

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
<b>Executive Summary</b>	The function of the Executive Summary is to convey the most important aspects and options relating to the project to the reader in a concise and readable form. It should use plain English and avoid the use of jargon and obscure terms. The executive summary should be written as a stand-alone document, able to be reproduced on request and distributed to interested parties who may not wish to read or purchase the EIS as a whole.	
	The structure of the executive summary should generally follow that of the EIS and focus on the key issues to enable the reader to obtain a clear understanding of the project, its potential adverse and beneficial environmental, social and economic impacts and the management measures to be implemented by the proponent to mitigate all impacts.	
	The executive summary should include:	
	- The title of the Project.	E-1
	- Name and contact details of the proponent, and a discussion of previous projects undertaken by the proponent and their commitment to effective environmental management.	E-1
	- A concise statement of the aims and objectives of the Project.	ES1.1
	- The legal framework, decision-making authorities and advisory agencies.	ES1.2
	- An outline of the background to and need for the Project, including the consequences of not proceeding with the Project.	ES1.3
	- An outline of the alternative options considered and reasons for the selection of the proposed development option.	ES1.4
	- A brief description of the Project (pre-construction, construction and operational activities) and the existing environment, utilising visual aids where appropriate.	ES1.1

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	- An outline of the principal environmental impacts predicted and the proposed environmental management strategies and commitments to minimise the significance of these impacts.	ES1.5, ES1.7, ES1.8
	Detailed maps of the proposed project location and any other critical figures should also be included.	Figure ES1-1, ES1-2, ES1-3
<b>Glossary of Terms</b>	A glossary of technical terms, acronyms and references should be provided.	
<b>1</b>	<b>Introduction</b>	
	The introduction should:	
	- clearly explain the background and purpose of the EIS;	1.2, 1.3
	- to whom the EIS is directed at; and	1.8.2
	- contain an overview of the structure of the document.	1.8
<b>1.1</b>	<b>Project Proponent</b>	
	This section should name the project proponent and describe their experience, including the nature and extent of business activities, experience and qualifications and environmental record.	1.1
<b>1.2</b>	<b>Project Description</b>	
	This section should provide a brief description and illustrations of the key elements of the project. Any major associated infrastructure requirements should also be summarised.	1.2
<b>1.3</b>	<b>Need for the Project</b>	
	The EIS should address the specific objectives and justification for the project. Issues to be addressed include:	

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	- the context of the project within the Central Queensland Regional Water Supply Strategy, Statewide Water Policy and any other strategies or planning processes to which it relates. In particular, the strategic, economic and environmental implications of the project, including future water supply security and distribution requirements to meet demands.	1.3
<b>1.4</b>	<b>Relationship with Other Project</b>	
	This section should also describe how the project relates to any other actions (if it does), of which the proponent should reasonably be aware, that have been or are being taken or that have been approved in the area affected by the project.	1.4
	Consequential impacts as defined under the EPBC Act and projects which will be considered as part of cumulative impact assessment should be identified and their relevance discussed.	1.4.4
<b>1.5</b>	<b>Socio-Economic Costs and Benefits of the Project</b>	
	The section should summarise with respect to short- and long-term cycles:	
	- The economic costs and benefits of the project itself to businesses and the wider community, at a range of geographic scales as applicable, including capital and operating costs (costs should include all facets of construction and operation, necessary environmental offsets and costs to all of government, such as monitoring and environmental mitigation/management costs), direct and indirect employment and local business involvement	1.5.1
	- Direct social costs and benefits, including community disruption, related land use changes, employment, skills development and any workforce accommodation issues.	1.5.2
	- The flow-on economic and social costs and benefits that result from satisfaction of water demand or security of supply issues by the project.	1.5.3
	- Any increased demand for natural resources as a result of the project.	1.5.4
<b>1.6</b>	<b>Alternatives to the Project</b>	

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	This section should describe feasible alternatives to and within the proposed Project, including the option of taking no action, i.e. of not building the dam or pipelines. Alternatives should be discussed in relation to each identifiable major demand (industrial, agricultural, urban) and in sufficient detail to enable an understanding of reasons for preferring certain options and courses of action and rejecting others. Reasons for selecting preferred options should be delineated in terms of technical, commercial, social and/or natural environment aspects as appropriate to the decision making process.	1.6
	<ul style="list-style-type: none"> <li>- Demand reduction techniques should be discussed along with alternative supply sources, such as other sources of water supply appropriate to the demand node or type, possibly including:</li> <li>- recycling</li> <li>- groundwater (alluvial, or artesian)</li> <li>- coal seam</li> <li>- desalination</li> <li>- surface water.</li> </ul>	1.6
	- Project alternatives may involve a combination of supply sources such as an existing or raised weir supplemented by coal seam gas water.	1.6
	When pipelines are the preferred means for distributing water to the demand nodes, route alternatives should be considered and the preferred alternative justified in economic, social and environmental terms as appropriate.	1.6
	<ul style="list-style-type: none"> <li>- In relation to the alternative water pipeline corridor alignments, the EIS should describe:</li> <li>- the alignments considered, aided by maps and diagrams;</li> <li>- the rationale for selecting the preferred alignment over alternative alignments, in consideration of:               <ul style="list-style-type: none"> <li>- ecologically sustainable development principles;</li> <li>- broad costs of each alignment;</li> <li>- water pipeline lengths;</li> <li>- the number of impacted properties, including tenure and ownership.</li> </ul> </li> </ul>	1.6
	Alternative engineering and project design solutions should be discussed for each major component of the project.	1.6
<b>1.7</b>	<b>Co-location Opportunities</b>	
	Opportunities may exist for efficiency gains and the mitigation of environmental and property impacts through the co-location of the water pipeline within existing or proposed linear infrastructure. This may also include the co-location of other proposed linear infrastructure in, near or parallel to the water pipeline.	1.7
	The project proponent should identify any proposals to develop infrastructure within the vicinity of the water pipeline investigation corridors. This includes rail corridors. Such proposals would be limited to those projects which are in the public arena during the period of preparation of this EIS and for which a proponent can be readily identified.	1.7

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	It is the responsibility of the individual proponents of those other linear infrastructure projects to provide the required information to the proponent. The DIP can, at the proponent's request, assist with the facilitation of meetings with known proponents of other linear infrastructure in the project area.	1.7
	It would be inappropriate for this EIS to evaluate the environmental impacts of other infrastructure not directly required for this project. However, the EIS should describe the implications of locating other forms of linear infrastructure within or near the water pipeline. Where co-location may be likely, the EIS should consider opportunities to coordinate or enhance any of the impact mitigation strategies proposed for the water pipeline through cooperation with other proponents in the locality. In particular, the potential implications of any infrastructure co-location on the water pipeline corridor width and alignment should be described.	1.7
<b>1.8</b>	<b>The Environmental Impact Assessment (EIA) Process</b>	
<b>1.8.1</b>	<b>Methodology of EIS</b>	
	This section should outline the stages of the EIS process, including information on the relevant stages of the approvals process; Commonwealth referrals; statutory and public consultation requirements; any associated licence or permit application processes; and any interdependencies that exist between approvals. (Details of specific approvals will be presented under Section 1.10.) The information in this section is required to ensure:	1.8.1
	The information in this section is required to ensure:	
	- stakeholders are informed of the EIS process to be followed	1.8.1
	- stakeholders understand the relationships between the EIS and associated approvals	1.8.1
	- stakeholders are aware of any opportunities for input and participation	1.8.1
	- relevant legislation is addressed.	1.8.1
<b>1.8.2</b>	<b>Objectives of the EIS</b>	
	This section should:	
	- Provide a statement of the objectives of the environmental impact assessment process;	1.8.2
	- Outline the structure of the EIS as an explanation of how the EIS will meet its objectives.	1.8.2
	The purpose of the EIS is to:	
	- provide public information on the need for the project, alternatives to it and options for its implementation;	1.8.2
	- present the likely effects of the project on the natural, social and economic environment;	1.8.2
	- set out acceptable standards and levels of impacts (both beneficial and adverse) on environmental values;	1.8.2
	- demonstrate how environmental impacts can be managed or mitigated;	1.9.2
	The role of the EIS in providing information for the formulation of the environmental management plan for the project should be discussed.	1.9.2
<b>1.8.3</b>	<b>Submissions</b>	
	This section should:	
	- inform the reader of how to and when public submissions on the draft EIS will be addressed and taken into account in the decision-making process; and	1.8.3

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	- inform the reader of how to make a submission, in what form the submission should take, and when submission must be made to gain standing for any appeal.	1.8.3
<b>1.9</b>	<b>Public Consultation Process</b>	
	The public consultation program should provide opportunities for community involvement and education. It may include interviews with individuals, public communication activities, interest group meetings, production of regular summary information and updates, and other consultation mechanisms to encourage and facilitate active public consultation.	Consultation Report, 2.4
	The public consultation program must enable people with a disability, families and carers to participate. This can be achieved through an inclusive communication strategy that uses a variety of communication modes, provision of information in alternative formats on request, holding public meetings in accessible venues with provision for those with special needs (e.g. sign language translation), and acceptance of submissions in alternative forms, including orally.	Consultation Report, 2.4
	The public consultation process should identify broad issues of concern to local and regional communities and interest groups and address issues from project planning through to commissioning and project operations.	Consultation Report, 2.4
	A consultation plan should be prepared during the initial phase of the EIS process. This should identify:	
	- the types of activities to be undertaken	Consultation Report, 5
	- timing	Consultation Report, 2.4
	- target the Stakeholder/community representatives	Consultation Report, 3
	- integration with other EIS activities and the project development process	Consultation Report, 2.4
	- consultation responsibilities	Consultation Report, 2.4
	- communication protocols	Consultation Report, 2.4
	- reporting and feedback arrangements.	Consultation Report, 2.4
	This section should outline the methodology adopted to:	
	- identify stakeholders and how their involvement was facilitated	Consultation Report, 3 & 5
	- identify the process conducted to date and future consultation strategies and programs, including during the operational phase of the project	Consultation Report, 2.4
	- indicate how consultation involvement and outcomes were integrated into the EIS process and future site activities, including opportunities for engagement and provision for feedback and action if necessary.	Consultation Report, 2.4

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	Detailed results of the consultation process should be provided as a consultation report and presented as an Appendix to the EIS. A summary of the key processes and outcomes should be provided in this section.	Consultation Report, 6
<b>1.10</b>	<b>Project Approvals</b>	
<b>1.10.1</b>	<b>Relevant Legislation and Policy Requirements</b>	
	This section should:	
	- identify and explain the State and Commonwealth legislation and policies controlling the approvals process.	1.10.1
	- make reference to the SDPWO Act and its relationship with other relevant Queensland laws.	
	- provide a description of the environmentally relevant activities, as defined under the EP Act and subordinate legislation, necessary for each aspect of the project.	
	- The EIS should include the project's relationship with the relevant Water Resource Plans, e.g. Water Resource (Fitzroy Basin) Plan 1999, and subsequent Resource Operations Plans, the Great Artesian Basin Water Resource Plan and resource operations plan, any other specific management plans and methods for compliance with the environmental objectives, including the objectives of the EPBC Act. Comment should be made on the future review of the Water Resource (Fitzroy Basin) Plan 1999 and how this impacts on the project if at all.	
	- The proponent may wish to apply for community infrastructure designation under the IPA Act as a mechanism to obtain project approval. If community infrastructure designation is applied for, the requirement for "adequate environmental assessment and public consultation" under section 2.6.7(1) of the IPA Act is fulfilled by the preparation of the CG's report evaluating the EIS. Further information should be provided in the EIS to assist the Minister with considerations under section 2.6.7(2) including information in relation to:	
	o each relevant state planning policy	
	o for land in a designated region – the region's regional plan	
	o for land in a relevant area for a State planning regulatory provision – the provision	
	o for land in a declared master planned area – any master plans for the area	
	o each relevant planning scheme.	
<b>1.10.2</b>	<b>Planning Process and Standards</b>	
	This section should:	
	- outline the project's consistency with existing policy framework for the region, and in particular in relation to the Central Queensland Regional Water Supply Strategy and with legislation, standards, codes or guidelines available to monitor and control operations of the project.	1.10.2
	- refer to all relevant planning policies; local, state and national, including: the National Water Initiative; National Water Quality Management Strategy, water reform under the National Competition Policy; the National Strategy on Conservation of Australia's Biological Diversity; the National Strategy for Ecologically Sustainable Development; the Queensland Natural Resources (Water) Policy, Water Resource Plan, Resource Operations Plan, Fitzroy Basin (CQSSII 2004, FBA), CQ A New Millennium, agreements relating to climate change and greenhouse gases and other relevant policies.	
<b>1.10.3</b>	<b>Accredited Process for Controlled Actions under Commonwealth Legislation</b>	

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	The EIS should address potential impacts on the MNES that were identified when the project was determined to be a controlled action.	1.10.3
	A stand-alone report should be provided as part of the EIS that exclusively and fully addresses the issues relevant to the controlling provisions. It should follow the following outline:	28
	1) introduction	28
	2) description of proposed action (as it would impact on matters of national environmental significance)	28
	3) <i>description of the affected environment relevant to the controlling provisions (i.e. describe the features of the environment that are matters of national environmental significance protected under the EPBC Act)</i>	28
	4) assessment of impacts on matters of national environmental significance and mitigation measures (in accordance with available guidelines and species recovery plans)	28
	5) consideration of any potential offsets to ameliorate residual impacts	28
	6) conclusions	28
	7) references	28
<b>2</b>	<b>Description of the Project</b>	
	This section should describe the project through its lifetime of construction, operation and decommissioning. The project description also allows for further assessment of which approvals may be required and how they may be managed through the life of the project.	
<b>2.1</b>	<b>Overview of the Project</b>	2.1
	The EIS should provide an overview of the project to put it into context. This section should include:	
	- a description of the key components of the project through the use of text and design plans where applicable. The key components are:	2.1, 2.2, 2.3
	o water storage infrastructure (the dam)	
	o water distribution infrastructure (pipes, pumps etc.)	
	o other infrastructure impacted by the works (including roads, riverine crossings, power, telecommunication or other services and any new resource extraction sites)	
	- the expected cost and overall duration and timing of the project	2.1
	- a summary of any environmental design features of the project.	2.1, 2.2, 2.3
<b>2.2</b>	<b>Location</b>	
	This section should describe the regional and local context of the project and associated infrastructure and illustrated on maps at suitable scales and reference points. These features should be overlaid on a rectified air photo enlargement. Real property descriptions of the project should be provided. Maps should show the precise location of the project area, and in particular:	2.2
	- the location and boundaries of land tenures, in place or proposed, to which the Project area is or will be subject;	
	- the location and boundaries of the Project footprint showing all key aspects of the water storage, water distribution infrastructure and other infrastructure, including full supply level (FSL), dam wall, intake towers(s), pipeline routes and easement widths and resource extraction; and	



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	- the location of any proposed buffers surrounding the working areas (for construction) and around the expected FSL of the storage.	
	- the identification of all site access points to, from and within the project on maps, to assist in the assessment of emergency planning.	
	The process and criteria used for the selection of the specific project and infrastructure sites, including relocated infrastructure should be described. This should also include justification of the corridor width for the water pipelines. The extent of land that is required for each component should be documented and each impacted land parcel identified (by property name and by a list of the impacted, in part or whole, lots which make up each property).	
<b>2.3</b>	<b>Design</b>	
	The process and criteria used for the selection of the preferred design and preferred construction techniques should be described separately for each component of the project:	
	- water storage infrastructure	2.3.1
	- water distribution infrastructure	2.3.2
	- other infrastructure, which may include roads.	2.3.3
<b>2.3.1</b>	The following should be described for the project:	
	- Water Storage Infrastructure (dam wall)	2.1, 2.3.1
	- full supply level (FSL) and details of any staging or prospects for future expansion	
	- maximum (final) crest height and spillway height, including height above stream bed	
	- length and width of crest	
	- storage capacity, maximum depth, average depth, area of inundation at FSL, area of any buffer required and means of its determination, length of river bed (and tributaries) inundated	
	- estimated water yields (with appropriate allowances for environmental requirements)	
	- general design of outlet works including siting, capacity, offtake level and ability to regulate flows	
	- spillway design, including gate specification, if included	
	- details of any energy dissipaters at the downstream foot of the barrier	
	- details of any provision for incorporating a fishway or other fish transfer mechanism in the design, should it be required and its effect on the viability of the proposed project	
	- details of the physical form of the stream bed within 200 m of the downstream foot of the barrier.	
<b>2.3.2</b>	The following information should be provided and be supported by detailed plans where appropriate.	
	- Water Distribution Infrastructure	2.3.2
	- the method of extracting and/or releasing water from the storage	
	- any treatment methods proposed	
	- if distribution is by pipe:	
	o provision for route refinement and right of way	
	o pipeline design parameters, including capacity and design life	

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	<ul style="list-style-type: none"> <li>o above ground facilities – physical dimensions and construction materials for surface facilities along the pipeline route, including information on pipeline markers</li> <li>o the location and/or frequency of (if applicable) cathodic protection points, off-take valves, pump stations, balance tanks, control valves (isolation points), pigging facilities and any other project facilities and linkages to existing water supply infrastructure along the pipeline route.</li> </ul>	
<b>2.3.3</b>	<b>Other Infrastructure</b>	
	- All other infrastructure required to be constructed, upgraded, relocated or decommissioned for the construction and/or operation of the project, such as access roads, power supply, connection to sewerage or water supply must be described including the design and construction standards to be met (e.g. waterway crossings should be designed in line with the Fisheries Act 1994, Department of Primary Industries and Fisheries Fish Habitat Guideline FHG 001 Fish Passage in Streams: fisheries guidelines for design of stream crossings (August 1998) and in consultation with the Department of Employment, Economic Development and Innovation).	2.3.3
<b>2.4</b>	<b>Construction</b>	
	The following information should be provided on the construction and operation of the project and be supported by detailed plans where appropriate.	2.4
<b>2.4.1</b>	<b>Pre-construction Activities</b>	
	This section should set out a description of the pre-construction activities, including:	
	- the land acquisition process;	2.4.1.1
	- obtaining licences/permits for the construction works;	1.1, 2.4.1.1
	- vegetation clearing;	2.4.1.6
	- provision of site access, power, telecommunications, water supply and other infrastructure; and	2.4
	- site establishment requirements for construction facilities.	2.4.1.2
<b>2.4.2</b>	<b>Construction</b>	
	This section should:	
	- identify the extent and nature of construction for each major component of the project (water storage infrastructure, water distribution infrastructure and other infrastructure).	2.4.2, 2.4.3, 2.4.4
	- Provide illustrations showing site boundaries, development sequencing and timeframes and the layout of construction facilities	2.4.2, 2.4.3, 2.4.4
	The general description should include, as appropriate to each component:	
	- the construction standards, methods and site management arrangements	2.4.2, 2.4.3, 2.4.4
	- works needed within the site and off-site (e.g. erosion protection, fencing)	2.4.2, 2.4.3, 2.4.4
	- general construction requirements including blasting, excavation, dredging, haul road establishment, crushing, screening, concrete batching, fuel storage, workshop facilities, office facilities, on-site mess, ablutions facilities	2.4.2, 2.4.3, 2.4.4
	- the number and type of vehicles, machinery and equipment used for construction activities and including the method of transport of construction materials to and within the site(s) (full details of transport volumes, modes and routes should be provided in accordance with Section 3.9Transport.)	2.4.2.8, 21

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	- chemicals and hazardous goods to be utilised (if any)	26
	- water supply (for each component of the works, the requirement for water (drinking, dust suppression, ablutions etc.) should be identified and quantified. For each water requirement, the source, volume, means of access and transport, treatment processes (if applicable) and storage method should be provided. The treatment and disposal of any wastewater should be described. For each source of supply the EIS should address the quality and quantity, security of supply and resource availability	2.4.2.13, 2.4.3.6
	- stormwater drainage systems and the proposed treatment, disposal and/or re-use arrangements, including any off-site services	24.2.15
	- capture, containment/disposal of construction spoil	2.4.2.14
	- waste management (full details of the waste volumes, characteristics and management strategies should be provided in accordance with Section 3.8 Waste)	20, 2.4.2.16
	- timetable for the construction phase, including hours of construction	2.4.2, 2.4.3, 2.4.4
	- public and workforce safety, medical facilities to be provided on site and provision for access to emergency services	2.4.2, 2.4.3, 2.4.4
	- allowance for provision of power back-up in emergency and potential impact on local supplies in the area	2.4
	- security	2.4
	- construction site demobilisation	2.4.5
	- site rehabilitation.	2.4.5
	Environmentally Relevant Activities under the EP Act, that are to be undertaken, should be listed and described.	2.4.8
<b>2.4.3</b>	<b>Rehabilitation</b>	
	This section should describe the options, strategies and methods for rehabilitation of the environment disturbed by the project. A preferred rehabilitation strategy should be developed with a view to minimising the amount of land disturbed at any one time. The final topography of any quarries, borrow areas, trenches, sediment control structures, waste areas, temporary dam sites, construction areas and all other items of significant landform impact should be described and shown on maps (if appropriate) at a suitable scale.	2.4.5
	Any proposals to divert waterways during construction, and, if applicable, proposals for the reinstatement of the waterways after the construction has ceased, should be provided.	2.4.5
<b>2.4.4</b>	<b>Workforce and Accommodation</b>	
	This section should provide details on the employment requirements and skills base of the required workforce for the construction phase of the project, including:	2.4.6
	- size and source of construction and operations workforce;	
	- deployment strategies proposed for the workforce over the construction period;	
	- employment opportunities relating to the dam construction including details of the required professional, skilled and semi-skilled labour requirements of the Project;	
	- information regarding the occupational groupings required for the workforce; and	
	- new skills and training to be introduced in relation to the Project.	

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	This section should also discuss an accommodation strategy for the construction workforce that addresses the estimated housing needs of both single and accompanied construction workers. This should include details of the size, location and management of any temporary worker accommodation that will be required either on-site or off-site. Maps should be included as necessary to illustrate the site.	
	This section should describe the concept plans for a site office during the construction phase that will act as a logistics base, materials/vehicle storage depot and workshop area, and highlight the need for power, water and sewerage at the site office. Information in relation to the site office and any construction camp should include:	
	- food preparation and storage;	
	- ablution facilities;	
	- vector and vermin control;	
	- safety and emergency services	
	Outline local government approvals required for establishment and operation of such camps or site office.	
<b>2.4.5</b>	<b>Commissioning</b>	
	A description of the commissioning process including any related potential environmental impacts should be provided for all components for the project.	2.4.7
<b>2.5</b>	<b>Operation</b>	
	This section should:	
	- describe the proposed system of allocation of water from the project, with particular reference to the WRP and ROP and include any proposed specific high priority allocations to urban or industrial users or medium priority allocations to agricultural users.	2.5
	- include details of the likely extraction regime (e.g. when water will be sourced) including likely release timings by each extraction mechanism (downstream release or pipeline) based on predicted user demands (described in detail in Section 3.2.4.1).	
	- describe the location, design and ownership of any new water distribution infrastructure (pump stations, pipelines etc.), as well as the expected use of any such existing infrastructure.	
	- describe the capacity of any existing water infrastructure to accept additional loading resulting from any new or increased allocations of water.	
	The following should be discussed:	
	- arrangements for administration and control of the works (dam, fishways, pipes, roads, recreational facilities and all other components)	
	- operational arrangements for the project including flow releases, operation of gates (if relevant), outlet works, pumps, including details of remote operation and administration, on-site staffing, safety requirements for staff and the public, routine maintenance etc.	
	- proposed access points associated with the storage and dam wall, infrastructure for recreational purposes and any easements required for distribution infrastructure	

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	- any restrictions on access or land usage within the buffer zone, of land exposed at water levels below FSL, within the storage or within any easements required for distribution infrastructure	
	- energy and telecommunications requirements and sources	2.3.3.3
	- solid, liquid and gaseous waste generated and proposed methods of treatment and disposal	2.5
	- transport needs and expected traffic	
	- the expected life of the infrastructure and any anticipated major maintenance periods.	
<b>2.6</b>	<b>Decommissioning</b>	
	It is recognised that dams are anticipated to have a very long operational life spanning many decades, and there is less expectation of detailed decommissioning strategies in the EIS for this project than for other types of projects. Nonetheless, this section should present general strategies and methods for decommissioning and rehabilitation of the project should it ever be required.	2.6
<b>3</b>	<b>Environmental Values and Management of Impacts</b>	
	The functions of this section are:	
	- describe the existing environmental values of the area which may be affected by the project. Environmental values should be described by reference to background information and/or new studies.	
	- describe the potential adverse and beneficial impacts of the project on the identified environmental values.	
	- describe any cumulative impacts on environmental values caused by the project, either in isolation or by combination with other known existing or planned projects.	
	- present environmental protection objectives and the standards and measurable indicators to be achieved.	
	- examine viable alternative strategies for managing impacts. These alternatives should be presented and compared in view of the stated objectives and standards to be achieved. Available techniques, including best practice, to control and manage impacts to the nominated objectives should be discussed.	
	- describe any likely residual environmental harm on the environmental values, why it cannot be avoided and discuss potential offsets.	
	This section should address all elements of the environment (physical, biological and cultural) in a way that is comprehensive and clear. This section should:	
	- assess the impacts of pre-construction, construction, rehabilitation of disturbed lands, commissioning, operation and potential decommissioning. The impacts associated with potential ongoing maintenance, access and servicing resulting from the development and any other facilities required for the project should also be assessed.	
	- detail the environmental protection and mitigation measures incorporated in the planning, construction, rehabilitation, commissioning, operations and decommissioning of all facets of the project. Measures should prevent, or where prevention is not possible, minimise environmental harm and maximise environmental benefits of the project. Preferred measures should be identified and described in more detail than other alternatives.	
	- discuss action or recovery plans for protecting rare or threatened species and vegetation types identified as having high conservation value should be described, and any obligations imposed by them or by Queensland or Australian Government biodiversity protection legislation, relevant policies or codes.	

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<b>3.1</b>	<b>Climate and Natural Disasters</b>	
	This section should:	
	- describe the rainfall patterns (including magnitude and seasonal variability of rainfall), air temperatures, humidity, wind (direction and speed) and any other special factors (e.g. temperature inversions) that may affect management of the project.	3.1.1, 3.1.2, 3.1.3, 3.1.4
	the vulnerability of the area to natural or induced hazards, such as bushfires, earthquakes, cyclones, thunderstorms and floods. The risk they pose to the construction and operation of the project should be assessed and approaches to management outlined.	3.2
	- discuss extremes of climate (e.g. droughts, floods etc.), with particular reference to water management at the project site.	3.2.5
	- Discuss the most recent information on potential climate change impacts as applicable to the project should be discussed. The information presented in this section will allow more detailed assessment of:	3.3.1
	o implications for nature conservation under Section 3.3	9.5
	o implications for water resource management under Section 3.4	14.2.2.6
	o implications for the project's commercial viability under Section 1.5	25.3.5
	o implications for hazard and risk management under Section 6	26
	- Impacts of climate change risks and adaptation measures should include the following:	3.3.2
	o analyse risks to the project from climate change impacts (e.g. increased risk and severity of flood; increased vulnerability to more intense bushfires)	
	o identify adaptation measures to minimise risk to the project from climate change impacts, particularly where there may be a significant impact to human safety or property.	
<b>3.2</b>	<b>Land</b>	
	This section should detail the existing land environment values for all areas associated with the Project, including areas affected by the dam construction site, inundation area, pipeline route/s, and any new permanent or temporary infrastructure constructed for the project.	4.2
	This section should also describe the potential for the construction and operation of the Project to change existing and potential land uses of the project sites and adjacent areas.	4.3
<b>3.2.1</b>	<b>Topography and Geomorphology</b>	
	<b>Description of Environmental Values</b>	
	Maps should be provided locating the project and its environs in state, regional and local contexts. The topography should be detailed with contours at suitable increments, shown with respect to Australian Height Datum. Significant features of the landscape should be included on the maps. Commentary on the maps should be provided highlighting the significant topographical features. (Note that fluvial geomorphology is addressed in Section 3.4.1 Surface Water.)	Figures 4.1, 4.2, 4.3
<b>3.2.1.2</b>	<b>Potential Impacts and Mitigation Measures</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	This section should provide details of any potential impacts to the topography or geomorphology or landscape character associated with the project and proposed mitigation measures, including:	
	- a discussion of the project in the context of major topographic features and any measures taken to avoid or minimise impact to such, if required	4.3
	- the objectives to be used for the project in any re-contouring or consolidation, rehabilitation, landscaping, fencing and monitoring	4.3
<b>3.2.2</b>	<b>Landscape Character and Visual Amenity</b>	
	<b>Description of Environmental Values</b>	
	This section should describe in general terms the existing character of the landscape and the general impression that would be obtained while travelling through and around it.	5.3.1, 5.3.2 and 5.3.3
	This section should describe existing landscape features, panoramas and views that have, or could be expected to have, value to the community. Information in the form of maps and photographs is to be used, particularly where addressing the following issues:	5.3.1, 5.3.2 and 5.3.3
	- major views, view sheds, outlooks, and features contributing to the amenity of the area, including assessment from private residences	5.3.1, 5.3.2 and 5.3.3, Figure 5-3
	- focal points, landmarks, waterways and other features contributing to the visual quality of the area and the project site(s)	5.3.1, 5.3.2 and 5.3.3
	- character of the local and surrounding areas including vegetation and land use	5.3.1, 5.3.2 and 5.3.3
	<b>Potential Impacts and Mitigation Measures</b>	
	- Describe the potential beneficial and adverse impacts of the project landscape character and visual qualities of the site and surrounding area. Particular mention should be made of any changes to the broad-scale clearing, the open water body and the construction or realignment of roads.	5.4.1.1, 5.4.2.1 and 5.4.3.1
	- Provide details of measures to be undertaken to mitigate or avoid the identified impacts.	5.4.1.2, 5.4.2.2 and 5.4.3.2
<b>3.2.3</b>	<b>Geology and Soils</b>	
	<b>Description of Environmental Values</b>	
	The EIS should provide a description, including maps, of the geology of the project area, with particular reference to the physical and chemical properties of surface and sub-surface materials and geological structures within the proposed areas of disturbance. Geological properties that may influence: ground stability (including seismic activity, geological faults and associated geological hazards); rehabilitation programs; occupational health and safety; or the quality of wastewater leaving any area disturbed by the project should be described. In locations where the age and type of geology is such that significant fossil specimens may be uncovered during construction/operations, the EIS should address the potential for significant finds.	6.1
<b>3.2.3</b>	Information should also be provided on soil stability and suitability for construction of all project facilities.	6.2.1.2, 6.2.2.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Soils should be mapped at a suitable scale and described according to the Australian Soil and Land Survey Field Handbook (Gunn et al. 1988 and McDonald et al., 1990) using the Australian Soil Classification (Isbell, 1996). Information should be presented according to the standards required in the Planning Guidelines: The Identification of Good Quality Agricultural Land (Department of Primary Industries, Department of Housing, Local Government and Planning, 1993), which supports State Planning Policy 1/92: Development and the Conservation of Agricultural Land. The area of good quality agricultural land that will be inundated or otherwise impacted should be clearly indicated. Any highly erodible soils, saline sites and sites which are particularly susceptible to becoming saline (including downstream of the project, where applicable) should be especially identified. Soil descriptions must be for all relevant soil horizons, and include:	6.1
	- horizon differentiation and depths, field texture, colour, mottles	Provided in Appendix to Chapter
	- profile depth, stability, permeability, erodibility, drainage, soil structure, rockiness	Provided in Appendix to Chapter
	- salinity, sodicity, pH	Provided in Appendix to Chapter
	- a measurement of dispersibility.	Provided in Appendix to Chapter
	The investigation area should include all areas potentially affected by the project including associated infrastructure corridors and riparian areas downstream of the dam for a distance of five kilometres.	6.1
<b>3.2.3.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	This section should provide details of any potential impacts to the land resources and proposed mitigation measures, including:	
	- the environmental consequences to the geology/soils of the construction earth-moving works, water storage and release/extraction	6.2
	- influence of time of year of construction and the potential that localised rain events may have on soils	6.2
	- assessment of likely erosion effects of all project's aspects, both on and off the project area(s)	6.2
	- erosion and sediment control should be described with a soil erosion and sediment control plan included in the EMP. For soil types with major differences in erosion potential, specific erosion management techniques should be outlined. Erosion monitoring should be discussed along with the development of rehabilitation/mitigation measures to achieve acceptable soil loss rates	6.2
	- description of topsoil and other material management, including excavation, transport, stockpiling and replacement. These aspects should be specifically developed for the EMP	6.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- the potential for the project to adversely impact on the stability of landforms within the impoundment area, infrastructure areas and adjacent lands should be addressed in detail. This should include the stability and potential for erosion of periodically inundated land below FSL and the buffer zone and adjacent catchment areas. The stability and potential for erosion of the watercourse and associated riparian zone downstream of the project should be addressed, including changes to sediment delivery, transport and deposition.	6.2
	- the impact of sedimentation on dam storage volumes and bed profile should be discussed	6.2.1.2
	- an assessment of the potential for land use conflict with GOAL is required with investigations following the procedures set out in the planning guidelines referred to above	6.1.4.2, 6.1.5.2, 6.2.1.2, 6.2.2.2 and 6.2.3.2, 7.2.1.1
	- the impact of clearing intake areas and construction on saline sites should be determined. Where impacts are envisaged, salinity management and monitoring techniques should be outlined in the EMP.	6.2
<b>3.2.4</b>	<b>Land Use and Infrastructure</b>	
<b>3.2.4.1</b>	<b>Description of Environmental Values</b>	
	<b>The EIS should try to identify the following, with the aid of maps:</b>	
	- land tenure, including reserves, tenure of special interest such as protected areas and forest reserves, mining and petroleum exploration tenures, mining leases, identification of existing and proposed gas, power lines and transport corridors (includes local roads, state-controlled roads, existing and proposed rail corridors, stock routes) and easements for any purpose	7.1.1.2, 7.1.2.5, 7.1.2.6, 7.1.3.5, 7.1.3.6, and 7.1.4 Figures 7-4, 7-5 and 7-8
	- <b>land use and zoning (urban, residential, industrial, agricultural, mining, forestry, recreational, mining claims, mineral development licences and extractive industry Key Resource Areas, etc.)</b>	7.1.1.1, 7.1.2.3, 7.1.2.4, 7.1.2.7, 7.1.3.3, 7.1.3.4, 7.1.3.7 and 7.1.4. Figures 7-2, 7-3, 7-6 and 7-7
	- areas covered by applications for Native Title claims or Native Title determinations, providing boundary descriptions of Native Title Representative Bodies. The proponent should also identify in the EIS whether there are any necessary notifications required to the Representative Body(ies) or evidence that Native Title does not exist	7.1.2.5 and 7.1.3.5 Cross referenced to Cultural Heritage Chapter
	- information on any known occurrences of economic mineralisation and extractive resources within the project area	7.1.2.5, 7.1.3.5 and 7.1.4 Cross referenced to DoP.
	- distance of the project from residential or recreational areas.	7.1.2.4 and 7.1.3.4 Figures 7-3 and 7-7
<b>3.2.4.2</b>	<b>Potential Impacts and Mitigation Measures</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Detail the potential for the construction and operation of the project to change existing and potential land uses of the project site(s) and adjacent areas.	7.2.1.2, 7.2.2.2, 7.2.3.2
	Detail post operations land use options including suitability of the area within any pipeline right of way, or dam storage buffer for agriculture, industry, mining, nature conservation or other purpose. The factors favouring or limiting the establishment of those options should be given in the context of land use suitability prior to the project and minimising potential liabilities for long-term management.	7.2.1.5, 7.2.2.5, 7.2.3.4
	A description of the following should be included:	
	- the land acquisition strategy and the proposed tenure (easements, leases etc.)	7.2.1.2, 7.2.1.5, 7.2.2.2, 7.2.2.5, 7.2.3.3, 7.2.3.4
	- management of the immediate environs of the project including construction buffer zones, and information on how easement widths and vegetation clearance in sensitive environmental areas will be minimised	7.2.1.5, 7.2.2.5, 7.2.3.4
	- strategies addressing individual property impacts affected by the project – viability to continue its current use and if not viable, alternative uses; access changes to and within the property	7.2.1.2, 7.2.1.5, 7.2.2.2, 7.2.2.5
	- potential for management of impacts to native title rights and interests by an Indigenous Land Use Agreement or other native title compliance outcomes	7.2.1.3, 7.2.1.5, 7.2.2.3, 7.2.2.5
	- direct or indirect impacts on any protected areas, World Heritage areas, Ramsar wetland sites, or other areas designated to be of high conservation value (including impacts on accessibility)	7.2.1.3, 7.2.1.4
	- impacts on surrounding land uses and human activities and strategies for minimisation, including	7.2.1.1, 7.2.1.2, 7.2.1.3, 7.2.1.5, 7.2.2.2, 7.2.2.3, 7.2.2.5, 7.2.3.2, 7.2.3.3, 7.2.3.4
	o GOAL	
	o forestry land (addressing loss of access to land, fragmentation of sites, increase of fire risk and loss of productive land for those purposes)	
	o mining activities	
	o residential and active and passive open space	
	o industrial uses.	
	- possible effect on town planning objectives and controls, including local government zoning and strategic plans	7.2.1.1, 7.2.2.1
	- constraints to potential developments and possibilities of rezoning adjacent to the project area, including upstream of the inundation area	7.2.1.1, 7.2.1.2
	- potential recreational use of the water storage and surrounding area should be explicitly addressed within any likely restrictions specifically identified	7.2.1.5
	<b>- possible impacts on, or sterilisation of, identified mineral or energy resources and extractive industry deposits resulting from the construction and/or operation of the project</b>	7.2.1.3, 7.2.2.3

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- any native forest hardwoods, cypress pine or quarry resources from state forests, timber reserves and other state-controlled lands within the project area to the satisfaction of the Department of Natural Resources and Water – Forest Products	Not Applicable
	- potential issues involved in proximity and/or co-location of other current or proposed infrastructure services	7.2.2.4, 7.2.2.5
	- potential impacts of construction work on essential services, and function of other infrastructure	7.2.1.4, 7.2.1.5, 7.2.2.4
	- any land units requiring specific management measures	7.2.1.5, 7.2.2.5, 7.2.3.4
<b>3.2.5</b>	<b>Land Contamination</b>	
<b>3.2.5.1</b>	<b>Description of Environmental Values</b>	
	A review should be undertaken within the project site and adjacent areas, to identify any area which has been or is being used for a “Notifiable Activity” as listed in Schedule 2 of the EP Act, is potentially contaminated, or is on the Environmental Management Register or Contaminated Land Register.	8.1.3 & 8.1.4
	A preliminary site investigation (PSI) in accordance with the Environmental Protection Agency (EPA) “Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (1998)” and “The National Environmental Protection (Assessment of Site Contamination) Measures 1999” should be prepared where evidence of existing or past contamination is encountered and where it represents a serious risk to the project. The results of the PSI should be summarised in the EIS and provided in detail in an appendix.	
	If the results of the PSI indicate potential or actual contamination (including any areas of potential unexploded ordinance), a schedule of investigation, remediation and validation and/or specific management strategies, must be developed in accordance with the EPA “Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland (1998)”. This schedule is to be undertaken if the project is approved and advanced to the construction phase.	
	The following information should be provided as part of the EIS:	
	- mapping of any areas listed on the Environmental Management Register or Contaminated Land Register under the EP Act	8.1.3 & 8.1.4
	- identification of any potentially contaminated sites not on the registers which may need remediation.	8.1.3 & 8.1.4
<b>3.2.5.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	This section should provide details of any potential impacts from existing land contamination and proposed mitigation measures, including:	8.2
	- a schedule of further investigations and remediation activities recommended for those land parcels where contamination may have an impact on construction or operation of the project	
	- details of any risks to occupational or human health, as a result of any residual contamination levels, to any of the proposed uses of the dam or other project areas, including recreational use, animal or human consumption of produce or potential impacts on surface and groundwater quality	8.2, 8.2.1, 8.2.4

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	The means of preventing land contamination (within the meaning of the EP Act) should be addressed. Methods proposed for preventing, recording, containing and remediating any contaminated land should be outlined. Intentions should be stated concerning the classification (in terms of the Queensland Environmental Management Register or Contaminated Land Register) of land contamination on the land after completion of construction of the project.	8.2.3
<b>3.3</b>	<b>Nature Conservation</b>	
	This section should detail the existing nature conservation values of the area that may be affected by the project. The description should include species lists with reference to with reference to species of international, national, state and local significance.	
	Reference should be made to relevant Queensland and Australian Government legislation and policies on threatened species and ecological communities including recovery plans.	
	All surveys undertaken should be in accordance with recognised best practice, including consideration of advice from the EPA, and should include consideration of seasonality, potential for occurrence of significant species, rarity of species and the sensitivity of the species to disturbance. Each sub-section should also discuss all likely direct, indirect, consequential and cumulative environmental impacts on flora and fauna in both terrestrial and aquatic environments and in sensitive areas.	
	Each subsection should assess potential impacts on the environmental values identified. It should also define and describe the objectives and practical measures for protecting or enhancing those environmental values, to describe how nominated quantitative standards and indicators may be achieved, and how the achievement of the objectives will be monitored, audited and managed. Any potential implications of climate change, as determined in Section 3.1, should be discussed.	
	The EIS should demonstrate how the project (including all associated infrastructure requirements such as access tracks) would comply with the following hierarchy:	
	- avoiding impact on areas of remnant vegetation and other areas of conservation value	
	- mitigation of impacts through rehabilitation and restoration	
	- measures to be taken to replace or offset the loss of conservation values where avoidance and mitigation of impacts cannot be achieved	
	- explanation of why measures above would not apply in areas where loss would occur.	
	The boundaries of the areas impacted by the project within or adjacent to an endangered ecological community, including details of footprint width should be discussed. Where the project area would impact upon a threatened community, the discussion should include reasons for the preferred location or alignment and the viability of alternatives.	
<b>3.3.1</b>	<b>Sensitive Environmental Areas</b>	
	The EIS should identify areas that are environmentally sensitive in proximity to the project or which may potentially be impacted by the project. The proximity of the project to any environmentally sensitive areas should be shown on a map of suitable scale.	9

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Environmentally sensitive areas include those designated or zoned under legislation or a planning scheme such as nature refuges, national parks, conservation parks, declared fish habitat areas, wilderness areas, aquatic reserves, heritage/historic areas or items, national estates, world heritage areas and sites covered by international treaties or agreements (e.g. Ramsar), areas of cultural significance and scientific reserves.	9.2.1, 9.2.4, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.4
	Areas which are not specifically proclaimed but which would be regarded as sensitive with regard to the natural environment have one or more of the following features:	
	- important habitats of species listed as threatened under the Nature Conservation Act 1992 (Old) and/or the EPBC Act	9.2.4, 9.2.6,
	- regional ecosystems recognised as 'endangered' or 'of concern' under State legislation and/or communities listed as threatened under the EPBC Act	9.2.2, 9.2.3
	- ecosystems which provide important ecological functions, such as riparian vegetation, buffers to a protected area, refugia or important habitat corridor between areas (such as determined by the EPA's Biodiversity Planning Assessment process)	9.2.5, 9.2.6, 9.3.6,
	- wetlands or flight paths of importance to migratory birds protected under the Japan-Australia Migratory Bird Agreement (JAMBA) or China-Australia Migratory Bird Agreement (CAMBA).	9.3.4
<b>3.3.2</b>	<b>Terrestrial Flora</b>	
<b>3.3.2.1</b>	<b>Description of Environmental Values</b>	
	The terrestrial vegetation communities within the affected areas should be described and shown on maps at an appropriate scale with mapping produced from aerial photographs and ground truthing, showing the following:	
	- location and extent of vegetation types including recognised regional ecosystem type descriptions and any areas of national, state or regional significance	10.1.3.1; 10.1.3.2; 10.1.4.1; 10.1.4.2
	- location of vegetation types of conservation significance	Figure 10.3, 10.4, Appendix 10-B
	- vegetation map unit descriptions, including their relationship to regional ecosystems. Sensitive or important vegetation types should be highlighted and their value for conservation of specific rare floral and faunal assemblages or community types discussed.	10.1.3.2; 10.1.4.2
	- the current extent (bioregional and catchment) of vegetation types of conservation significance within protected areas (e.g. national parks, conservation parks, resource reserves, nature refuges etc.)	Appendix 10-C
	- any special landscape values of any natural vegetation communities	10.1.3.2; 10.1.4.2; 9
	- any plant communities of cultural, commercial or recreational significance	10.1.3.5; 10.1.3.7; 10.1.3.11; 10.1.4.5, 10.1.4.6, 10.1.4.7
	- the location of any horticultural crops in the vicinity of the project area	10.1.3.10; 10.1.4.10
	- the distribution and abundance of exotic and weed species.	10.1.3.8; 10.1.4.8

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	For each significant natural vegetation community likely to be impacted by the project, vegetation surveys should be undertaken at an appropriate number of sites, allowing for seasonal factors, and satisfying the following:	
	- all data requirements of the Queensland Herbarium CORVEG database	10.1.2
	- selection of appropriate minimum site sizes observing recognised sampling approaches and to providing an adequate sample of surveyed communities	10.1.2; Appendix 10-B
	- a list of species present at each site	Appendix 10-B
	- the relative abundance and community structure of plant species present	Appendix 10-B
	- recognition of any plant species of conservation, cultural, commercial or recreational significance	10.1.3.6; 10.1.4.5
	- submission of vegetation mapping and data to the Queensland Herbarium to assist the updating of the CORVEG database	
	- submission of specimens of species listed as Protected Plants under the Nature Conservation (Wildlife) Regulation 1994, other than common species, are to be submitted to the Queensland Herbarium for identification.	10.1.3; 10.1.4
	The existence of species of conservation significance should be specifically addressed under sensitive areas.	10.1.3.6; 10.1.4.5; Section 9
	Existing information on plant species may be used instead of new survey work provided that the data are derived from surveys consistent with the above methodology and describe existing conditions. Methodology used for flora surveys should be specified. Any existing information should be revised and comments provided on whether the areas are degraded, cleared or affected in ways that would affect their environmental value.	10.1.2
<b>3.3.2.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	Construction and operation of the project involving clearing, salvaging or removal of vegetation should be described, and indirect impacts on vegetation not cleared should be discussed.	10.2.1; 10.2.2
	Measures to mitigate the impacts of the project on vegetation types identified as having high conservation values, listed species and sensitive habitat or the inhibition of propagation should be described. This should also include the identification of potential offset areas, in an "Offset Strategy" to compensate for any loss of vegetation.	10.2.1; 10.2.2
	With regard to all components of the project, this section should discuss:	
<b>3.3.2.2</b>	- the significance of impacts at a local, catchment, bioregional, state or national levels as appropriate	10.2.1; 10.2.2, Appendix 10-C
	- the impact on any plants of potential or recognised environmental or economic significance (the commercial value of the timber resource should be estimated and described)	10.2.1; 10.2.2; 10.1.3.11; 10.1.4.11
	- a discussion of the ability of identified stands of vegetation to withstand any increased pressure, such as by fragmentation, resulting from the project and identify measures proposed to mitigate impacts	10.2.1; 10.2.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- a description of the methods to ensure rehabilitation of disturbed areas following construction, including the species chosen for revegetation which should be consistent with the surrounding associations. Details of any post-construction monitoring programs and what benchmarks would be used for review of monitoring should be included	29.9.9
	- a description of methods of minimising the potential for the introduction and/or spread of weeds or plant disease, including: <ul style="list-style-type: none"> <li>o identification of the origin of construction materials, machinery and equipment</li> <li>o the need for vehicle and machinery wash-down and any other hygiene protocols</li> <li>o staff/operator education programs</li> <li>o determination of the potential for the introduction of or facilitation of exotic, non-indigenous and noxious plants</li> </ul>	10.2.1.4; 10.2.2.4
	- a weed management plan should be included in an environmental management plan, to be developed in consultation with local government environmental officers, to cover construction, rehabilitation and operation periods (to be included in the environmental management plan).	10.2.1.4; 10.2.2.4
<b>3.3.3</b>	<b>Terrestrial Fauna</b>	
<b>3.3.3.1</b>	<b>Description of Environmental Values</b>	
	The terrestrial and riparian fauna occurring in the areas affected by the project should be described, noting the broad distribution patterns in relation to vegetation, topography and substrate. Wildlife corridors and refugia impacted by the project should be identified and mapped.	11.1.3; 11.1.4
	The description of the fauna present or likely to be present in the area should include:	
	- species diversity (i.e. a species list) and abundance of animals, including amphibians, birds, reptiles, mammals and any invertebrates of recognised significance	11.1.3.4; 11.1.3.5-11.1.3.10
	- existence (actual or likely) of any species/communities of conservation significance in the study area, including discussion of range, habitat, breeding, recruitment feeding and movement requirements, and current level of protection (e.g. any requirements of Protected Area Management Plans or Threatened Species Recovery Plans)	11.1.3.11; 11.1.4.5; Appendix 11-A
	- any species that are poorly known but suspected of being a species of conservation significance	11.1.3.11; Table 11.8
	- habitat requirements and sensitivity to changes, including movement corridors and barriers to movement	11.1.3.3; 11.1.4.3; Appendix 11-A
	- an estimate of commonness or rarity for the listed or otherwise significant species	Figure 11.5 (location of records); Table 11.7 and 11.3
	- the existence of feral or exotic animals, including invertebrates of economic or conservation significance	11.1.3.13; 11.1.4.7
	- use of the area by migratory fauna.	11.1.3.12; 11.1.4.6
	The EIS should indicate how well any affected fauna are represented and protected elsewhere in the bio-region where the project occurs.	Appendix 11-A

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Methodology used for fauna surveys should be specified. Relevant site data should be provided to the EPA in a format compatible with the EPA WildNet database for listed threatened species.	11.1.2; Appendix 11-A
<b>3.3.3.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The assessment of potential impact should consider:	
	- impacts the project may have on terrestrial fauna, relevant wildlife habitat and other fauna conservation values, including:	11.2.1; 11.2.2; 11.2.3
	o impacts due to loss of range/habitat, food supply, nest sites, breeding/recruiting potential or movement corridors or as a result of hydrological change	11.2.1.1; 11.2.1.2; 11.2.2.1; 11.2.2.2
	o impacts on species of conservation significance	11.2.1.3; 11.2.2.3
	o cumulative effects of direct and indirect impacts	11.3
	o threatening processes leading to progressive loss.	11.2.1.1; 11.2.1.2; 11.2.1.5-11.2.1.7; 11.2.2.1; 11.2.2.2; 11.2.2.5; 11.2.2.6
	With respect to mitigation strategies the following should be provided:	
	- measures to mitigate the identified impacts. Any provision for buffer zones and movement corridors, nature reserves or special provisions for migratory animals should be discussed and coordinated with the outputs of the flora assessment	11.2.1.1- 11.2.1.4; 11.2.2.1-11.2.2.4
	- details of the methodologies that would be used to avoid injuries to livestock and native fauna as a result of the project's construction and operational works, and if accidental injuries should occur the methodologies to assess and handle injuries	11.2.1.1; 11.2.1.2; 11.2.2.1; 11.2.2.2
	- methods for minimising the introduction of feral animals, and other exotic fauna such as declared pest species (including ant species and terrestrial biting insect species of pest and health significance)	11.2.1.5; 11.2.2.5
	- strategies for complying with the objectives and management practices of relevant recovery plans. In particular, specific reference should be made to the recovery plan for the EPBC Act listed critically endangered Boggomoss snail ( <i>Adclarkia dawsonensis</i> ).	11.2.1.3 (Table 11-19)
<b>3.3.4</b>	<b>Aquatic Flora</b>	
<b>3.3.4.1</b>	<b>Description of Environmental Values</b>	
	The discussion of the flora present or likely to be present at any time during the year in the areas potentially affected by the project should include the following habitats:	12.1.3.1 and 12.1.3.2
	- in-stream pools/runs, riffles/rapids	12.1.3.1 and 12.1.3.2
	- off-stream perennial and ephemeral pools (billabongs, ox-bow lakes etc.)	12.1.3.1 and 12.1.3.2
	and should be described, noting:	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- the extent and location of submerged, emergent, rooted and free-floating aquatic vegetation communities and species	12.1.3.2 and 12.1.4.2
	- the presence of any species of conservation significance	12.1.3.2 and 12.1.4.3
	- the presence of any declared pest plants or weed species.	12.1.3.2 and 12.1.4.4
	The natural state should be estimated.	12.1.3.5 and 12.1.4.5
	A description of the habitat requirements and the sensitivity of aquatic flora species to change should be described.	12.1.3.6
	The impact of existing impoundments, flow regulation and non-water resource development on the natural aquatic flora should be discussed using literature based and/or survey data as appropriate.	12.1.3.7
	Estuarine and marine environments should be described at a level of detail commensurate to the risks (including cumulative risks) the project poses to those environments.	12.1.3.3 and 12.1.3.4
<b>3.3.4.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The discussion should include:	
	- the flora community to be lost within the impoundment area	12.2.1.1
	- the flora community expected to develop within the impoundment area	12.2.1.2
	- effects of variations in water level of the impoundment including desiccation, drowning and colonisation of temporarily exposed bed	12.2.1.2
	- the potential for blue-green algae outbreaks as a result of the project	12.2.1.2
	- changes to flow regime and associated factors downstream and resultant changes to habitat (in-river and offstream) and consequential floristic changes (note flow regime indicators and nodes other than those used in the WRP can be used if more appropriate to impact assessment). The risks to estuarine and marine environments should be identified and the impacts associated with significant risks estimated and quantified as far as possible	12.2.1.2
	- impacts of barriers to interbreeding opportunities between populations	12.2.1.2
	- identification of the conservation importance of identified populations at the regional, State or National levels as appropriate	12.2.1.1
	- determination of the potential for the introduction or facilitation of exotic, non-indigenous and noxious plants.	12.2.1.2
<b>3.3.5</b>	<b>Aquatic Fauna</b>	
	<b>Description of Environmental Values</b>	
	The discussion of the fauna (macroinvertebrates, fish, aquatic reptiles and aquatic mammals) present or likely to be present at any time during the year in each habitat (riverine, weir pool, offstream water body etc.) that may be impacted should include:	
	- description of representative habitats (natural or otherwise) within, upstream and downstream of the storage area including	13.1.3.1 and 13.1.4.1
	- distribution of pool and riffle formations;	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- presence of snags, overhanging vegetation, aquatic macrophytes, sand and gravel bars (including known or potential turtle nesting banks);	
	- sediment type;	
	- river profile (bank width and depth), floodplain wetlands	
	- diversity, distribution and abundance (where feasible and practicable)	13.1.3.2 and 13.1.4.2 (macroinvertebrates);
	- listed threatened or migratory species	13.1.3.3 and 13.1.4.3 (fish);
	- commercial and recreational fish species and any stocking undertaken	13.1.3.4 and 13.1.4.4 (reptiles - turtles);
	- otherwise significant species or populations	13.1.3.5 and 13.1.4.5 (reptiles - crocodiles);
	- introduced and exotic species	13.1.3.6 and 13.1.4.6(mammals)
	- habitat requirements of key species, including water depth, substrate, nesting or breeding habitat, flow, water quality and sensitivity changes, including barriers to movement	13.1.3.7, 13.1.3.8 and 13.1.4.7
	- a description of the conditions necessary for breeding and/or migration of key potentially affected species including minimum flows, seasonal conditions, stream characteristics and migratory behaviour and assessment of existing impacts in this regard	
	- an estimate of the natural condition and changes that have occurred related to water resource development and non-water resource development activities.	
	This section should indicate how well any affected communities are represented and/or protected elsewhere.	
	Estuarine and marine environments should be described at a level of detail commensurate to the risks (including cumulative risks) the project poses to those environments.	13.1.6
<b>3.3.5.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The discussion should include:	
	- impacts on habitat, nesting, burrowing, food supply, reproduction, different life stages, population and community structure, movement or status etc, as appropriate	13.2.1 and 13.2.2
	- construction phase impacts including physical disturbance, temporary barrier creation, ponding and trapping and water quality impacts	13.2.1.1 and 13.2.2.1
	- any proposed stream diversions, causeway construction and crossing facilities, stockpiled material and other impediments that will restrict free movement of fish	13.2.1.1, 13.2.1.2 and 13.2.2.1
	- potential for, and mitigation measures to prevent, the creation of new mosquito and biting midge breeding sites during construction (e.g. in quarries and borrow pits)	13.2.1.1
	- the extent and importance of the habitats that will be lost as a result of the dam	13.2.1.1
	- the extent and importance of any downstream wetlands impacted by reduced flooding and the type and degree of impact	13.2.1.2
	- impacts during the first filling stage of the water storage	13.2.1.1
	- the likely fauna that will colonise the different habitats available within the storage	13.2.1.2
	- effects of fluctuating water level in the impoundment and particularly in creeks flowing into the impoundment	13.2.1.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- operational impact of proposed in-stream structures including water off-takes (at intake and discharge point), spillway and gate operation (if applicable), energy dissipation devices, any proposed fauna transfer devices or techniques, roads and bridges, pipeline crossings etc.	13.2.1.2
	- effects of changes to flow regime downstream, including the effect of changes in water quality, salinity, habitat structure (e.g. permanence and depth of flow in riffles) and flow regime (seasonality of releases, decreased flooding etc.). The risks to estuarine and marine environments should be identified and the impacts associated with significant risks estimated and quantified as far as practicable	13.2.1.2
	- effects on species of conservation significance including listed threatened and listed migratory species and their habitat	13.2.1.2
	- determination of the potential impacts on commercial and recreational fisheries, addressing issues such as access, changes to stocks, potential for fish kills etc.	13.2.1.2
	- determination of the potential for the introduction or increased translocation of exotic or noxious aquatic fauna.	13.2.1.2
<b>3.4</b>	<b>Water Resources</b>	
<b>3.4.1</b>	<b>Surface Water</b>	
<b>3.4.1.1</b>	<b>Description of Existing Environment</b>	
	This section should describe the existing hydrologic regime of the Connors River and the Fitzroy catchment, its tributaries and any other river system, including downstream systems, subject to water related impact as a result of the project. It should include the following:	14.1.3
	- a map of waterways or water features, including drainage channels, wetlands, flood-prone or low lying land on or adjacent to the dam site. The position of the dam in the Fitzroy catchment and the waterways crossed by any pipelines, should also be shown	14.1.3
	- a description of existing surface drainage patterns, flows in major streams, and the length of stream already impounded and regulated	14.1.3,14.1.4
	- discussion of the likelihood of flooding, history of flooding including extent, levels and frequency (upstream and downstream). The extent of flood modelling will be to the points at which no significant impact occurs. Flood studies will include a range of annual exceedence probabilities. Actual hydrographs should be used for representative floods at different locations	14.1.5
	- a description of the current operation and management of the water storage and distribution system, including yield, operating strategy, supply reliability, allocation and use of water supplies, water use efficiency and the environmental flow regime. This should include a description of the WRP, ROP, water allocation security objectives and environmental flow objectives	14.1.4.2, 14.1.4.3, 14.1.6, 14.2.2.3
	- a description of the pre-development (without water resource development), current and full entitlement flow characteristics including seasonal flow patterns, flow volumes and duration using relevant indicators from the WRP and others as appropriate to this project after consultation with fluvial geomorphologists and ecologists. Graphical representations at a range of nodes should be included	14.1.4, 14.2.2.2, 14.2.2.3

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- a discussion of the changes in the parameters from pre-development to current conditions, and the corresponding changes that may be anticipated or have occurred in:	14.1.2.2
	o in-stream and offstream wetland inundation frequency	14.2.3
	o sediment/nutrient/energy processes in the catchment, including delivery to the coastal and nearshore environment	14.4
<b>3.4.1.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	Matters to be addressed should include the following:	
	- a level of service analysis (based on the security, frequency and duration of restriction)	14.2.2.7
	- the effects of drainage or dewatering works, excavation, placement of fill, clearing or any other alterations to existing topography and landform on the hydrology of works sites including any alteration to drainage patterns and the water table and secondary influence on flooding. If levee banks or stream diversion constructions are proposed, the effects on neighbouring landholders should be considered.	14.2.1, Chapter 2
	- proposed drainage structures for all aspects of the project, including supporting facilities such as access roads	14.2.1, Chapter 2
	- timing of the construction works relative to likely periods of flooding and proposals to minimise the risk of flood damage	14.2.1.1, 14.2.1.2, 14.2.1.3, Chapter 2
	- with regard to dam operational impacts the following should be provided:	
	o a discussion of impacts of the project on flow regime indicators (water allocation security objectives and environmental flow objectives in accordance with the Fitzroy Basin Water Resource Plan) and stipulation of the assumptions made (e.g. extraction patterns, release patterns, release capacity, consumptive uses)	14.2.2.3, 14.2.2.1, 14.2.2.2
	o the effect of environmental flow requirements on dam reliability and water availability for consumptive use	14.2.2.1
	o changes in the reliability of supply to current water entitlement holders and any impacts on the operation of existing water extraction	14.2.2.2, 14.2.2.3
	o changes in flow patterns including changes in frequency, volumes and duration and changes in flows reaching estuarine waters, when compared at a meaningful scale with pre-regulation and current flows in the system	14.2.2.2
	- potential impacts on flood levels upstream and downstream of the storage area and at any new crossing of watercourses	14.2.3, 14.2.1.2
	- changes in flood regimes including frequency and duration of floodplain/wetland inundation	14.2.3, Chapter 12
	- determination of the effects of the proposal on sediment transport, potential erosion/scouring and changes in deposition upstream and downstream	14.4.2.2
	- any potential implications of climate change, as determined in Section 3.1.	14.2.2.6, Appendix 14-A
<b>3.4.2</b>	<b>Groundwater</b>	
<b>3.4.2.1</b>	<b>Description of Environmental Values</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	This section should describe the existing environment for hydrogeology resources that may be affected by the project and the possible significance of the project to groundwater depletion or recharge, or potential saltwater intrusion of existing aquifers. The review should include a survey of existing groundwater supply facilities (i.e. bores, wells or excavations) within the project area. This section should include reference to:	
	- proximity of groundwater facilities to the project and value of these facilities for rural, industrial and/or domestic use	15.1.3.10
	- the current use of groundwater for irrigated agriculture within any potential area of impact	15.1.3.10
	- known nature of the aquifers at and near the sites, geology/stratigraphy, aquifer type, depth to and thickness of the aquifer, hydrology of the aquifers, depth to water level and seasonal changes in levels, groundwater flow directions	15.1.3.1 to 15.1.3.8
	- interaction with surface water including with mound springs (Boggomosses) and possible sources of recharge	15.1.3.11
	- basic water quality of the aquifer, vulnerability to pollution	15.1.3.9
	- groundwater resources proposed to be used by the project (if applicable), including a description of the quality, quantity, usage rate and required location of those resources	15.1.3.13
	- the characteristics of target aquifers (if applicable), including seasonal variability, capacity to provide the required volumes of water at the expected usage rate, recharge potential and profile of existing extraction.	15.1.3
<b>3.4.2.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	Matters to be addressed should include clear descriptions of the following:	
	- an assessment of the potential impacts on the objectives and requirements of the Great Artesian Basin Water Resource Plan and Resource Operations Plan	15.2.1
	- the impacts of the project on the stygofauna within groundwater dependant ecosystems	15.1.3.11 & 15.2.3
	- effect of dewatering of dam foundations	15.2.3
	- effect of dam wall construction and grouting on the availability and quality of groundwater resources downstream	15.2.3
	- impacts of vegetation clearing, sedimentation and salinity on local groundwater resources	15.1.3.12 & 15.2.3
	- extent of the area within which groundwater resources are likely to be affected by the proposed operations, including effects of water storage, presence of the dam wall and downstream flow releases	15.2.3
	- impacts the dam will have on the local Boggomoss springs and wider Great Artesian Basin	15.2.3
	- impacts of the required extraction of groundwater resources (if applicable) and proposed mitigation measures to reduce the impact of the project on groundwater quality including the potential for interconnection between the target and underlying aquifers	15.2.3
	- decommissioning of any temporary groundwater bores.	15.2.7
<b>3.4.3</b>	<b>Surface Water Quality</b>	
<b>3.4.3.1</b>	<b>Description of Environmental Values</b>	
	This section should describe the existing environment for water quality that may be affected by any component of the project in the context of environmental values as defined in local, state or national guidelines. The discussion should be at both local and catchment scales as related to the direct impacts of the project and the potential uses of water from the project.	16.1 and 16.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Existing and historic surface water quality should be described in terms of physical, chemical and biological characteristics within the proposed storage area, upstream and downstream of the area, and in significant waterways crossed by any pipelines, including consideration of seasonal or flow variations where applicable. Offstream water bodies and existing weir pools should be included.	16.1.4 and 16.1.5
	The basis for this assessment should be a literature review supplemented by a sampling program, as appropriate. The following should be discussed:	
	- the relationship of water quality to flow, using local catchment examples where available	16.1.4.5 and 16.1.4.6
	- water quality issues within and downstream from existing storages in the system	16.1.4.7 and 16.1.4.8
	- the confirmed or likely causes of present water quality impacts	16.1.4.9
	- the suitability of existing raw water quality for present uses and any treatment required	16.1.4.7
	- current water quality issues related to specific uses of water as related to the project (e.g. potable supply, agricultural water (if applicable)).	16.1.4.7, 16.1.4.8 and 16.1.4.9
<b>3.4.3.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	Matters to be addressed should include clear descriptions of the following:	
	- possible sources of water pollution or other changes in water quality during specific construction activities such as sand and gravel extraction, site clearing, excavation, dewatering of foundations, temporary or permanent road construction and related drainage, wastewater from concrete batch plants, vehicle and equipment washdown activities, sewage or greywater treatment and disposal, use of chemicals in foundation cleaning, grouting or testing and accidents or spillage	16.2.1.1
	- the likely quality of water leaving construction sites taking into account the management and mitigation measures proposed	16.2.1.1 ; 16.2.4
	- quality of water within the impoundment during the first filling phase	16.2.1.2
	- quality of water within the impoundment under projected operating conditions including annual seasonal variation, extended wet or dry periods, the effects of inundated soil types and wind driven re-suspension, impacts of surrounding or upstream land uses	16.2.1.3
	- the effects of depth and holding time within the storage, particularly on turbidity	16.2.1.5
	- potential for stratification and 'turn-over' of the storage (including potential for blue-green algae blooms) and implications for water quality management, supply and use (including for stock and domestic users, industrial users, urban potable use or recreational use of the storage)	16.2.1.3; 16.2.1.4; 16.2.1.6
	- the potential effect of algae and macrophytes on water quality and vice versa	16.2.1.3; 16.2.1.4; 16.2.1.6
	- the effects on downstream water quality under varying scenarios of flow release including potential impacts on estuarine and nearshore environments.	16.2.1.6
<b>3.5</b>	<b>Air Quality</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
<b>3.5.1</b>	<b>Description of Environmental Values</b>	
	This section should describe the existing air environment, which may be affected by the proposal in the context of environmental values as defined by the EP Act and Environmental Protection (Air) Policy 2008.	17.1.1, 17.1.3, 17.1.4, 17.1.5
<b>3.5.1</b>	Ambient air quality conditions in terms of particulate matter and any other major constituent of the air environment that may be affected by the proposal should be described for any sensitive localities such as residences. These descriptions should include any baseline monitoring results.	17.1.3.3 and 17.1.4.3
<b>3.5.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The following air quality issues and their mitigation should be considered:	
	- the quality and quantity of air emissions within the project area expected during construction and operational activities	17.2.1, 17.2.2, 17.2.3, 17.2.5
	- dust generation from construction activities (including blasting, excavation and extraction), especially in areas where construction activities are adjacent existing road networks or are in close proximity to sensitive receivers	17.2.1, 17.2.2
	- climatic patterns that could affect dust generation and movement	17.1.3.2, 17.1.4.2
	- vehicle emissions and dust generation along haulage routes (internal and external to construction sites)	17.2
	- air quality from gaseous emissions including greenhouse gas emissions and ozone depleting substances	17.2.4
	- terrestrial flora and fauna.	17.2.4
<b>3.6</b>	<b>Greenhouse Gas Emissions</b>	
<b>3.6.1</b>	<b>Description of Environmental Situation</b>	
	This section of the EIS should:	
	- provide an inventory of projected annual emissions for each relevant greenhouse gas, with total emissions expressed in 'CO2 equivalent' terms	18.3.1, 18.3.2, 18.3.3
	- estimate emissions from upstream activities	18.3.4
	- briefly describe method(s) by which estimates were made.	18.2.1, 18.2.2
	The Australian Greenhouse Office Factors and Methods Workbook can be used as a reference source for emission estimates and supplemented by other sources where practicable and appropriate.	18.2.1, 18.2.2
<b>3.6.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	This section of the EIS should propose and assess greenhouse gas abatement measures. It should include:	
	- a description of the proposed measures (alternatives and preferred) to avoid and/or minimise direct greenhouse gas emissions	18.4.1, 18.4.2
	- an assessment of how the preferred measures minimise emissions and achieve energy efficiency	18.5
<b>3.6.2</b>	- a comparison with best practice environmental management	18.4.2
	- a description of any opportunities for further offsetting greenhouse gas emissions through indirect means including sequestration and carbon trading.	18.4.2
<b>3.7</b>	<b>Noise and Vibration</b>	
<b>3.7.1</b>	<b>Description of Environmental Values</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	This section should describe the existing noise and vibration environment that may be affected by the project in the context of environmental values as defined by the Environmental Protection (Noise) Policy 2008. The EPA's Noise Measurement Manual should be considered and references should be made to the EPA Guideline Noise and Vibration from Blasting.	19.1
	Sensitive noise receptors adjacent to all project components should be identified and typical background noise levels estimated based on surveys at representative sites. The potential sensitivity of such receptors should be discussed and performance indicators and standards nominated.	19.1.3.1, 19.1.6
<b>3.7.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The EIS should describe the impacts of noise and vibration generated during the construction and operational phases of the project. An analysis of noise and vibration impacts should include:	19.2
<b>3.7.2</b>	- the levels of noise and vibration generated assessed against current typical background levels, using modelling where appropriate	19.2.2, 19.2.3, 19.2.4, 19.2.5, 19.2.6
	- impact of noise, including low frequency noise (noise with components below 200Hz) and vibration at all potentially sensitive receivers should be quantified and compared with the performance indicators and standards nominated above	19.2.5.1, 19.2.6.2, 19.2.7.2
	- impact on terrestrial and aquatic fauna	19.2.8
	- proposals to minimise or eliminate these effects, including details of any screening, lining, enclosing or bunding of facilities, or timing schedules for construction and operations that would minimise environmental harm and environmental nuisance from noise and vibration.	19.2.9
<b>3.8</b>	<b>Waste</b>	
<b>3.8.1</b>	<b>Waste Generation</b>	
	The EIS should identify and describe all sources, likely volumes and quality (where applicable) of waste associated with construction, construction phase decommissioning and operation of all aspects of the project. This section should describe:	
	- waste generated by delivery of material to site(s)	20.3.1
	- chemical and mechanical processes conducted on the construction sites that produce waste (e.g. chemical storage, sewage treatment, all forms of waste water, power generation, fuel storage and use, mechanical workshop, offices and camp (if applicable), vegetation clearing)	20.3.1
	- the amount and characteristics of solid and liquid waste (including run-off from roads, plant areas, chemical storage areas and workshops) produced on-site by the project	20.3.1
	- hazardous materials to be stored and/or used on-site, including environmental toxicity data and biodegradability.	20.3.2
<b>3.8.2</b>	<b>Waste Management</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Having regard for best practice waste management strategies and the Environmental Protection (Waste) Policy 2000 and the Environmental Protection (Waste) Regulation 2000, the proposals for waste avoidance, reuse, recycling, storage, treatment, transport and disposal should be described including measures to minimize attraction of vermin, insects and pests. This section should assess the potential impact of all wastes generated during construction and operation and provide details of each waste in terms of:	20.2
	- the options available for avoidance	20.3.2, 20.4
	- operational handling and fate of all wastes including storage	20.3.2, 20.4
	- on-site treatment methods proposed for any wastes	20.3.2, 20.4
	- methods of disposal (including the need to transport wastes off-site for disposal) proposed to be used for any trade wastes, liquid wastes and solid wastes	20.3.2, 20.4, 20.5
	- the potential level of impact on environmental values	20.3.2, 20.5
	- measures to ensure stability of the waste storage areas and impoundments	20.3.2, 20.5
	- methods to prevent, seepage and contamination of groundwater from stockpiles and/or storage areas and impoundments	20.3.2, 20.5
	- market demand for recyclable waste (where appropriate)	20.3.2
	- decommissioning of the construction site.	20.3.2.7
<b>3.9</b>	<b>Transport</b>	
<b>3.9.1</b>	<b>Transport Methods and Routes</b>	
	The transport assessment is to be presented for each project-affected mode (road, rail, air and sea) as appropriate. These assessment reports should provide sufficient information to allow an independent assessment of how existing transport infrastructure will be affected by project transport at the local and regional level.	
	The EIS must detail:	
	- any proposed new or alterations to transport-related infrastructure required by the project (as distinct from impact mitigation works).	s21.1, s21.3.2
	- construction of any project-related plant and utilities, within or impacting on the jurisdiction of any transport authority	s21.3 & s21.4
	- expected volumes of project inputs and outputs of transported raw materials, wastes, hazardous goods, finished products and so on for all phases of the project	s21.3
	- how identified project inputs and outputs will be moved through the transport network (volume, composition, trip timing and routes)	s21.3
	- traffic generated by workforce personnel including visitors (volume, composition, timing and routes)	s21.3
	- likely heavy and oversize/indivisible loads (volume, composition, timing and routes) highlighting any vulnerable bridges and structures along proposed routes.	s21.3
<b>3.9.2</b>	<b>Potential Impacts and Mitigation Measures</b>	N/A
	Impact assessment reports must include:	s21
	- assessment methodology adopted (for impacts on roads: The Road Impact Assessment Report (RIA) should be in general accordance with DMR 'Guidelines for Assessment of Road Impacts of Development' (2006))	s21.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- all base data assumptions, including current condition of the affected network and its performance	s21.2
	- possible interruptions to transport operations	s21.3
	- any impacts on the natural environment within the jurisdiction of an affected transport authority (for example road and rail corridors)	s21.3 and s21.4
	- the nature and likelihood of product-spill during transport if relevant.	s21.3
	The Road Impact Assessment Report should include:	
	- project impacts (from either transport or project operations) on the safety, efficiency and condition of road operations and assets	s21.2 , s21.3 and s21.4
	- project impacts on overland water-flows and their interaction with the road network	s21.3 and s21.4
	- driver fatigue for workers travelling to and from regional centres and key destinations	s21.3 and s21.4
	- project impacts on any existing or proposed pedestrian cycle networks	s21.3 and s21.4
	- project impacts on any existing public transport networks (assets and services).	s21.3 and s21.4
	o project impacts on the amenity and health of adjacent land users as a result of dust, noise and vibration	s21.3 and s21.4
	o impacts on passenger transport and services, should the project generate large public transport trip movements.	s21.3 and s21.4
	- any existing public transport networks (assets and services).	s21.3 and s21.4
	The proponent is to discuss and recommend how identified impacts will be mitigated so as to maintain safety, efficiency and condition of each mode. These mitigation strategies are to be prepared by the proponent in close consultation with relevant transport authorities and include consideration of those authority's works program and forward planning.	s21.3 and s21.4
<b>3.10</b>	<b>Indigenous Cultural Heritage</b>	
<b>3.10.1</b>	<b>Description of existing indigenous cultural heritage values</b>	
<b>3.10.1</b>	The EIS should describe the known indigenous cultural heritage values that may be affected by the project. An indigenous cultural heritage survey (as part of the cultural heritage management plan (CHMP) process or otherwise) should be undertaken for Significant Aboriginal Objects and Significant Aboriginal Areas. The indigenous cultural heritage survey should:	22.1
	- refer to the Department of Natural Resources and Water Indigenous Site Database and any existing literature relating to the affected areas	22.1.3
	refer to:	22.1.2.1, 22.1.6
	- the consultation and negotiation with traditional owners and the outcomes about:	
	o significant Aboriginal Objects and Significant Aboriginal Areas	
	o confidentiality of culturally sensitive information	
	- The involvement of traditional owners in field surveys.	
	- include locations of Significant Aboriginal Objects and Significant Aboriginal Areas identified during the survey and which are likely to be impacted by the project	22.1.3, 22.1.5

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- provide a report of work done which includes background research, relevant environmental data and methodology, as well as results of field surveys, significance assessment and conclusions and management recommendations (having due for any confidentiality requirements specified by community representatives).	22.1.4,22.1.5
<b>3.10.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The management of indigenous cultural heritage impacts should be detailed in either a native title agreement with traditional owners or in a CHMP, with the native title agreement or plan to be developed in a form that complies with the provisions of Part 7 of the Aboriginal Cultural Heritage Act 2003, thereby meeting the cultural heritage duty of care. The agreement or plan must provide a process for the conduct of comprehensive cultural heritage investigations and the identification of Significant Aboriginal Objects and Significant Aboriginal Areas in the proposed project area. It is also to provide a process for the management of those objects, areas and values identified in the proposed project area.	22.2.2
	The agreement or plan should include the following:	
	- a process for including Aboriginal communities or Aboriginal Parties in the identification, management and protection of Aboriginal cultural heritage in the project area	22.2.2
	- a process for undertaking a comprehensive and systematic cultural heritage assessment	22.2.2
	- processes for the mitigation, management and protection of identified cultural heritage objects and areas in the project area, and in any areas to be affected by development of any associated infrastructure, both during construction and operational phases of the project	22.2.2
	- provision for the management of the accidental discovery of cultural material, including burials, in the project area	22.2.2
	- processes for determining any requirements for monitoring of the project during construction, and measures by which any monitoring program is to be implemented	22.2.2
	- indigenous cultural heritage induction and awareness programs for project staff, subcontractors and staff, consultants and agents of the project	22.2.2
	- a conflict resolution process.	22.2.2
	The development of the agreement or plan should be negotiated with all relevant stakeholder representatives, subject to any confidentiality specified by the Aboriginal community, registered native title applicants, and/or Aboriginal Parties as appropriate.	22.2.2
	As a minimum, impact assessment, management and protection strategies should satisfy statutory responsibilities and duties of care under the <i>Aboriginal Cultural Heritage Act 2003</i> and the <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i> (Cth).	22.2.2
	If a CHMP has not been approved by the submission of the EIS to the CG then the following should be provided:	22.2.2
	- a outline of the draft CHMP, subject to any confidentiality provisions, with the position of the endorsed cultural heritage parties	22.2.2
<b>3.10.2</b>	- details of the proposed steps and timeframes for seeking the ratification of the CHMP.	22.2.2
<b>3.11</b>	<b>Non-Indigenous Cultural Heritage</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	The EIS should describe the existing environmental values for non-Indigenous cultural heritage that may be affected by the project activities. The non-Indigenous cultural heritage survey should:	
	refer to:	23.1.2.1
	- the Australian Heritage Places Inventory	
	- the EPA Queensland Heritage Register and other information regarding places of potential non-Indigenous cultural heritage significance	
	- local government heritage register	
	- any existing literature relating to the affected areas.	
	refer to consultations and negotiations with the local community and historical societies about:	23.1.2.2
	- places of non-Indigenous cultural heritage significance	
	- the significance of any non-Indigenous cultural heritage places located or identified.	
	- include locations of culturally significant sites likely to be impacted by the project	23.1.4, 23.1.5, 23.1.6
	- provide a constraints analysis of the proposed development area to identify and record non-Indigenous cultural heritage places	Appendix 23-A
	- provide the location of mining areas with historical significance should be shown on maps	Figure 23-1, Figure 23-2
	- provide a report of work done which includes background research, relevant environmental data and methodology, as well as results of field surveys, significance assessment and conclusions and management recommendations (having due regard for any confidentiality requirements specified by community representatives).	Appendix 23-A
	As a minimum, investigations and consultation should be undertaken in such manner and detail to satisfy statutory responsibilities and duties of care under the EPBC Act and <i>Queensland Heritage Act 1992</i> (Qld).	Appendix 23-A
<b>3.11.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The proponent should provide an assessment of any likely effects on sites of non-Indigenous cultural heritage value, including but not limited to the following:	
	- description of the significance of artefacts, items or places of non-indigenous cultural heritage value likely to be affected by the project and their values at a local, regional or national level as appropriate	23.2
	- recommended means of mitigating any negative impacts and enhancing any positive impacts	23.2
	- negotiations with Queensland Heritage Council and the EPA regarding management of places of historic heritage significance, taking account also of community interests and concerns	23.2, 23.1.2.2
	- documented management strategies in accordance with the outcomes of negotiations with Queensland Heritage Council, EPA and the community.	23.2, 23.1.2.2
	As a minimum, impact assessment, management and protection strategies should satisfy statutory responsibilities and duties of care, including those under the EPBC Act and <i>Queensland Heritage Act 1992</i> (Qld).	23.2
<b>4</b>	<b>Social values and management of impacts</b>	
<b>4.1</b>	<b>Social</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
4.1.1	<b>Description of Social Values</b>	
	This section should describe the existing social values that may be affected by the project including effects at both footprint and benefited area locations (that is, the communities which may benefit from the water supply). The social amenity and use of the project area and adjacent areas for agriculture, forestry, mining, fishing, recreation, industrial, educational or residential purposes should be described. The scope of works to satisfy the TOR should be commensurate with the scale and risks associated with the project.	
4.1.1.1	<b>Description of the local community area</b>	
	This section should give an overview of the project's near neighbours, and the local communities at the level of townships, district, region and state and be comprised of:	
	- definition of the local community area: The local community area should be defined in consultation with the Social Impact Unit, DIP before the proponent commences detailed social impact assessment work	24.2.1
	- other relevant proposals or projects: This section should include the locations of relevant projects or proposals within the local community area	24.2.3
	- other features in the local community area: This section should include shopping centres, schools, childcare centres, welfare organisations, policing, emergency services, areas of community congregation, public transport options and access points. The relationship between localities and district centres should be described. Access to human services and social infrastructure available to each community directly impacted by the project including access to: health care, education, recreational, cultural, leisure and sporting facilities and activities, water supply and sanitation, waste treatment and disposal, housing, power supply, transport and roads, communication, and local banking and credit facilities and any other important characteristics	24.2.4
4.1.1.2	<b>Profile of the local community (Social Baseline Study)</b>	
	Local character, identity and aspirations including characteristics of each community within the project area, the name and location of the community, size, history, spatial distribution, land use and land ownership patterns, major trends/changes in the population make-up that may be occurring irrespective of the project.	24.2.1, 24.2.2, 24.3
	This section should include demographics information, including:	
	- total population (the total enumerated population for the local community area and the Full Time Equivalent (FTE) transient population)	24.3.1
	- population 18 years and over	24.3.2
	- population growth and population forecasts with and without the proposal	24.3.1
	- age and gender distributions	24.3.2
	- education including schooling levels	24.3.6
	- occupation	24.4.2
	- ethnic characteristics	24.3.5
	- incidence of disability	24.3.9
	- indigenous population including age and gender	24.3.5
	- median individual and household incomes	24.4.2

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- employment, unemployment and not in the labour force	24.4.2
	- housing costs (monthly housing repayments (percent of dwellings in each category), and weekly rent (per cent dwellings in each category))	24.3.7
	- housing tenure type and landlord type, household and family type	24.3.7 24.3.4
	- SEIFA (Social and Economic Index for Areas, Index of Disadvantage) – score and relative ranking	24.3.8
	- crimes including domestic violence and crimes against the person	24.3.9
	<b>Profile of the local business community</b>	
	This section should include a description of:	
	- the key industries including: rural properties, farms, croplands, grazing areas, livestock, agricultural equipment, small enterprise equipment	24.4.3
	- the number of properties directly affected by the project and the number of families directly affected by the project. This should include not only property owners but also families of workers either living on the property or workers where the property is their primary employment.	24.4.1
	- use of the project area for forestry, mining, fishing, recreation, and industrial, purposes should be described. This section should include tourism if applicable.	24.4.3 24.4.4 24.4.5
<b>4.1.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The social impact assessment of the project is to be carried out in consultation with affected local authorities and relevant State authorities, in particular the Department of Communities and the DIP's Social Impact Assessment team. The assessment of impacts should describe the likely response of affected communities and identify possible beneficial and adverse impacts (both immediate and cumulative) and should be considered both at the local and regional level.	24.5
	The social impact assessment of the project should consider the information gathered in the community engagement program and the analysis of the existing socio-economic environment, and describe the project's impact, both beneficial and adverse, on the local and regional community. The impacts of the project on local and regional residents, community services and recreational activities are to be analysed and discussed for all stages of the development. The nature and extent of the community engagement program are to be described and a summary of the results incorporated in the EIS.	24.5 Community Consultation Chapter
	The social impact assessment should include sufficient data to enable affected local authorities and State authorities, such as Queensland Health and Education Queensland, and to make informed decisions about how the proposal may affect their business and plan for the continuing provision of public services in the region of the project. Proponents of projects that are likely to result in a significant increase in population of an area should consult the relevant management units of the State authorities, and summarise the results of the consultations in the EIS. The summary should discuss how the impacts of population increase on public services, particularly health, education, housing, disability services and community services, would be mitigated.	24.5 24.5.6

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Cumulative impacts: direct, indirect and secondary impacts resulting from existing projects, the proposed project and anticipated future projects should be identified including the important cause and effect relationships between human activities and resources, ecosystems, and human communities. The magnitude and significance of these cumulative effects should be determined.	24.5 24.6
	The EIS should address the following matters:	
	- impacts on local and regional residents, current land uses and existing lifestyles and enterprises	24.5.1 24.5.3 24.5.9
	- impacts on local, regional and state labour markets, with regard to the source of the workforce presented according to occupational groupings of the workforce	24.5.2 Economics Chapter
	- impacts of both construction and operational workforces and associated contractors on housing demand, housing affordability, community services and community cohesion. The capability of the existing housing stock, including rental accommodation, to meet any additional demands created by the project is to be discussed.	24.5.5 24.5.6 24.5.9
	- any new skills and training to be introduced in relation to the project. Adequate provision should be made for apprenticeship and worker training schemes. If possible skill shortages anticipated should be indicated.	24.5.2
	- likely employment and revenue to flow to existing communities in the area of the project	24.5.2 Economics Chapter
	- impacts on existing local and regional residents' values and aspirations	24.5.9
	- impacts on the new project workforce and their families	24.5.10
	- in regard to affected Indigenous and non-Indigenous communities respectively, particular attention should be paid to the effects on:	
	o the ability of people to live in accordance with their own values and priorities	24.5.9
	o the use of and access to culturally important areas and landscapes.	22.2.2.1, Table 23-6, Table 23-8
	For the construction and operational phases of the project, describe the effects on local and regional residents, including land acquisition and relocation issues and property valuation and marketability, community services and recreational activities.	24.5.1 24.5.6
	The educational impacts of the proposed development are to be analysed and described, particularly in regard to primary, secondary, post-secondary and tertiary educational sectors.	24.5.6
	The social impact mitigation strategies should pay particular attention to:	
	- the sourcing of the construction and operational workforce and the social and cultural implications this may have for the host community particularly if any part of the workforce is sourced from overseas	24.5.2 24.5.9
	- the availability of accommodation for the project's workforce and the possible cumulative impact on the local and regional housing and rental market	24.5.5

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- an accommodation strategy, where necessary, in consultation with relevant State government agencies, which will detail proposals that avoid, mitigate or offset any short and medium term adverse effects on the local and regional housing market	24.5.5
	- documenting the demographic changes in the profile of the region and the associated sufficiency of current infrastructure and services	24.5.4
	- developing a community engagement management plan that promotes an active and on-going role for impacted communities.	24.7 Community Consultation Chapter
	The social impact assessment will contain an evaluation of the net social impacts of the project including a summary table of net social impacts identified by the study and an estimation of the overall significance of those impacts.	24.8
<b>4.1.3</b>	<b>Social Responsibility Initiatives</b>	
	Modifications or alternatives to avoid, minimise, or mitigate significant cumulative effects should be described. Key policies and procedures to be adopted or used by the proponent that would mitigate or enhance impacts should be highlighted for example, the establishment of a complaints register and a conflict resolution mechanism, consultative mechanisms etc.	24.7
	Key government documents outlining proposed local, state or Australian Government initiatives or plans that would mitigate or enhance impacts should also be described here. Uncertainty should be addressed through the design of an effective monitoring system.	24.7 24.9
<b>5</b>	<b>Economies and Management of Impacts</b>	
<b>5.1</b>	<b>Economy</b>	
<b>5.1.1</b>	<b>Description of affected local regional economies</b>	
	This section should describe the existing economy in which the project is located and the economies materially impacted by the project.	25.2
	Define the economy in which the project is to be located.	25.1 and table 25.1
	Describe the economy including:	
	- Gross Regional Product or other appropriate measure of annual economic production;	25.2.1
	- population	25.2.2
	- labour force statistics	25.2.3
	- infrastructure	25.2.4
	Describe the regional economy's key industries and their contribution to regional economic income.	25.2.5
	Discuss regional resource endowment, competitive advantage and expected future growth.	25.2.6
	- Describe the key regional markets relevant to the project:	25.2.7
	o labour market	
	o housing and land markets	
	o construction services and building inputs market.	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	With regard to the region's key industries and factor prices:	25.2.8
	- describe current demand and usage of water	25.2.8.1 & 25.2.8.2
	- provide information on current input costs (wage rates, building costs, housing rent etc)	25.2.7, 25.2.8
	- provide information on land values in the region by type of use.	25.2.7.2
<b>5.1.2</b>	<b>Potential Impacts and Mitigation Measures</b>	
	The potential impacts should consider regional, state and national perspective as appropriate to the scale of the project. The analysis should include the direct economic impacts on industry and citizens of the project area including:	25.3
	- property values	25.3.2.4
	- industry output	25.3.2.1
	- employment	25.3.2.2 & 25.3.3.1
	- factor incomes.	25.3.2.3
	The analysis should also:	
	- assess forgone industry output as a result of the project (e.g. production no longer possible extractive resources, agriculture and forestry)	25.3.2.5
	- assess forgone opportunities and impacts to households (e.g. recreation, increased travel times)	25.3.2.6
	- assess the indirect impacts likely to flow to other industries and economies from the development of the project. This should also consider the implications of the project for future development	25.3.3 & 25.3.3.2
	- discuss climate change risks from the project and mitigated by the project.	25.3.5
<b>5.1.2.1</b>	<b>Strategies for Local Participation</b>	
	The assessment should outline:	
	- strategies for assessing the cost effectiveness of sourcing local inputs from the regional economy during the construction, rehabilitation and operation of the project	25.3.7
	- employment strategies for local residents including members of Indigenous communities including a skills assessment and recruitment and training programs to be offered	25.3.7.2
	- strategies responding to Government Policy relating to:	25.3.7
	o the level of training provided for construction contracts on Queensland Government building and construction contracts, with regard to the Queensland Government Building and Construction Contracts Structured Training Policy (the 10% Policy)	
	o the use of locally sourced goods and services, with regard to the Local Industry Policy (Department of State Development, 1999).	
<b>5.1.2.2</b>	<b>Strategies to mitigate disruption to the local economy during construction and operation</b>	
	The assessment should:	
	- identify all potential changes to industry practices, particularly agricultural production, likely to occur during construction and operation of the project	25.3.6.1

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- identify all potential economic impacts on households likely to occur during construction and operation of the project	25.3.6.1
	- estimate the cost of these changes if material	N/A
	- describe the measures to be taken to minimise disruption or alleviate cost impacts of the project.	25.3.6.1 & Table 25.22
<b>5.1.2.3</b>	<b>Impact upon Property Management</b>	
	This section should address the current and future management processes for properties which are impacted by the project during construction and operation, by virtue of the fact that the water pipeline and dam may intersect these properties, or separate adjoining properties, and there is potential for current farming or grazing practices to be affected in some material way. Mention should be made of the following:	25.3.8
	- the impact of the project on existing agricultural land uses and management practices, e.g. disruption to stockyards, fences, water points, pump installations, sowing or harvesting of crops, movement of livestock, agricultural machinery and any loss of agricultural land	25.3.2.5 & 25.3.6.1
	- the range of measures required to mitigate real and potential disruptions to rural practices and management of properties (both within properties and with adjoining landholdings), such as separation of stock areas by the project and the types of alternative crossing points.	25.3.6.1
<b>5.2</b>	<b>Sustainable Development</b>	
	The EIS should provide a comparative analysis of how the project conforms to the objectives for 'sustainable development' (see the National Strategy for Ecologically Sustainable Development (1992)).	25.4
	This analysis should consider the cumulative impacts (both beneficial and adverse) of the project from a life-of-project perspective, taking into consideration the scale, intensity, duration and frequency of the impacts to demonstrate a balance between environmental integrity, social development and economic development.	25.4 & 25.3.4
	This information is required to demonstrate that sustainable development aspects have been considered and incorporated during the scoping and planning of the project.	25.4
<b>6</b>	<b>Hazard and Risk</b>	
<b>6.1</b>	<b>Hazard and risk assessment</b>	
	This section of the EIS should describe the potential hazards and risks that may be associated with the Project. A preliminary hazard analysis should be conducted for the Project. The preliminary hazard analysis should incorporate all known hazards, which may include:	
	- identification of potential hazards, accidents, spillages and abnormal events occurring during all stages of the project, including possible frequency of occurrence	26.2.2 Tables 26.5, 26.6 and 26.7
	- indication of cumulative risk levels to surrounding land uses	26 introduction
	- identification of all hazardous substance to be used, stored, processed or produced and the rate of usage	26.3.1.1 Table 26-9
	- potential wildlife hazards such as snakes and disease vectors.	11.2.1.5, Table 26.5
	Any potential implications related to climate change, as determined in Section 3.1, should be discussed.	26.2.1.1 , 26.2.3.14.

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	A preliminary risk assessment for all components of the project (dam wall, pipeline(s), quarries, clearing, downstream flooding etc.) shall be undertaken as part of the EIS process in accordance with Australia/New Zealand AS/NZS 4360:2004 Risk Management. With respect to risk assessment:	26.2.2 Tables 26.5, 26.6 and 26.7
	- the EIS should deal comprehensively with on-site risks. External risks to the project should also be considered. External risks from natural hazards could be determined on the basis of AS/NZS Risk Management Standard 4360:1999.	26.2.2 Tables 26.5, 26.6 and 26.7
	- the study should assess risks during the construction, operational and decommissioning phases associated with the project. These risks should be assessed in quantitative terms where possible.	26.2.2 Tables 26.5, 26.6 and 26.7
	- analysis of the consequences of each hazard on safety and environmental damage in the project area should be conducted, including:	26.2.2 Tables 26.5, 26.6 and 26.7
	o injuries and death to workers and to the public	26.2.2 Tables 26.5, 26.6 and 26.7
	o direct harm to the environment as a result of project hazards.	26.2.2 Tables 26.5, 26.6 and 26.7
	- the analysis should examine the likelihood of these consequences being experienced, both individually and collectively	26.2.2 Tables 26.5, 26.6 and 26.7
	- quantitative levels of risks should be presented from the above analysis	26.2.2 Tables 26.5, 26.6 and 26.7
	- details should be provided on the safeguards that would be employed or installed to reduce the likelihood and severity of hazards, consequences and risks to persons, fauna (such as trapping in pipeline trenches) and environmentally sensitive sites within and adjacent to the project area(s).	26.2.3
	A comparison of assessed and mitigated risks with acceptable risk criteria for land uses adjacent to the project area(s) should be presented.	26 Introduction
<b>6.1.1</b>	<b>Emergency Management Plan</b>	
	An outline of the proposed emergency management procedures should be provided for the range of situations identified in the above risk assessment where there are measurable risks. This should include an overview of the objectives and management principles to be adopted for the preparation of a detailed emergency plan (including emergency response and recovery/cleanup procedures) in consultation with the relevant emergency services.	26.4.1
	Planning should include reference to State Planning Policy 1/03, Mitigating the Adverse Impacts of Flood, Bushfire and Landslide.	26.4
	In particular, the following should be presented:	
	- contingency plans to deal with hydrocarbon (e.g. diesel, lubricating oils) oil spills or natural disasters during construction, operation and maintenance of the project	26.4
	- contingency plans to account for natural disasters such as storms and fires during the construction, operation and maintenance phases	26.4

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- emergency planning and response procedures that have been determined in consultation with state and regional emergency service providers	26.4.2
	- plans for involvement of the relevant state agencies (such as the Queensland Police Service and Department of Community Safety, which includes the Queensland Ambulance Service, Queensland Fire and Rescue Service and Emergency Management Queensland) in relation to emergency medical response and transport and first aid matters.	26.4.2
<b>7</b>	<b>Cumulative Impacts</b>	27
	The purpose of this section is to provide clear and concise information on the overall impacts of the project, and to discuss the interrelationship of these impacts. The range of variables to be considered including, where applicable, relevant baseline or other criteria upon which the incremental aspects of the project should be assessed. The methodology to be used to determine cumulative impacts should be discussed. Cumulative impacts should be assessed with respect to both geographic location and environmental value.	27.1, 27.2
	Cumulative impacts specific to the project may relate to:	
	- multiple forms of impact at one location (e.g. the nearest sensitive receiver will probably be impacted by noise, dust, air quality, traffic, land acquisition etc.)	27.3, 27.3.2
	- a form of impact occurring at a number of locations (e.g. noise impacts will occur at a number of construction sites and along transport routes – this type of cumulative impact should feature in the relevant sub-section 3 Environmental Values)	27.3
	- an environmental value being impacted at several locations or by a number of forms of impact e.g. water quality will be effected by construction activities at a number of locations, by habitat change (river to dam) and by operational activities (such as downstream flow regime change)	27.3
	- the potentially counter-active effects of negative and positive impacts (e.g. loss of income to the local region from loss of agricultural land may be offset by enhanced agricultural productivity elsewhere, or locally by economic benefits derived from construction phase expenditure).	27.3
	Cumulative impacts also include those of the project acting in combination with other known activities in the region/catchment including:	27.3
	- other water resource development projects for which the proponent is responsible	27.3
	- other water resource developments for which the proponent is not responsible	27.3
	- other known developments or types of development that may impact upon the same environmental values as the project (e.g. projects impacting on the same local or regional communities (Wandoan Coal or Surat Basin Rail for example),, projects involving land clearing, impacts on GOAL, or impacts that relate to water volume, the flow regime or water quality).	27.3, 27.3.2
	The assessment of the significance of identified cumulative impacts should include evaluation of the scale, intensity, duration and/or frequency of included impacts and the possible additive nature of impacts.	27.3.2, 27.4
<b>8</b>	<b>Matters of National Environmental Significance</b>	
	The controlling provisions under the EPBC Act have been determined as:	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- sections 12 and 15A (World Heritage properties)	28.1
	- sections 15B and 15C (National Heritage place)	28.1
	- sections 16 and 17B (Wetlands of International importance)	28.1
	- sections 18 and 18A (Listed threatened species and communities)	28.1
	- sections 20 and 20A (Listed migratory species).	28.1
	- sections 23 and 24A (Commonwealth marine areas).	28.1
	This section should bring together assessments of impacts on Matters of National Environmental Significance in other chapters (e.g. water resources, flora and fauna, cultural heritage, cumulative impacts) and produce a stand-alone assessment in a format suited for assessment under the EPBC Act.	28
8	The project should initially be assessed in its own right followed by an assessment of the cumulative impacts related to all known proposed water resource developments in the Fitzroy basin with respect to each controlling provision and all identified consequential actions. Cumulative impacts not solely related to water resource development should also be assessed.	28
	Predictions of the extent of threat (risk), impact and the benefits of any mitigation measures proposed, should be based on sound science and quantified where possible. All sources of information relied upon should be referenced and an estimate of the reliability of predictions provided. Any positive impacts should also be identified and evaluated.	28
	The extent of any new field work, modelling or testing should be commensurate with risk and should be such that when used in conjunction with existing information, provides sufficient confidence in predictions that well informed decisions can be made. Obligations under and implications of any species recovery plans, such as that for the Boggomoss Snail ( <i>Adclarkia dawsonensis</i> ), must be specifically addressed.	28
8.1	<b>Impacts on World Heritage properties, National Environmental places, wetlands of international importance and Commonwealth marine environment</b>	
	Provide a description of the values of the Great Barrier Reef World Heritage Area, National Heritage place, Shoalwater Bay Ramsar site that is likely to be impacted by the proposal, including but not restricted to, the significant regional habitat for listed threatened and migratory marine species.	28.3
	Specifically with respect to the Commonwealth marine environment, a description of the area that is likely to be impacted by the proposal, including the airspace, seabed or any other areas of sea or seabed that is included in a Commonwealth reserve.	28.3
	The potential direct and indirect impacts on each area, place, site or reserve, resulting from: <ul style="list-style-type: none"> <li>o modification, destruction, fragmentation, isolation or disturbance of an important, sensitive or substantial area of habitat</li> <li>o a substantial change in water quality (including temperature) and hydrological regime which may adversely impact on biodiversity, ecological integrity, social amenity or human health</li> <li>o persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, social amenity or human health may be adversely affected.</li> </ul>	28.4

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	Specifically with respect to Commonwealth marine environments, the potential impacts on important amenities, navigation, culturally and historically significant sites or sensitive habitats.	28.4
	The EIS will outline the extent to which identified impacts can be forecast or predicted and managed.	28.4
	A description of any mitigation measures proposed to reduce the impact on the environments of each area, place, site or reserve should be provided.	28.4
<b>8.2</b>	<b>Impact on a listed threatened species and ecological community</b>	
	A description of the listed threatened species and ecological communities identified below (including EPBC Act listed status, distribution, life history, habitats etc.).	28.4.2
	The EIS should consider and assess the impacts to the listed threatened species and communities and any others that are found to be or may potentially be present in areas that may be impacted by the project. The EIS should identify which component of the project is of relevance to each species or community or if the threat of impact relates to consequential actions, resulting from:	
	- a decrease in the size of a population or a long term adverse affect on an ecological community	28.4.2
	- a reduction in the area of occupancy of the species or extent of occurrence of the ecological community	28.4.2
	- fragmentation an existing population or ecological community	28.4.2
	- disturbance or destruction of habitat critical to the survival of the species or ecological community	28.4.2
	- disruption of the breeding cycle of a population	28.4.2
	- modification, destruction, removal, isolate or reduction of the availability or quality of habitat to the extent that the species is likely to decline	28.4.2
	- modification or destruction of abiotic (non-living) factors (such as water, nutrients, or soil) necessary for the ecological community's survival	28.4.2
	- the introduction of invasive species that are harmful to the species or ecological community becoming established	28.4.2
	- interference with the recovery of the species or ecological community	28.4.2
	- actions which may be inconsistent with a recovery plan.	28.4.2
	Any positive impacts should also be identified and evaluated.	
	A description of any mitigation measures proposed to reduce the impact on the listed threatened species and ecological communities should be discussed within the EIS.	28.4.2
	List of potential ecological communities and listed threatened species and their status:	28.3.4
	- The community of native species dependent on natural discharge from the Great Artesian Basin — Endangered	
	- Ecological communities of Bluegrass, Brigalow & Semi-evergreen vine thickets of the Brigalow Belt — Endangered	
	- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland — Critically endangered	
	- Boggomoss snail ( <i>Adclarkia dawsonensis</i> ) — Critically endangered	
	- Fitzroy River turtle ( <i>Rheodytes leukops</i> ) — Vulnerable	
	- Loggerhead turtle ( <i>Caretta caretta</i> ) — Endangered	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- Green turtle ( <i>Chelonia mydas</i> ) — Vulnerable	
	- Hawksbill turtle ( <i>Eretmochelys imbricate</i> ) — Vulnerable	
	- Flatback turtle ( <i>Nataor depressus</i> ) — Vulnerable	
	- Ornamental snake ( <i>Denisonia maculate</i> ) — Vulnerable	
	- Dunmall's snake ( <i>Furina dunmalli</i> ) — Vulnerable	
	- Yakka skink ( <i>Egernia rugosa</i> ) — Vulnerable	
	- Brigalow scaly-foot ( <i>Paradelma orientalis</i> ) — Vulnerable	
	- Five-clawed worm-skink, long-legged worm-skink ( <i>Anomalopus mackayi</i> ) — Vulnerable	
	- Grassland earless dragon ( <i>Tympanocryptis pinguicolla</i> ) — Endangered	
	- Large-eared pied bat, large pied bat ( <i>Chalinolobus dwyeri</i> ) — Vulnerable	
	- Water mouse ( <i>Xeromys myoides</i> ) — Vulnerable	
	- Northern quoll ( <i>Dasyurus hallucatus</i> ) — Endangered	
	- Eastern long-eared bat ( <i>Nyctophilus timoriensis</i> – South-eastern form) — Vulnerable	
	- Murray cod, cod, goodoo ( <i>Maccullochella peelii peelii</i> ) — Vulnerable	
	- Swift parrot ( <i>Lathamus discolor</i> ) — Endangered	
	- Red goshawk ( <i>Erythroriorchis radiatus</i> ) — Vulnerable	
	- Black-breasted button-quail ( <i>Turnix melanogaster</i> ) — Vulnerable	
	- Star finch (eastern), star finch (southern) ( <i>Neochmia ruficauda ruficauda</i> ) — Endangered	
	- Squatter pigeon ( <i>Geophaps scripta scripta</i> ) — Vulnerable	
	- Yellow chat (Dawson) ( <i>Epthianura crocea macgregori</i> ) — Critically endangered	
	- Hairy-joint grass ( <i>Arthraxon hispidus</i> ) — Vulnerable	
	- Ooline ( <i>Cadellia pentastylis</i> ) — Vulnerable	
	- Cadarga ( <i>Commersonia</i> sp.) — Vulnerable	
	- Spotted-throat cowslip, tricolour diuris, tricolour donkey-orchid ( <i>Diuris tricolor</i> ) — Vulnerable	
	- Finger panic grass ( <i>Digitaria porrecta</i> ) — Vulnerable	
	- King blue-grass ( <i>Dichanthium queenslandicum</i> ) — Vulnerable	
	- Acacia chinchillensis — Vulnerable	
	- Curly-bark wattle ( <i>Acacia curranii</i> ) — Vulnerable	
	- Calytrix gurulumundensis — Vulnerable	
	- Denhamia parvifolia — Vulnerable	
	- Homopholis belsonii — Vulnerable	
	- Cobar greenhood orchid ( <i>Pterostylis cobarensis</i> ) — Vulnerable	
	- Austral cornflower, native thistle ( <i>Stemmacantha australis</i> ) — Vulnerable	
	- Austral toadflax, toadflax ( <i>Thesium australe</i> ) — Vulnerable	
	- Westringia parvifolia — Vulnerable	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
8.3	If any additional Matters of National Environmental Significance are identified during the EIS process they should also need to be addressed.	N/A
	<b>Impact on a listed migratory species</b>	
	A description of the listed migratory species identified below (including EPBC Act listed status, distribution, life history, habitats etc.).	28.3.5
	The EIS should consider and assess the impacts to the listed migratory species identified below and any others that are found to be or may potentially be present in areas that may be impacted by the project. The EIS should identify which component of the project is of relevance to each species or if the threat of impact relates to consequential actions, resulting from:	28.4.3
	- the destruction, isolation or modification of habitat important to a migratory species	28.4.3
	- the introduction of invasive species in an important habitat that would be harmful to a migratory species	28.4.3
	- the disruption of the lifecycle (breeding, feeding, migration, or resting behaviour) of an ecologically important proportion of the population of a migratory species	28.4.3
	- interference with the recovery of the species or ecological community	28.4.4
	- actions which may be inconsistent with a recovery plan.	28.4.4
	Any positive impacts should also be identified and evaluated.	
	<p>A description of any mitigation measures proposed to reduce the impact on migratory species should be discussed within the EIS.</p> <p>List of potential migratory species:</p> <ul style="list-style-type: none"> <li>- White-bellied sea-eagle (<i>Haliaeetus leucogaster</i>)</li> <li>- Rufous fantail (<i>Rhipidura rufifrons</i>)</li> <li>- Great egret, white egret (<i>Ardea alba</i>)</li> <li>- Cattle egret (<i>Ardea ibis</i>)</li> <li>- Black-faced monarch (<i>Monarcha melanopsis</i>)</li> <li>- Spectacled monarch (<i>Monarcha trivirgatus</i>)</li> <li>- Magpie goose (<i>Anseranas semipalmata</i>)</li> <li>- Latham's snipe (<i>Gallinago hardwicki</i>)</li> <li>- Australian cotton pygmy-goose (<i>Nettion coromandelianus albipennis</i>)</li> <li>- Little curlew, little whimbrel (<i>Numenius minutus</i>)</li> <li>- Painted snipe (<i>Rostratula benghalensis</i>)</li> <li>- Eastern curlew (<i>Numenius madagascariensis</i>)</li> <li>- Common greenshank (<i>Tringa nebularia</i>)</li> <li>- Bar-tailed godwit (<i>Limosa lapponica</i>)</li> <li>- Grey-tailed tattler (<i>Heteroscelus incanus</i>)</li> <li>- Curlew sandpiper (<i>Calidris ferruginea</i>)</li> <li>- Whimbrel (<i>Numenius phaeopus</i>)</li> </ul>	28.4.3

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	<ul style="list-style-type: none"> <li>- Glossy ibis (<i>Plegadis falcinellus</i>)</li> <li>- Brolga (<i>Grus rubicunda</i>)</li> <li>- Sharp-tailed sandpiper (<i>Calidris acuminata</i>)</li> <li>- Paradise parrot (<i>Psephotus pulcherrimus</i>)</li> <li>- Southern boobook (<i>Ninox novaezealandiae</i>)</li> <li>- Yellow-tufted honeyeater (<i>Lichenostomus melanops</i>)</li> <li>- Cicadabird (<i>Coracina tenuirostris</i>)</li> <li>- Dugong (<i>Dugong dugong</i>)</li> <li>- Green turtle (<i>Chelonia mydas</i>)</li> <li>- Hawksbill turtle (<i>Eretmochelys imbricate</i>)</li> <li>- Flatback turtle (<i>Nataor depressus</i>)</li> <li>- Loggerhead turtle (<i>Caretta caretta</i>)</li> </ul>	
<b>9</b>	<b>Environmental Management Plan</b>	
	This section of the EIS should detail the environmental management plans developed for the project. Separate environmental management plans should individually address the discrete project elements, including Greenhouse Gas. The environmental management plans should be developed from, and be consistent with, the preceding information in the EIS.	29
	An environmental management plan should provide control actions in accordance with agreed performance criteria for specified acceptable levels of environmental harm. In addition, the environmental management plans should identify:	29.8, 29.9, 29.10
	- potential impacts on environmental values	29.9, 29.10
	- mitigation strategies	29.9, 29.10
	- relevant monitoring	29.9, 29.10
	- appropriate indicators and performance criteria	29.9, 29.10
	- reporting requirements	29.9, 29.10
	- appropriate corrective actions, should an undesirable impact or unforeseen level of impact occur	29.9, 29.10
	- the recording of and response to complaints.	29.9, 29.10
	The aims of the environmental management plans are to provide:	
	- commitments by the proponent to practical and achievable strategies and design standards (performance specifications) for the management of the project to ensure that environmental requirements are specified and complied with	29.9, 29.10
	- an integrated plan for comprehensive monitoring and control of impacts	29.9, 29.10
	- local, Queensland and Australian government authorities, stakeholders and the proponent with a common focus for approvals conditions and compliance with policies and conditions	29.9, 29.10
	- the community with evidence that the environmental management of the project is acceptable.	29.9, 29.10
	The recommended structure of each element of the environmental management plan is:	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	- Element/issue: Aspect of construction or operation to be managed (as it affects environmental values).	29.9, 29.10
	- Operational Policy: The operational policy or management objective that applies to the element.	29.9, 29.10
	- Performance Criteria Measurable performance criteria (outcomes) for each element of the: operation.	29.9, 29.10
	- Implementation Strategy: The strategies, tasks or action program (to nominated operational design standards) that would be implemented to achieve the performance criteria	29.9, 29.10
	- Monitoring: The monitoring requirements to measure actual performance (i.e. specified limits to pre-selected indicators of change).	29.9, 29.10
	- Auditing: The auditing requirements to demonstrate implementation of agreed construction and operation environmental management strategies and compliance with agreed performance criteria.	29.9, 29.10
	- Reporting: Format, timing and responsibility for reporting and auditing of monitoring results.	29.9, 29.10
	- Corrective Action: The action (options) to be implemented in case a performance requirement is not reached and the person(s) responsible for action (including staff authority and responsibility management structure).	29.9, 29.10
	An environmental management plan should commit to manage, enhance or protect identified environmental values. The commitments should contain the following components for performance criteria and implementation strategies:	29.9, 29.10
	- environmental protection objectives for enhancing or protecting each relevant value;	29.9, 29.10
	- indicators to be measured to demonstrate the extent to which the environmental protection objective is achieved;	29.9, 29.10
	- environmental protection standards (a numerical target or value for the indicator), which defines the achievement of the objective; and	29.9, 29.10
	- an action program to ensure the environmental protection commitments are achieved and implemented. This will include strategies in relation to:	29.5 - 29.7
	o communication	
	o continuous improvement	
	o environmental auditing	
	o monitoring	
	o reporting	
	o staff training	
	o a decommissioning program for land proposed to be disturbed under each relevant aspect of the project.	
<b>10</b>	<b>Conclusions and Recommendations</b>	
	The EIS should make conclusions and recommendations with respect to the project based on the studies presented, the environmental management plans and conformity of the project with legislative and policy requirements.	Chapter 30
<b>11</b>	<b>References</b>	
	All references consulted should be presented in the EIS in a recognised format.	Chapter 31
<b>12</b>	<b>Appendices</b>	
<b>12.1</b>	<b>ToR for this EIS</b>	

TOR Section	ToR Requirement	Where is this issue addressed in EIS Section
	A copy of these TOR should be included in the EIS. A summary cross-referencing specific items of these TOR to the relevant section of the EIS should also be provided.	Appendix 1-A
<b>12.2</b>	<b>Development Approvals</b>	
	A list of the development approvals required by the project should be presented.	Appendix 1-D
<b>12.3</b>	<b>Consultation Report</b>	
	The report should include the methodology used in the community consultation program including criteria for identifying stakeholders and the communication methods used (the consultation plan). A list of stakeholders identified, including the Australian, Queensland and local government agencies, the individuals and groups should be provided.	Consultation Report, 2.4
	A summary of the issues raised by stakeholders and the means by which the issues have been addressed, should be provided.	Consultation Report, 6
	Plans for ongoing consultation should be outlined and included in the environmental management plan.	Consultation Report, 2.4
<b>12.4</b>	<b>Study Team</b>	
	The relevant qualifications and experience of the key study team members and specialist sub-consultants should be provided	Appendix 1-E
<b>12.5</b>	<b>Glossary of Terms</b>	
	A glossary of technical terms and acronyms should be provided.	
<b>12.6</b>	<b>Technical Data and Baseline Studies</b>	
	Relevant supporting data and information generated from specialist studies undertaken as part of the EIS are to be included as appendices if not included within the main report. These may include:	Chapter Appendices
	- geological surveys	
	- soil surveys	
	- flora and fauna studies	
	- waterway hydrology and groundwater	
	- water quality	
	- air quality modelling	
	- noise and vibration modelling	
	- transport impact assessment	
	- cultural heritage studies	
	- social impact assessment.	
<b>12.7</b>	<b>List of Proponent Commitments</b>	
	A list of all commitments made by the proponent in the EIS should be provided together with a reference to the relevant section in the report.	Appendix 30-A