut, Big Nut, Beefwood	V	✓				low
<i>Fontainea venosa</i>		V	✓			✓	medium
<i>Haloragis exalata subsp. velutina</i>		V	✓			✓	medium
<i>Hicksbeachia pinnatifolia</i>	Monkey Nut, Bopple Nut, Ivory Silky Oak	V	✓			✓	medium
<i>Hydrocharis dubia</i>	Frogbit	V	✓			✓	medium
<i>Macadamia integrifolia</i>	Macadamia Nut, Queensland Nut,	V	✓			✓	medium
<i>Macadamia tetraphylla</i>	Rough-shelled Macadamia	V	✓			✓	medium
<i>Marsdenia coronata</i>	Slender Milkvine	V	✓			✓	medium
<i>Marsdenia longiloba</i>	Clear Milkvine	V	✓			✓	medium
<i>Notelaea floydii</i>		V	✓			✓	medium
<i>Owenia cepiodora</i>	Onionwood, Bog Onion, Onion Cedar	V	✓			✓	medium
<i>Owenia cepiodora</i>	Onionwood, Bog Onion, Onion Cedar	V	✓			✓	medium



Table 5.3 (cont'd)

Taxa	Common Name	EPBC		Records			Likely occurrence
		Status	Habitat	Birds Atlas	WildNet	HERBREC	
<i>Phaius australis</i>	Lesser Swamp-orchid	E	✓			✓	medium
<i>Plectranthus habrophyllus</i>		E	✓			✓	medium
<i>Plectranthus nitidus</i>		E	✓			✓	medium
<i>Pouteria eerwah</i>	Shiny-leaved Condoo, Black Plum	E	✓			✓	medium
<i>Randia moorei</i>	Spiny Gardenia	E	✓			✓	medium
<i>Sarcochilus hartmannii</i>	Waxy Sarcochilus, Blue Knob Orchid	V	✓				low
<i>Sophora fraseri</i>		V	✓			✓	medium
<i>Syzygium hodgkinsoniae</i>	Smooth-bark Rose Apple, Red Lilly Pilly	V	✓				low
<i>Thesium australe</i>	Austral Toadflax, Toadflax	V	✓				low
<i>Zieria collina</i>		V	✓			✓	medium

E = endangered

V = vulnerable

M = migratory species terrestrial or marine

OM = may overfly area

