Appendix C

TERMS OF REFERENCE CROSS REFERENCE TABLE

TOR Section	TOR Requirement	EIS Section
PART B	**SPECIFIC REQUIREMENTS – CONTENTS OF THE EIS** The EIS should include the following sections but need not be limited to these sections or inferred structure.	
	Executive Summary 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 esoteric 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, but focus on key issues to enable the reader to obtain a clear understanding of the Project and its potential adverse and beneficial environmental, social and economic impacts and the management measures to be implemented by the Proponent to mitigate all residual impacts. The Executive Summary should include: • The title of the Project; • Name and contact details of the Proponent, and a discussion of previous projects undertaken by the Proponent, if applicable, and their commitment to effective environmental management; • A concise statement of the aims and objectives of the Project; • The legal framework, decision-making authorities and Advisory Agencies; • An outline of the background to and need for the Project, including the consequences of not proceeding with the Project; • An outline of the alternative options considered and reasons for the selection of the proposed development option; • A brief description of the Project (pre-construction, construction and operational activities) and the existing environment, utilising visual aids where appropriate; and • An outline of the principal environmental impacts predicted and the proposed environmental management strategies (including waste minimisation and management) and commitments to minimise the significance of these impacts.	**EIS Summary**
	Glossary of Terms A glossary of technical terms, acronyms and references should be provided.	**Appendix O**

1	**INTRODUCTION** The introduction should clearly explain the background and purpose of the EIS, to whom it is directed and contain an overview of the structure of the document.	**s1**
1.1	**Project Proponent** This section should describe the experience of the Project Proponent (and its Joint Venture partners), including the nature and extent of business activities, experience and qualifications, and environmental record.	**s1.2.1**
1.2	**Project Description** A brief description of the key elements of the Project should be provided and illustrated. Any major associated infrastructure requirements should also be summarised. Detailed descriptions of the Project should follow in Section 2. Also, provide a brief description of the reasons for selecting the preferred operating scenario, which will be one of the following: • Narrow gauge coal railway; • Narrow gauge coal / freight railway; or • Dual gauge coal / freight railway.	**s1.1, s3 & s6**
1.3	**Need for the Project** This section should provide a broad statement of the objectives which have led to the development of the Project and a brief outline of the events leading up to the Project's formulation, envisaged time scale for implementation and project lifespan, anticipated establishment costs and actions already undertaken within the Project area. In particular mention should be made of the potential for other infrastructure, including rail and port infrastructure to provide additional coal handling capacity for Queensland coal producers. This section should reference the strategic significance of the Project as a link in the State's rail network and potentially a link in an inland rail network spanning the eastern seaboard states.	**s1.3**
1.4	**Relationship to Other Projects** This section should also describe how the Project relates to any other actions, 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. In particular, reference should be made to upgrades to the existing railway systems and to any proposed expansion of port facilities, and the nature of the interdependency of the projects.	**s1.4**

1.5	**Cost and Benefits of the Project** This section should summarise: • The economic costs and benefits of the Project to businesses and the wider community, including employment and spin-off business development; • Social costs and benefits, including community disruption, related land use changes, employment, skills development and any workforce accommodation issues; • Increased demand for natural resources; and • The open access multi-user framework that must be adopted by the Rail Manager.	**s1.5**
1.6	**Alternatives to the Project** This section should describe feasible alternatives to the Project, including the consequences of not proceeding with the Project (i.e. of not building the rail link). Alternatives should be discussed in sufficient detail to enable an understanding of the 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 natural environment aspects. The alternative options should include the train power plants for example diesel or electrical engines. Discussion of reasonably practicable alternatives to the Project should include the rationale for selecting the preferred rail corridor option over alternative transport modes. In relation to the alternative rail corridor alignments the EIS should describe: • The alignments considered, aided by maps and diagrams; • The rationale for selecting the preferred alignment over alternative alignments, in consideration of: – ecologically Sustainable Development principles – broad costs of each alignment – rail corridor lengths; and – the number of impacted properties, including tenure and ownership (private/government); • Alternative engineering and project design solutions.	**s1.6**

1.7	**Co-location Opportunities** Opportunities may exist for efficiency gains and the mitigation of environmental and property impacts through the location of other proposed linear infrastructure in, near or parallel to the rail corridor (such as, water and gas pipelines and electricity transmission and distribution). The Project Proponent should identify any proposals to develop infrastructure within the vicinity of the railway investigation corridor. 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 entity can be readily identified. It is the responsibility of the individual proponents of those other linear infrastructure projects to provide the required information to the Proponent. The Department of Infrastructure and Planning can, at the Proponent's request, assist with the facilitation of meetings with known proponents of other linear infrastructure in the Project area. 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 rail corridor. Where co-location may be likely, the EIS should consider opportunities to coordinate or enhance any of the impact mitigation strategies proposed for the rail corridor through cooperation with other proponents in the locality. In particular, the potential implications of any infrastructure co-location on rail corridor width and alignment should be described.	**s1.7**
1.8	**The Environmental Impact Assessment Process**	
1.8.1	**Methodology of the EIS** This section should provide an outline of the approvals process including the environmental impact assessment process, and any associated licence or permit application processes. It should include information on relevant stages of the approvals process, statutory and public consultation requirements and any interdependencies that exist between approvals sought. The information in this section is required to ensure: • Relevant legislation is addressed; • Readers are informed of the process to be followed; and • The Stakeholders are aware of any opportunities for input and participation.	**s1.8.1 & s1.8.2**

1.8.2	**Objectives of the EIS** This section should provide a statement of the objectives of the environmental impact assessment process. The structure of the EIS can then be outlined as an explanation of how the EIS will meet its objectives. The purpose of the EIS is to: • Provide public information on the need for and likely effects of the Project on the natural, social and economic environment; • Set out acceptable standards and levels of impacts (both beneficial and adverse) on environmental values; and • Demonstrate how environmental impacts can be managed. The role of the EIS in providing information for the formulation of the EMP for the Project should be discussed. Discussion of options and alternatives is a key aspect of the EIS.	**s1.8.3**
1.8.3	**Submissions** The reader should be informed as to how and when public submissions on the EIS will be addressed and taken into account in the decision-making process. The EIS should inform the reader as on how to make submissions and what form the submissions should take.	**s1.9.7**
1.9	**Public Consultation Process** An appropriate public consultation program is an important component of the EIS process. This section should outline the methodology that will be adopted to: • Identify the Stakeholders and how their involvement will be facilitated; • Identify the process conducted to date and future consultation strategies and programs, including during the operational phase of the Project; and • Indicate how consultation involvement and outcomes will be integrated into the EIS process and future site activities, including opportunities for engagement and provision for feedback and action if necessary. A list of the Stakeholders consulted during the program should be provided, as well as any meetings held, presentations made and any other consultation undertaken for the EIS process. The public consultation process should identify broad issues of concern to local and regional community and interest groups and address issues from Project planning through commissioning and Project operations. A Consultation Plan should be prepared during the initial phase of the EIS process. This should identify: • The types of activities to be undertaken; • Timing; • Target the Stakeholder/ community representatives;	**s1.9** **Appendix D**

	• Integration with other EIS activities and the Project development process; • Consultation responsibilities; • Communication protocols; and • Reporting and feedback arrangements. Information about the consultation process that has taken place and the results should be provided. 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.	**s13.3**
1.10	**Project Approvals**	**17**
1.10.1	**Relevant Legislation** The aim of this section is to provide the reader with an explanation of the legislation and policies controlling the approvals process for the Project. Reference should be made to the SDPWO Act, EP Act, *Integrated Planning Act 1997* (Qld), *Transport Infrastructure Act 1994* (Qld), *Land Act 1994* (Qld), *Water Act 2000* (Qld) (Water Act), *Vegetation Management Act 1999* (Qld), *Cultural Heritage Act 2003* (Qld), *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), *Forestry Act 1959* (Qld), *Soil Conservation Act 1986* (Qld), *Fisheries Act 1994* (Qld), *Transport Operations (Road Use Management) Act 1995* (Qld), and other relevant Queensland laws. All requirements of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and *Native Title Act 1993* (Cth) should also be included. The EIS should describe the approval process resulting from the gazettal of this Project as a significant project pursuant to the SDPWO Act and outline the linkage to other relevant State and Commonwealth legislation. This outline should describe the public notification processes and appeal rights that will be available in the anticipated approval processes. The EIS should indicate the level of approvals anticipated by the Proponent for each Project element in order that approval agencies are able to determine the completeness of the information presented and the scope to generate the anticipated approvals. Local Government planning controls, local laws and policies applying to the development should be described, and a list provided of the approvals required for the Project and the expected program for approval of applications. This information is required to assess how the legislation applies to the proposal, which agencies have jurisdiction, and whether the proposed impact assessment process is appropriate. The Proponent may wish to apply for Community Infrastructure Designation (CID) under the IPA as a mechanism to obtain project approval. If CID is applied for, the requirement for "adequate environmental assessment and public consultation" under s2.6.7 (1) of the IPA is fulfilled by the preparation of the CG Report evaluating the EIS. Further information should be provided in the EIS to assist	**Description of legislation and approvals in s17** **Project approvals process overview in s1.8.1** **Contained in technical sections where appropriate:** **s4.5.2, s6.1.6, s6.2.3, s7.2 & s11.2**

	the Minister with considerations under s2.6.7(2) including information in relation to: • Each relevant State planning policy; • For land in a designated region – the region's regional plan; • For land in a relevant area for a State planning regulatory provision – the provision; • For land in a declared master planned area – any master plans for the area; • Each relevant planning scheme; and • Every properly made submission under section 2.6.7(4) of the IPA.	
1.10.2	**Planning Process and Standards** This section should discuss the Project's consistency with existing land uses or long-term policy framework for the area (e.g. as reflected in local and regional plans), and with legislation, standards, codes or guidelines available to monitor and control operations on site. This section should refer to all relevant State and regional planning policies. This information is required to demonstrate how the proposal conforms to State, regional and local plans for the area.	**s4.5.2**
2	**DESCRIPTION OF THE PROJECT** The objective of this section is to describe the Project through its lifetime of construction, operation and decommissioning. The Project description also allows further assessment of which approvals may be required and how they may be managed through the life of the Project.	**s2**
2.1	**Overview of Project** The EIS should provide an overview of the Project to put it into context. This section should include: • Reasoning as to the preferred operating scenario, such as cost, environmental impacts, operational efficiencies of corridor, operational efficiencies of this option; • A description of the key components of the Project through the use of text and design plans where applicable; • The expected cost and overall duration and timing of the Project; and • A summary of any environmental design features of the Project should be presented.	**s2.1**
2.2	**Location** This section should describe the regional and local context of the Project and associated infrastructure and illustrated on maps at suitable scales. Real property descriptions of the Project should be provided. Maps should show the precise location of the Project area, and in particular: • The location and boundaries of land tenures, in place or proposed, to which the Project area is or will be subject;	**s2.2 & Map folio**

	• The location and boundaries of the Project footprint, including easement widths and access requirements; • The location of any proposed buffers surrounding the working areas (for construction); and • The location of proposed site office(s). The process and criteria used for the selection of the specific Project site and infrastructure construction and relocation design should be described. The full extent of land that is required for infrastructure associated with the rail corridor should be documented. This should also include a justification of the corridor width. The possible processes of acquisition and/or resumption should be outlined. The method, by which ownership, control or owners' consent is to be acquired, should also be presented.	
2.3	**Construction and Operation** The following information should be provided on the construction and operation of the Project and be supported by detailed plans where appropriate.	**2.4 &** **s2.5**
2.3.1	**Pre-Construction Activities** This section should set out a description of the pre-construction activities, including: • The land acquisition process; • Any land acquisitions required, be it in full or as easements, leases, etc; • Vegetation clearing; • Site establishment requirements for construction facilities; and • Upgrade, relocation, realignment or deviation of roads and other infrastructure.	**s2.3 & s17.5** **Vegetation clearing requirements in s5.3.2**

2.3.2	**Construction** The extent and nature of the Project's construction phase should be described, including any staging of the proposal with illustrations showing site boundaries, development sequencing and timeframes. The general description should include: • The design, construction standards, construction methods and site management, including the containment/disposal of construction spoil; • Works needed within the site (e.g. tree clearing) and off-site (e.g. erosion protection); • General construction requirements including types, sources, quantity and method of transport of construction materials; • The arrangements and facilities for the supply of permanent way ballast for the construction of the rail corridor. This should consider the possible location of ballast storage and handling works, and transport logistics for this material, both during construction and operation; • Estimated numbers and roles of persons to be employed; • The number and type of vehicles, machinery and equipment used for construction activities; • Chemicals and hazardous goods to be utilized (if any); • Timetable for the construction phase, including hours of construction; • Licensing/permit requirements for the construction works; • Public safety and emergency aid/medical facilities to be provided on site; • Allowance for provision of power back-up in emergency and potential impact on local supplies in the area; and • Security.	**s2.4.1 – s2.4.16 & s2.7**
2.3.3	**Commissioning** A description of the commissioning process including the environmental impacts should be provided.	**s2.4.17**
2.3.4	**Operation** This section should describe the proposed operational requirements for the Project including: • Freight demand and logistics. This should include descriptions of operating characteristics of the line and expected train movements, including initial traffic and growth scenarios and ultimate capacity expectations; • The administration and control of the rail corridor; • Maintenance works, including patrols, repair of equipment and corridor maintenance including access roads; • Licensing/permit requirements, including railway accreditation arrangements; and	**s2.5, s2.8.2 & s2.8.5**

	• Estimated numbers and roles of persons to be employed.	
2.3.5	**Possible Future Expansion** The extent and nature of likely future expansion for the corridor (e.g. passing loops, second track) should be shown on maps and in writing. The EIS can use this information when considering suitability of impacts, mitigation measures but not assessing likely impacts. This will be assessed at the appropriate time through the appropriate methods.	**s2.1, s2.5.1 & s2.4.10**
2.3.6	**Rehabilitation** It is recognised that rail lines 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.	**s2.6**
2.4	**Associated Infrastructure Requirements** This section should provide proposed plans of requirements for constructing, upgrading or relocating all infrastructures required for the Project. The matters to be considered include such infrastructure as roads, bridges, dams, power lines and other cables, wireless technology (e.g. microwave telecommunications), and pipelines for any services (whether underground or above).	**s2.8**
2.4.1	**Workforce and Accommodation** This section should provide details on the employment requirements and skills base of the required workforce for both the construction and operations phases of the Project, including: • Size and source of construction and operations workforce; • Deployment strategies proposed for the workforce over the construction period; • Employment opportunities relating to the rail corridor 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. 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 and should include the location of any proposed construction workers' accommodation on-site or in the vicinity of	**Description in s2.7** **Further detail in s13.4.6** **Proposed camp location in Map Folio** **Housing needs and construction camps s2.7.3 and s2.7.4**

	the Project. 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; and • First aid facilities and fire safety. Local government approvals required for establishment and operation of such camps or site office should be outlined.	
2.4.2	**Transport** This section should provide a brief overview of transport requirements during the construction and operational phases of the Project. The description should address the use of existing transport infrastructure (road, rail and port) and all requirements for the construction, upgrading or relocation of any transport related infrastructure, including new roads, road alignments, or proposed road closures. Full details of transport volumes, modes and routes should be provided in accordance with Section 3.8 Transport.	**s2.8.1**
2.4.3	**Water Supply and Storage** This section should provide information on water usage by the Project. In relation to the water to be transported, the EIS should address the quality and quantity; the supply source(s); security of supply; and resource availability. Determination of potable water demand for the Project during the construction period should be made. Details should be provided of any existing town water supply to be used to meet such requirements. If water storage and/or treatment are proposed on site, for use by the site workforce, then this should be described. This description should include the management practices to maintain the quality of the water, including the source of the water, transportation, and water treatment processes.	**s2.8.2**
2.4.4	**Electricity and telecommunications** This section should identify the extent of electricity supply requirements and energy conservation measures proposed, including for water treatment and pumping. Telecommunications requirements should also be discussed.	**s2.4.14 & s2.4.15** **s2.8.5 for camp requirements**

2.4.5	**Stormwater** A description should be provided of the proposed stormwater drainage system and the proposed disposal and/or re-use arrangements, including any off-site services and downstream impacts, both for construction purposes and for the operational purposes along the proposed corridor.	**s2.8.3**
2.4.6	**Waste Management** This section should provide a brief overview of the waste management requirements of the Project. Full details of the waste volumes, characteristics and management strategies should be provided in accordance with Section 3.7 Waste.	**s2.8.6**
3	**ENVIRONMENTAL VALUES AND MANAGEMENT OF IMPACTS** The functions of this section are to: • 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 studies, which should be included as appendices to the EIS; • Describe the potential adverse and beneficial impacts of the Project on the identified environmental values. Any likely environmental harm on the environmental values should be described and why they can not be avoided; • Describe any cumulative impacts on environmental values caused by the Project, either in isolation or by combination with other known existing or planned sources of contamination; • Present environmental protection objectives and the standards and measurable indicators to be achieved; and • 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. This section should detail the environmental protection measures incorporated in the planning, construction, commissioning, operations, decommissioning, rehabilitation and associated works for the Project. Measures should prevent, or where prevention is not possible, minimise environmental harm and maximise socio-economic and environmental benefits of the Project. Preferred measures should be identified and described in more detail than other alternatives. This section should address all elements of the environment, such as land, water, air, noise, nature conservation, cultural heritage, social and community, economy, waste, health and safety, hazards and risk, in a way that is comprehensive and clear. The EIS should assess the impacts of pre-construction, commissioning, construction and operation, potential decommissioning, and rehabilitation of disturbed lands. 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.	**s3-19 & Map Folio**

	It is recommended that the EIS follow the heading structure shown below. The mitigation measures, monitoring programs, etc., identified in this section of the EIS should be used to develop the EMP for the Project (see Section 4).	
3.1	**Climate and Natural Disasters** 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. Historic weather patterns in the Project area and seasonal conditions (e.g. cyclones, thunderstorms, floods and storms) that may influence timing and/or construction methods should be discussed, including how this would be managed. Extremes of climate (e.g. droughts, floods, etc) should be discussed with particular reference to water management at the Project site. The implications of climate change on the Project's environmental and commercial feasibility should be discussed. The vulnerability of the area to natural or induced hazards, such as bushfires and earthquakes should be addressed. The relative frequency and magnitude of these events should be considered together with the risk they pose to the construction and operation of the Project. Hazard and risk assessment and management should be provided in Section 3.13.	**Climate patterns s3.2** **Implications of climate change s3.3 & 3.4** **Vulnerability s3.2.3 & 3.4**
3.2	**Land** This section should detail the existing land environment for all areas associated with the Project, including areas affected by the rail corridor route, and any new permanent or temporary facilities constructed for the rail line. 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.	**s4, Appendix G & Map Folio**
3.2.1	**Topography and Geomorphology**	**s4.1 – s4.2**
3.2.1.1	**Description of Environmental Values** Maps should be provided locating the Project and its environs in state, regional and local contexts. The topography of the rail corridor should be detailed with contours at suitable increments, shown with respect to Australian Height Datum (AHD). Significant features of the landscape should be included on the maps. Commentary on the maps should be provided highlighting the significant topographical features.	**s4.1.2 – s4.1.3** **s4.2.1 – s4.2.3 & Map Folio**
3.2.1.2	**Potential Impacts and Mitigation Measures** This section should provide details of any potential impacts to the topography, 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;	**s4.1.4** **s4.2.4**

	• The objectives to be used for the Project in any re-contouring or consolidation, rehabilitation, fencing, monitoring and landscaping; and • Proposals for any diversion of watercourses during construction or operations, and the reinstatement of these watercourses.	
3.2.2	**Geology and Soils**	**s4.2 – s4.3**
3.2.2.1	**Description of Environmental Values** 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; or the quality of wastewater leaving any area disturbed by the Project should be described. Soils within the Project disturbance area should be described and mapped at a suitable scale, with particular reference to the physical and chemical properties of the soils that would influence erosion potential, storm water run-off quality, and rehabilitation of the land. Information should also be provided on soil stability and suitability for construction of all Project facilities. 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)". Soil descriptions must be for all relevant soil horizons , and include: • Horizon differentiation and depths, field texture, colour, mottles; • Profile depth, stability, permeability, erodibility, drainage, soil structure, rockiness; • Salinity, sodicity, pH; and • A measurement of dispersibility. The investigation area should include all areas potentially affected by the Project including associated infrastructure corridors. Relevant soil erosion management techniques should be outlined. Existing saline sites and sites that have the potential to become saline as a result of the project should be identified and 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.	**s4.2.1 – s4.2.3** **s4.3.2 & Map Folio** **Appendix G**
3.2.2.2	**Potential Impacts and Mitigation Measures** 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 water extraction and any earth-moving works required;	**s4.2.4** **s4.3.3**

	• Measures to ensure that soil erosion does not accelerate within the Project area, particularly along the rail corridor due to construction or maintenance activities. This may be addressed in accordance with measures detailed in "Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites, 1996"; • Influence of time of year of construction and the potential that localised rain events may have on soils; • Assessment of likely erosion effects of all Project's aspects, both on and off the Project site; • Details of erosion control measures and criteria used to assess methods that would minimise or alleviate erosion and sedimentation over the site. For each soil type identified, erosion potential and 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; • Description of topsoil management, including transport, storage and replacement of topsoil to disturbed areas. The minimisation of topsoil storage times (to reduce fertility degradation) should also be addressed. Erosion and sediment control should be described with a Soils Erosion and Sediment Control Plan included in the EMP; and • The potential for the Project to adversely impact on the stability of landforms within the construction areas and adjacent lands should be addressed in detail. The stability and potential for erosion of any watercourses in the Project area should be addressed.	**Erosion & Sediment Control s18.6.1**
3.2.3	**Land Use and Infrastructure**	**s4.5**
3.2.3.1	**Description of Environmental Values** The EIS should identify, with the aid of maps: • Land tenure, including reserves, tenure of special interest such as protected areas and forest reserves, identification of existing and proposed gas, water pipelines, power lines and transport corridors; this includes local roads, state-controlled roads and rail corridors; • Land use (urban, residential, industrial, agricultural, forestry, recreational, mining including mining and petroleum exploration tenures, mining leases, mining claims, mineral development licences and extractive industry permits); • 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; • Potential impacts of the Project on mining developments;	**s4.5.1 – s4.5.3 & Map Folio**

	• Information on any known occurrences of economic mineralisation and extractive resources within the Project area; and • Distance of the Project from residential and recreational areas.	
3.2.3.2	**Potential Impacts and Mitigation Measures** The potential for the construction and operation of the Project to change existing and potential land uses of the Project site and adjacent areas should be detailed. Post operations land use options should be detailed including suitability of the area within the rail corridor to be used for agriculture or nature conservation. 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. A description of the following should be included: • 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; • Strategies addressing individual property impacts affected by the Project – access changes to and within the property may be addressed; • The land acquisition strategy and the proposed tenure (easements, leases, etc); • The identification of the potential native title rights and interests likely to be impacted upon by the Project and the potential for management of those impacts by an Indigenous Land Use Agreement or other native title compliance outcomes; • Direct impacts on any areas of high conservation value, including National Parks, Ramsar Sites, or other areas designated to be of high conservation value (including impacts on accessibility); • Impacts on surrounding land uses and human activities and strategies for minimisation, including: – good quality agricultural land – forestry land (addressing loss of access to land, fragmentation of sites, increase of fire risk and loss of productive land for those purposes) – mining activities – residential and active and passive open space; and – industrial uses; • Possible effect on town planning objectives and controls, including Local Government zoning and strategic plans; • Constraints to potential developments and possibilities of rezoning adjacent to the development area; • Possible impacts on, or sterilisation of, identified mineral or energy resources and extractive industry deposits resulting from the	**s4.5.4 & Map Folio**

	construction and/or operation of the Project; • The identification of 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 DNRW – Forest Products; • Potential issues involved in proximity and/or co-location of other current or proposed infrastructure services along the rail corridor; • Potential impacts of construction work on essential services, in particular the rail line construction on the existing electricity transmission infrastructure; • Potential impacts on future road upgrades; and • Identification of any land units requiring specific management measures. In addition, the following information should be presented: • Identification and discussion of land use impacts associated with the construction of the Project; • Construction impacts on land adjacent to the construction site, including weed control; and • Incompatible land uses, whether existing or potential, adjacent to all aspects of the Project, including essential and proposed ancillary developments or activities and areas directly or indirectly affected by the construction and operation of these activities should be identified and measures to avoid unacceptable impacts defined.	**Identification of native forest hardwoods s5.2.1 & Appendix H.4**
3.2.4	**Land Contamination**	**s4.4**
3.2.4.1	**Description of Environmental Values** A review should be undertaken within the Project site and adjacent areas, 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. 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 may be impacted by 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.	**s4.4.1 – s4.4.2** **Appendix G and Map Folio**

	The results of the site investigations, remediation and validation should be certified by a Third Party Reviewer before being submitted to the EPA. In short, 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; • Identification of any potentially contaminated sites not on the registers which may need remediation; and • A schedule of further investigations and remediation activities recommended for those land parcels where soil contamination may have an impact on construction activities.	
3.2.4.2	**Potential Impacts and Mitigation Measures** This section should provide details of any potential impacts from land contamination and proposed mitigation measures, including: • A description of the nature and extent of existing or potential contamination at each site and remediation and validation sampling; and • 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 area for groundwater extraction, particularly potential impacts on water quality and implications for domestic use. 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 Contaminated Land Register) of land contamination on the land after completion of construction of the Project.	**s4.4.3**
3.3	**Nature Conservation** This section should detail the existing nature conservation values of the Project area. The environmental values of nature conservation for the affected area should be described in terms of: • Integrity of ecological processes, including habitats of rare and threatened species; • Conservation of resources; • Biological diversity, including habitats of rare and threatened species; • Integrity of landscapes and places including wilderness and similar natural places; and • Aquatic and terrestrial ecosystems. The flora and fauna communities should be described, in particular those that are rare or threatened, in environmentally sensitive localities, including waterways, riparian zones, and wilderness and habitat corridors. The description should include species lists	**s5**

	with reference to 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. This section should also discuss all likely direct and indirect environmental impacts on flora and fauna in both terrestrial and aquatic environments in sensitive areas. 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; and • 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 alignment and the viability of alternatives.	**Appendix H** **s5.4**
3.3.1	**Sensitive Environmental Areas**	**s5.2.4**
3.3.1.1	**Description of Environmental Values** The EIS should identify areas that are environmentally sensitive in proximity to the Project. Environmentally sensitive areas should also include areas classified as having national, state, regional or local biodiversity significance, or flagged as important for their integrated biodiversity values. Consideration should be given to nature refuges, national parks, conservation parks, declared fish habitat areas, wilderness areas, aquatic reserves, heritage/historic areas or items, national estates, world heritage listings and sites covered by international treaties or agreements (e.g. Ramsar, Japan-Australia Migratory Bird Agreement, China-Australia Migratory Bird Agreement), areas of cultural significance (see Sections 3.9 and 3.10) and scientific reserves. The proximity of the Project to any environmentally sensitive areas should be shown on a map of suitable scale. Areas which would be regarded as sensitive with regard to flora and fauna have one or more of the following features: • Important habitats of species listed under the *Nature Conservation Act 1992* and/or the EPBC Act as presumed extinct,	**s5.2.1 -s5.2.4**

	endangered, vulnerable or rare; • Regional ecosystems recognised by the EPA as 'endangered' or 'of concern' or 'not of concern', and/or ecosystems listed as 'presumed extinct', 'endangered' or 'vulnerable' under the EPBC Act; • Ecosystems which provide important ecological functions, such as riparian vegetation, important buffer to a protected area, refugia or important habitat corridor between areas; and • Protected areas which have been proclaimed under the *Nature Conservation Act 1992* or are under consideration for proclamation.	
3.3.1.2	**Potential Impacts and Mitigation Measures** This section should discuss the following: • The impact of the Project on species, communities and habitats of local, regional or national significance; • Proposals to mitigate impacts (e.g. timing of works, minimise width of disturbance, proposed rehabilitation of in-stream and floodplain disturbances); and • Appropriate mitigation measures for remnant ecosystems that may be affected by the Project should refer to the Regional Vegetation Management Code for Brigalow Belt and New England Tablelands Bioregions, and address the "Policy for Vegetation Management Offsets (DNRW 2007)".	**s5.3 – s5.4**
3.3.2	**Terrestrial Flora**	**s5.2.1**
3.3.2.1	**Description of Environmental Values** The terrestrial vegetation communities within the affected areas should be described 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; • Location of vegetation types of conservation significance; • Vegetation map unit descriptions, including their relationship to regional ecosystems. Sensitive or important vegetation types should be highlighted and their value as habitat for fauna and conservation of specific rare floral and faunal assemblages or community types discussed; • The current extent (bioregional and catchment) of protected vegetation types of conservation significance within the protected areas (e.g. national parks, conservation parks, resource reserves, nature refuges etc); • Any plant communities of cultural, commercial or recreational significance; and	**s5.2.1, Appendix H & Map Folio** **Database search results Appendix H.3 & H.4**

	• The distribution and abundance of exotic and weed species. The description should contain a review of published information regarding the assessment of the significance of the vegetation to conservation, recreation, scientific, educational and historical interests. The assessment should also include the significance of native vegetation (including re-growth and restored areas in addition to remnant vegetation) from a local, regional, state and national perspective. 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, as follows: • All data requirements of the Queensland Herbarium CORVEG database should be collected; • Appropriate minimum site sizes should be selected, observing recognised sampling approaches and to provide an adequate sample of surveyed communities; • A list of species present at each site should be recorded; • The relative abundance and community structure of plant species present should be recorded; • Any plant species of conservation, cultural, commercial or recreational significance should be identified; • Vegetation mapping and data should be submitted to the Queensland Herbarium to assist the updating of the CORVEG database; and • 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 and entry into the HERBRECS database. The existence of rare or threatened species should be specifically addressed under sensitive areas. Any special landscape values of natural vegetation communities should be described. 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 in the appendices to the report. 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. The occurrence of pest plants (weeds), particularly significant populations of declared plants under the *Land Protection (Pest and Stock Route Management) Act 2002* should be shown on a map at an appropriate scale. A weed management strategy will be required.	**Detailed survey methodolgy in Appendix H.1** **List of recorded species Appendix H.6** **Weed management s18.6.7**
3.3.2.2	**Potential Impacts and Mitigation Measures**	**s5.3 – 5.4**

	This section should discuss all foreseen direct and indirect effects on terrestrial flora and the potential level of environmental impact identified. Action plans for protecting rare or threatened species and vegetation types identified as having high conservation value should be described, and any obligations imposed by Queensland or Australian Government biodiversity protection legislation, relevant policies or codes should be discussed. 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. Impacts during construction and operation of the Project should be assessed. Short-term and long-term durations should be considered. 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. With regard to the Project area, this section should include: • The significance of impacts at a local, catchment, bioregional, state or national levels; • Impact on any plants of potential or recognised environmental or economic significance; • A discussion of the ability of identified stands of vegetation to withstand any increased pressure resulting from the Project and identify measures proposed to mitigate impacts; • 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; • A description of methods of minimising the potential for the introduction and/or spread of weeds or plant disease, including: – identification of the origin of construction materials, machinery and equipment – the need for vehicle and machinery wash-down and any other hygiene protocols – staff/operator education programs; and – determination of the potential for the introduction of or facilitation of exotic, non-indigenous and noxious plants; • A weed management plan should be included in an EMP, to be developed in consultation with local government environmental officers, to cover construction, rehabilitation and operation periods.	**Potential for vegetation offsets s5.3.3**
3.3.3	**Terrestrial Fauna**	**s5.2.2**
3.3.3.1	**Description of Environmental Values**	**s5.2.2, Appendix H**

	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 along the proposed rail corridor should be identified and mapped. 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 bats; • Any species that are poorly known but suspected of being rare or threatened; • Habitat requirements and sensitivity to changes, including movement corridors and barriers to movement; • The existence of feral or exotic animals, including maps of major pest infestations; • Existence of any rare, threatened or otherwise noteworthy species/communities 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); and • Use of the area by migratory birds, nomadic birds, fish and terrestrial fauna. The EIS should contain results from surveys for species listed as threatened or migratory under the EPBC Act. Surveys are to be conducted at the appropriate time of the year when the species is known to be present on the site, so that identification and location of these species is optimal. Methodology used for fauna surveys should be specified in the appendices to the report. The EIS should indicate how well any affected communities are represented and protected elsewhere in the sub-region where the Project occurs. Relevant site data should be provided to the EPA in a format compatible with EPA WildNet database for listed threatened species.	**& Map Folio** **Species list Appendix H.2 – H.6** **Detailed survey methodology in Appendix H.1**
3.3.3.2	**Potential Impacts and Mitigation Measures** This section should discuss all foreseen direct and indirect effects on terrestrial fauna. Strategies for protecting rare or threatened species should be described, and any obligations imposed by Queensland or Australian Government endangered species legislation or policy should be discussed. Impacts during construction and operation of the Project should be assessed. Short and long-term durations should be considered. Measures to mitigate the impact on habitat or the inhibition of normal movement, propagation or feeding patterns, and change to food chains should be described. Any provision for buffer zones and movement corridors, or special provisions for migratory, nomadic and aquatic animals should be discussed where appropriate. With regard to terrestrial and riparian fauna, the assessment of potential impact should consider: • Impacts the Project may have on terrestrial fauna, relevant wildlife habitat and other fauna conservation values, including:	**s5.3 – s5.4**

	– direct (or short term) and indirect (or long-term) impacts due to loss of range/habitat, food supply, nest sites, breeding/recruiting potential or movement corridors – cumulative effects of direct and indirect impacts – impacts on rare and threatened or otherwise noteworthy animal species – threatening processes leading to progressive loss; and – identification of the conservation importance of identified populations at the regional, state and national levels; • Measures to minimise wildlife capture and mortality during construction and operation; • 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; • Methods for minimising the introduction of feral animals, and other exotic fauna such as declared pest ant species (fire ants and yellow crazy ants); and • Review of control measures to prevent increases in local populations and spread of biting insect species of pest and health significance associated with construction activities and disposal of construction wastes.	
3.3.4	**Aquatic Flora and Fauna**	**s5.2.3**
3.3.4.1	**Description of Environmental Values** The aquatic flora and fauna occurring in the areas affected by the Project should be described noting the patterns and distribution in waterways intersected by the Project. A description of the habitat requirements and the sensitivity of aquatic flora and fauna species to changes in flow regime, water levels and water quality in the Project areas should be described. The discussion of the fauna and flora present or likely to be present at any time during the year, (including the presence of any rare, threatened or otherwise noteworthy aquatic species or communities) should include information on: • Fish species, mammals, reptiles, amphibians, and aquatic invertebrates occurring in the waterways within the Project area, including feral and exotic fauna species; • Aquatic (waterway) plants, including any declared pest plant species; and • Aquatic substrate and stream type.	**s5.2.3**
3.3.4.2	**Potential Impacts and Mitigation Measures** This section should discuss all foreseen direct and indirect effects on aquatic flora and fauna, including strategies for protecting rare	**s5.3 – s5.4**

	or threatened species and any obligations imposed by Queensland or Australian Government endangered species legislation or policy. The discussion should include: • An assessment of any impacts on aquatic flora and fauna, habitat or the inhibition of propagation that the proposed Project may have during its construction and operation, both in the short-term and long-term; • An examination of any proposed stream diversions, causeway construction and crossing facilities, stockpiled material and other impediments that will restrict free movement of fish, including seasonal construction of waterway crossings as a means of avoiding fish spawning periods. Waterway crossings should be designed in line with the fish habitat guideline FHG 001 "Fish Passage in Streams: fisheries guidelines for design of stream crossings (August 1998)". • Identification of necessary permits/authorities required by the Project (e.g. permits under the *Fisheries Act 1994* to construct temporary or permanent waterway barriers); • Description of mitigation measures to prevent the creation of new mosquito and biting midge breeding sites during construction (e.g. in quarries and borrow pits); and • Description of the potential for and mitigation measures to prevent the introduction, transfer or facilitation of exotic, non-indigenous and noxious plants (including blue green algae) and water borne insect pests.	
3.4	**Water Resources**	**s6**
3.4.1	**Description of Environmental Values** This section should describe the existing environment for water resources that may be affected by the Project in the context of the environmental values as defined in such documents referred to in the EP Act, the Environmental Protection (Water) Policy 1997 and the "National Water Quality Management Strategy (Australian and New Zealand Environment and Conservation Council, 2000". The need or otherwise for water licenses or any other authorisation under the Water Act or EP Act (e.g. dredging) and their triggers, should be identified for any proposed activities to be undertaken e.g. Bores, stream diversions, dams (including referable dams, take or interference with the flow of water etc. The construction of any overland flow works must be in accordance with relevant water resource plans. The EIS should demonstrate that the corridor/alignment of the proposed rail project does not conflict with any proposed infrastructure to take or interfere with the flow of water should be considered and triggers identified. The EIS should discuss the following: • Watercourses to be crossed by the rail corridor showing planned crossing locations on a map, and include descriptions of the selection process that considered alternative crossing locations if the preferred crossing point is in environmentally sensitive areas; • Physical, chemical and biological characteristics of existing surface and ground water;	**s6.1.1 – s6.1.5 & s6.2.1 – s6.2.4** **Watercourse crossings in Map Folio**

	• Environmental values of surface waterways of affected area in the context of: – values identified in the Environmental Protection (Water) Policy – water quality guidelines within the Queensland Water Quality Guidelines 2006 – sustainability, including both quality and quantity; and – physical integrity, fluvial processes and morphology of water courses, including riparian zone vegetation and form; • Overland flows, flows, flooding (including extent, levels and frequency), and present water uses.	
3.4.2	**Potential Impacts and Mitigation Measures** This section should assess potential impacts on environmental values of water resources identified in the previous section. It should also define and describe the objectives and practical measures for protecting or enhancing water resource 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. Matters to be addressed should include clear descriptions of the following. • Likely impacts associated with the construction, commissioning and operation of the Project on water courses, particularly with respect to bank erosion and bed destabilisation, and the selection criteria used that determined the final crossing point and crossing method for various streams encountered along the route so as to protect watercourse integrity. This would include amelioration or mitigation measures to address each identified impact that may affect local and/or regional water quality thereby safeguard downstream water quality. • Potential impact of the rail corridor on overland flows. • Potential impacts on flooding levels upstream and downstream of any new crossing of water courses. • Possible sources of water pollution or other changes in water quality, including soil erosion, accidental spills, other wastes including sewage disposal and likely chemical composition of any leachate from introduced fill present on a work site. • The quality of water leaving construction sites (including physical, chemical, and biological characteristics), potential impacts for any likely discharged water (e.g. hydro-test water) and how the impacts will be assessed and monitored. • The effects of drainage works, placement of fill, clearing or any other alterations to existing topography and landform on the hydrology of the site. This would include any alteration to drainage patterns, water tables and secondary influences on flooding. If levee banks or downstream diversionary constructions are proposed, the effects on neighbouring landholders should be considered, and identification of any works that will require permits or licensing in accordance with the Water Act. • Proposed principles for drainage control structures for all aspects of the Project, including facilities such as access roads.	**s6.1.7 – s6.1.9 & s6.2.5 – s6.2.6**

	• The timing of construction works in the context of likely periods of flooding and proposals to minimise the risk of adversely impacting downstream water quality. • Measures to ensure viable weed seeds and pathogens are not released into the water environment including from machinery traversing creek systems or riparian areas. • Measures to minimise the likelihood for the transfer of toxins and pathogens between catchments.	
3.5	**Air Quality**	**s7**
3.5.1	**Description of Environmental Values** This section of the EIS should describe the existing air quality that may be affected by the Project in the context of environmental values as defined by the EP Act and *Environmental Protection (Air) Policy 1997*. 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, industrial and agricultural developments near the rail corridor and associated construction areas. These descriptions should include any baseline monitoring results.	**s7.2 &** **s7.3**
3.5.2	**Potential Impacts and Mitigation Measures** The following air quality issues and their mitigation should be considered: • Impacts from construction activities, especially in areas where the rail corridor follows existing road networks or passes in close proximity to residences or other dust sensitive receptors; • Identification of probable climatic conditions (seasonal wind patterns, extended dry periods) that could affect dust generation and dust dispersion; • Impacts from operation of diesel powered locomotives in rail operations; and • Coal dust emissions as an environmental nuisance and in particular to any sensitive receptor along the proposed rail corridor. For each identified situation, amelioration and/or mitigation measures to be undertaken during construction that relate to vehicle emissions and control of dust generation should be proposed. Similarly, proposals to manage air emissions associated with the Project's operations and maintenance, such as diesel and coal dust emissions and any gaseous emissions from pump stations should be discussed.	**s7.5 – s7.6 & s7.9** **Modelling results in Appendix I**
3.5.3	**Greenhouse Gas Emissions** Greenhouse gas emissions should be described in the context of the Project implementation, including: • An inventory of projected future emissions attributable to the construction, operation and maintenance phases of the Project and for alternative Project operating scenarios (in the case of electrification this can be based on the single most likely power	**s7.7**

	sources) expressed as total mass CO_2 equivalents per annum; and • Any intended measures to avoid or minimise greenhouse emissions. The preferred operating scenario is not dependent on CO_2 gas emissions alone and is subject to other various issues, such as cost and the future use of the corridor.	
3.6	**Noise and Vibration**	**s8**
3.6.1	**Description of Environmental Values** 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 EP Act *Environmental Protection (Noise) Policy 1997* and QR's Code of Practice – Railway Noise Management (or equivalent). The Environmental Protection Agencies Noise Measurement Manual should be considered. Sensitive noise receptors adjacent to the rail corridor and associated permanent infrastructure should be identified and typical background noise levels determined. The potential sensitivity of such receptors should be discussed and performance indicators and standards nominated for each affected receptor. Current background levels for noise should be surveyed or reported. Comment should be provided on any current activities near the Project area that may cause a background level of ground vibration.	**s8.2** **Sensitive receivers s8.1.1 & Map Folio** **Background levels s8.2.2**

3.6.2	**Potential Impacts and Mitigation Measures** The EIS should describe the modelled impacts of noise and vibration generated during the construction and operational phases of the Project. An analysis of noise and vibration impacts should include: • The levels of noise and vibration generated during construction of the Project and ancillary activities (e.g. access roads) and operations, assessed against current typical background levels; • The potential environmental impact of noise and vibration at all potentially sensitive places, in particular, any places of work, residence, recreation, or worship should be quantified and compared with objectives, standards to be achieved and measurable indicators, including environmental impact on terrestrial and aquatic animals and avifauna; • 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; and • Assessment should be made of the potential emission of low-frequency noise (noise with components below 200Hz) from trains and major items of plant or equipment where it may impact sensitive receivers. If necessary, measures should be described for reducing the intensity of these components where relevant. Reference should also be made to the "EPA Guideline: Noise and Vibration from Blasting".	**s8.3 – s8.7** **Construction noise impacts s8.3** **Construction vibration impacts s8.4** **Impact on ecology s5.3.4** **Operation noise impacts s8.5** **Low frequency s8.5.2**
3.7	**Waste**	**s9**
3.7.1	**Waste Generation** The EIS should identify and describe all sources of waste associated with construction, operation and decommissioning of all aspects of the Project, using schematic diagrams for each distinct phase. This section should describe all activities including: • Chemical and mechanical processes conducted on the construction sites (e.g. chemical storage, sewage treatment, power generation, fuel burning, mechanical workshop, diesel storage); • 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; • Any waste treatment process involved, including site drainage and erosion controls; • Hazardous materials to be stored and/or used on-site, including environmental toxicity data and biodegradability; • Descriptions should also include (using maps and plans as appropriate): – generation points	**s9.1** **Hazardous materials Table 9-2.**

	– storage methods and facilities – quantities – disposal arrangements; and – recycling/reuse arrangements.	**S9.1 & s9.3**
3.7.2	**Waste Management** Having regard for best practice waste management strategies, the *Environmental Protection (Waste Management) Policy 2000* and the *Environmental Protection (Waste Management) Regulation 2000*, the proposals for waste avoidance, reuse, recycling, treatment and disposal should be described. This section should discuss waste management strategies, including reduction, reuse, recycling, storage, transport and disposal of waste, including measures to minimize attraction of vermin, insects and pests. This section should assess the potential impact of all wastes to be generated during construction and operation and provide details of each waste in terms of: • Operational handling and fate of all wastes including storage; • On-site treatment methods proposed for any wastes; • 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; • The potential level of impact on environmental values; • Measures to ensure stability of the waste storage areas and impoundments; • Methods to prevent, seepage and contamination of groundwater from stockpiles and/or storage areas and impoundments; • Market demand for recyclable waste (where appropriate); and • Decommissioning of the construction site. The EIS should address waste minimisation techniques and processes proposed and the market demand for recyclable waste (where appropriate).	**s9.2** **Management strategies s9.2.1** **Methods of disposal s9.2.2** **On-site storage and treatment s9.2.3**
3.8	**Transport**	**s10**
3.8.1	**Construction Methods and Routes** The EIS should describe transport methods and routes for all aspects of the transport task associated with the construction and operation of the Project. Information should include:	**s10.1 – s10.5** **Existing traffic s10.2.3**

	• Existing traffic volumes on the proposed transport routes and associated access points; • Volumes, tonnage, and composition of construction inputs; • Hazardous or dangerous material that may be transported; • Modes of transport (e.g. sea, rail, road) and the type of vehicles most likely to be used for transport; • Number and type of workforce traffic and service vehicles; • Number of trips generated (both light and heavy vehicles); • Origin and destination of inputs and any wastes, together with transport routes proposed (with the use of maps); • Details of over-dimension, excess mass loads or any hazardous goods; and • Timing and duration of transport. The EIS should describe transport information for all stages of the Project including: • All requirements for the construction, upgrading or re-location of any transport-related infrastructure, including any need for increased road maintenance; • Any new access requirements to state-controlled or local government roads; and • Sufficient details to allow the Department of Main Roads (DMR), Queensland Transport and local government authorities to ascertain compliance with legislative and design requirements.	**Construction inputs s10.3.3** **Modes of transport s10.3.2** **Trip generation s10.3.5** **Origin & destination s10.3.4 & Map Folio** **Required deviations s10.4** **Access s10.4.4**
3.8.2	**Operational Coal/Freight Haulage** This section should describe the transport task of coal/freight haulage that will be undertaken on the rail line, as well as any road transport tasks directly related to servicing the rail line during operations. This should address at least the following information: • Tonnage rates per day, per month, or per annum for various stages, or scenarios of operation (such as initial operation, growth scenarios and ultimate capacity expectations); • Train size, speeds and frequency of movement; • Operating hours, daylight, night time, during adverse weather conditions; and • Expected road traffic pattern changes directly relating to servicing the rail operations.	**s10.6**
3.8.3	**Potential Construction Impacts and Mitigation Measures** An assessment of impacts to existing transport infrastructure associated with Project activities should be provided and include the following: • The likely impacts and mitigation strategies of any new roads or road realignments that are required as a result of the Project;	**s10.5** **Traffic volume impacts s10.3.6**

	• The likely impacts and mitigation strategies of increased traffic on local and regional road networks (with appropriate directional distributions), with reference to: – traffic volume – vehicle size and types, including heavy vehicle access – usage rates – road safety issues, including safe access to and from construction sites including the workforce travelling long distances to their residences and school bus routes within the Project area (e.g. consideration of the need for turning lanes, improved sight lines, waiting areas, off-road parking locations) – reduced efficiency of traffic flows or intersections along key routes, especially during construction – additional wear or reduced life of pavements requiring additional or accelerated rehabilitation and maintenance, if any – social, amenity, environmental or cultural heritage impacts associated with construction related transport activities not covered in other sections of the EIS – proposed traffic control plans and traffic management plans; and – steps to prevent public access to construction access ways that are not public roads. • Specific issues related to construction phase activities, including: – site depot location and access – construction traffic on local road networks, daily movement patterns, possible road closures and emergency access, especially in rural and urban residential areas; and – methods to be adopted to avoid obstruction to other road uses during construction. Road infrastructure impacts should be described and assessed according to DMR's "Guidelines for Assessment of Road Impacts of Development Projects (April 2006)". Reference should be made to other relevant DMR planning documents.	
3.8.4	**Potential Coal/Freight Haulage Impacts and Mitigation Measures** This section should describe the relevant transport impacts of the coal haulage tasks presented in 3.8.2, including any direct maintenance and servicing tasks associated with operations. This should include the following areas of interest: • Existing railway systems and port facilities; • Safety principles for operations; • Impact management strategies contained in EMP for train operations;	**s10.7**

	• Details of where the rail corridor crosses or runs within or close to road reserves; • Assessment of road/rail intersections for all proposed stages of operating scenarios; • An outline of the proposed process to be employed in assessing and managing road/rail interactions at downstream locations on the rail network, at future stages when operational capacity on the downstream line increases; and Impacts associated with identified direct road traffic pattern changes for the operational phase.	
3.9	**Indigenous Cultural Heritage**	**s11**
3.9.1	**Description of Environmental Values** The EIS should describe the 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: • Refer to: – the DNRW Indigenous Site Database; and – any existing literature relating to the affected areas; • Refer to the consultation and negotiation with traditional owners and the outcomes about: – significant Aboriginal Objects and Significant Aboriginal Areas and their involvement in field surveys; and – requirements relating to the selection of consultants and confidentiality of culturally sensitive information; • Include locations of Significant Aboriginal Objects and Significant Aboriginal Areas likely to be impacted by the Project; • Provide a constraints analysis of the proposed development area to identify and record indigenous cultural heritage places; and • 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).	**s11.1 – s11.5** **Databases searches s11.1 & Map Folio** **Consultation s11.3**
3.9.2	**Potential Impacts and Mitigation Measures** The Proponent should provide an assessment of any likely effects on sites of indigenous cultural heritage values, including but not limited to the following: • Description of the significance of artifacts or places of indigenous cultural heritage value likely to be affected by the Project and their values at a local, regional and national level; and	**s11.6** **Details of CHMP in s11.2.2, s11.3, s11.6 & s17.2.3**

	• Recommended means of mitigating any negative impacts on indigenous cultural heritage values and enhancing any positive impacts. 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. 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; • A process for undertaking a comprehensive and systematic cultural heritage assessment; • 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; • Provision for the management of the accidental discovery of cultural material, including burials, in the Project area; • Processes for determining any requirements for monitoring of the Project during construction, and measures by which any monitoring program is to be implemented; • Indigenous cultural heritage induction and awareness programs for Project staff, subcontractors and staff, consultants and agents of the Project; and • A conflict resolution process. 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. As a minimum, impact assessment, management and protection strategies should satisfy statutory responsibilities and duties of care under the *Aboriginal Cultural Heritage Act 2003* and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth). If a CHMP has not been approved by the submission of the EIS to the CG then the following should be provided: • An outline of the draft CHMP, subject to any confidentiality provisions, with the position of the endorsed cultural heritage parties; and	

	• Details of the proposed steps and timeframes for seeking the ratification of the CHMP.	
3.10	**Non-Indigenous Cultural Heritage**	**s12**
3.10.1	**Description of Environmental Values** 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: – 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; and – any existing literature relating to the affected areas; • Refer to consultations and negotiations with the local community and historical societies about: – places of non-indigenous cultural heritage significance; and – 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; • Provide a constraints' analysis of the proposed development area to identify and record non-indigenous cultural heritage places; • Provide maps showing the location of mining areas with historical significance; and • 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). 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 *Queensland Heritage Act 1992*.	**s12.1- s12.2** **Database searches s12.1** **Consultation s12.2.2** **Significance of places 12.2.3** **Locations in Map Folio** **European Contextual History Report Appendix K**
3.10.2	**Potential Impacts and Mitigation Measures** The Proponent should provide an assessment of any likely effects on sites of non-indigenous cultural heritage values, including but not limited to the following: • Description of the significance of artifacts, items or places of conservation or non-indigenous cultural heritage value likely to be affected by the Project and their values at a local, regional and national level;	**s12.3**

	• Recommended means of mitigating any negative impacts on non-indigenous cultural heritage values and enhancing any positive impacts; • Negotiations with Queensland Heritage Council and the EPA regarding management of places of historic heritage significance, taking account also of community interests and concerns; and • Documented management strategies in accordance with the outcomes of negotiations with Queensland Heritage Council, EPA and the community. As a minimum, impact assessment, management and protection strategies should satisfy statutory responsibilities and duties of care, including those under the EPBC Act and *Queensland Heritage Act 1992*.	
3.11	**Social Environment**	**s13**
3.11.1	**Description of Environmental Values** This section should describe the existing social values that may be affected by the Project. The social amenity and use of the Project area and adjacent areas for forestry, mining, fishing, recreation, industrial, educational or residential purposes should be described. In the development of this community profile, consideration should be given to: • Rural properties, farms, croplands and grazing areas; • Community infrastructure and services, access and mobility; • Population, demographics and family structure of the affected community; • Local community values, vitality and lifestyles; • Recreational, cultural, leisure and sporting facilities and activities in relation to the affected area; • Health and educational facilities; • Local government and public facilities; • Number of properties directly affected by the Project; and • 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.	**s13.1 – s13.3** **Appendix L**
3.11.2	**Potential Impacts and Measures** This section should define and describe the objectives and practical measures for protecting or enhancing social values, describe how nominated quantitative standards and indicators may be achieved for social impacts management, and how the achievement of the objectives should be monitored, audited and managed.	**s13.4 – s13.5**

	The social impact assessment of the Project should consider the information gathered in the community consultation program and the analysis of the existing socio-economic environment, and describe the Project's impact, both beneficial and adverse, on the local community. The impacts of the Project on local and regional residents, community services and recreational activities are to be discussed. The nature and extent of the community consultation program are to be described and a summary of the results incorporated in the EIS. The assessment of impacts should describe the likely response of affected communities and identify possible beneficial and adverse impacts (both immediate and cumulative). These impacts should be considered both at the regional and local level. The EIS, through various assessments, should address potential impacts and proposed mitigation measures for the following: • Affected landholders and communities; • Current land uses and existing lifestyles and enterprises; • Demographic, social, cultural and economic profiles; • Labour markets, with regard to the source of the workforce; • Housing demand including rental accommodation for the construction workforce and associated contractors; • Disruption to recreation and tourism, including changes to access patterns; • Existing local resident values and aspirations; • Government funded projects particularly of an environmental nature, i.e. waterway re-vegetation programs, tree planting schemes, salinity reduction; • Places of value to the community or individuals; and • Establishment of a complaints register and response procedure.	**Affected landholders s13.4.2, x13.4.3 & s13.5.1** **Demographics s13.4.2 & s13.5.2** **Housing & Accomodation s13.4.6 &s13.5.3** **Labour s13.4.4, s13.4.5 & s13.5.4**
3.12	**Economic Environment**	**s14**
3.12.1	**Description of Environmental Values** This section should describe the existing economic environment that might be affected by the Project. • A description of the local economy; • Economic contribution of existing enterprises (e.g. tourist activity, local business, etc) and future economic opportunities; and • The existing housing market, particularly rental accommodation that may be required for, and available to the Project workforce.	**s14.1-14.2**
3.12.2	**Potential Impacts and Measures** An economic analysis should be presented from national, state, regional and local perspectives as appropriate to the scale of Project. The general economic benefits from the Project should be described, including estimated total economic costs for materials, labour	**s14.3**

	and infrastructure for the construction and operational phases. The analysis of general economic impacts of the Project should include: • The effects of the Project on local residents, including land acquisition and property valuation and marketability, community services and recreational activities; • The potential mechanisms for local communities and businesses to meet contracts for services and supplies for the construction, rehabilitation and operation phases of the Project; • Strategies for local residents including members of Indigenous communities interested in employment opportunities, which would identify skills required for the Project and initiate appropriate recruitment and training programs; • The implications of the Project for future developments in the local area including constraints on surrounding land uses; • Strategies responding to Government Policy relating to: – 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)" – Indigenous employment opportunities, with regard to the "Indigenous Employment Policy for Queensland Government Building and Civil Construction projects (the 20% Policy)"; and – the use of locally sourced goods and services, with regard to the "Local Industry Policy (Department of State Development 1999)". The effect on local labour markets should be discussed with regard to the number and source of the construction workforce, including sub-contractors. This information should be presented according to occupational groupings of the workforce and show anticipated peaks in numbers during the construction period. The operational workforce requirements should also be discussed.	**Analysis of economic impacts s14.3**
3.12.3	**Impact upon Property Management** This section should address the current and future management processes for properties which are impacted by the rail corridor during construction and operation, by virtue of the fact that the corridor 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: • The impact of the Project on existing agricultural and grazing land uses and management practices – e.g. disruption to	**s14.3.2**

	stockyards, fences, water points, sowing or harvesting of crops, movement of livestock, agricultural machinery and any loss of agricultural land; • Describe 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 rail corridor and the types of alternative corridor crossing points; and • Identification of potential impacts resulting from fragmentation of rural lots, changes to property management practices, or losses of agricultural land or productivity, and outline possible measures and processes to manage these impacts.	
3.13	**Hazard and Risk**	**s15**
3.13.1	**Hazard and Risk Assessment** This section of the EIS should describe the potential hazards and risks that may be associated with the Project and 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; • Based on historical data provide an indication of incidents, consequences and frequency of occurrence of train accidents associated with long haul coal lines in the QR network; • Indication of cumulative risk levels to surrounding land uses; • Identification of all hazardous substance to be used, stored, processed or produced and the rate of usage; and • Potential wildlife hazards such as snakes and disease vectors. The EIS should deal 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 Australia/New Zealand AS/NZS 4360:2004 Risk Management. 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. Possible hazards, accidents, and abnormal events that may arise for the Project, both during construction and in operation should be described, including: • Accidental release of hazardous goods or other materials; • Fires associated with incidents arising from the Project activities; and • Vulnerability of the Project area to bushfire and landslip and other natural disasters. Analysis of the consequences of each of these events on safety and environmental damage in the Project area should be conducted, including direct harm to the environment as a result of Project hazards. The analysis should examine the likelihood of these	**s15.1 – 15.7** **Potential hazards s15.6** **Hazardous substances s15.4** **Wildlife hazards s15.6** **Construction and operation hazards s15.6** **Vulnerability s15.6 & s3.2.3**

	consequences being experienced, both individually and collectively. 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 and environmentally sensitive sites within and adjacent to the Project area.	
3.13.2	**Emergency Management Plan** 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. Planning should include reference to "State Planning Policy 1/03, Mitigating the Adverse Impacts of Flood, Bushfire and Landslide". In particular, the following should be presented: • Contingency plans to deal with hydrocarbon (e.g. diesel, lubricating oils) oil spills during construction, operation and maintenance of the Project; • Contingency plans to account for natural disasters such as storms and fires during the construction, operation and maintenance phases; and • Emergency planning and response procedures.	**s15.8 & s15.9**
3.14	**Cumulative Impacts** 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. This is in addition to the discussion of cumulative impacts which feature in the relevant sections. The cumulative impacts as they relate to particular issues (e.g. water management, cultural heritage, social etc.) may also be discussed in this section. These impacts should be considered over time or in combination with other impacts because of the scale, intensity, duration or frequency of the impacts. Cumulative impacts should also take into consideration other infrastructure projects. In particular, the requirements of any relevant State Planning Policies, Environmental Protection Policies, National Environmental Protection Measures, water resource planning and any other relevant plans should be addressed. The methodology to be used to determine the cumulative impacts of the Project should be discussed. The methodology should detail 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.	**s16** **Cumulative impacts of other infrastructure projects s16.3-s16.5** **Methodology s16.1**
4	**ENVIRONMENTAL MANAGEMENT PLAN** This section of the EIS should detail the EMP's developed for the Project. Separate EMP's should individually address the discrete Project elements. The Imp's should be developed from, and be consistent with, the preceding information in the EIS.	**s18**

	An EMP should provide control actions in accordance with agreed performance criteria for specified acceptable levels of environmental harm. In addition, the Imp's should identify: • Potential impacts on environmental values; • Mitigation strategies; • Relevant monitoring; • Appropriate indicators and performance criteria; • Reporting requirements; • Appropriate corrective actions, should an undesirable impact or unforeseen level of impact occur; and • The recording of and response to complaints. The aims of the Imp's 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; • An integrated plan for comprehensive monitoring and control of impacts; • Local, Queensland and Australian government authorities, Stakeholders and the Proponent with a common focus for approvals conditions and compliance with policies and conditions; and • The community with evidence that the environmental management of the Project is acceptable. The recommended structure of each element of the EMP is:	

Element/issue:	Aspect of construction or operation to be managed (as it affects environmental values).
Operational policy:	The operational policy or management objective that applies to the element.
Performance criteria:	Measurable performance criteria (outcomes) for each element of the operation.
Implementation strategy:	The strategies, tasks or action program (to nominated operational design standards) that would be implemented to achieve the performance criteria.
Monitoring:	The monitoring requirements to measure actual performance (i.e. specified limits to pre-selected indicators of change).
Auditing:	The auditing requirements to demonstrate implementation of agreed construction and operation environmental management strategies and compliance with agreed performance criteria.
Reporting:	Format, timing and responsibility for reporting and auditing of monitoring results.
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).

An EMP should commit to manage, enhance or protect identified environmental values. The commitments should contain the following components for performance criteria and implementation strategies:

- Environmental protection objectives for enhancing or protecting each relevant value;
- Indicators to be measured to demonstrate the extent to which the environmental protection objective is achieved;
- Environmental protection standards (a numerical target or value for the indicator), which defines the achievement of the objective;

- An action program to ensure the environmental protection commitments are achieved and implemented. This will include strategies in relation to:

	– communication – continuous improvement – environmental auditing – monitoring – reporting – staff training; and – a decommissioning program for land proposed to be disturbed under each relevant aspect of the Project.	
5	**CONCLUSIONS AND RECOMMENDATIONS** The EIS should make conclusions and recommendations with respect to the Project based on the studies presented, the Imp's and conformity of the Project with legislative and policy requirements.	**s19**
6	**REFERENCES** All references consulted should be presented in the EIS in a recognised format.	**s20**
7	**APPENDICES**	
7.1	**ToR for this EIS** 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 B & C**
7.2	**Development Approvals** A list of the development approvals required by the Project should be presented.	**Integrated to s17**
7.3	**Consultation Report** A list of Advisory Agencies should be provided in a summary Consultation Report, which should also list the Australian, Queensland and local government agencies consulted, and the individuals and groups of stakeholders consulted. A summary of the issues raised by these groups, and the means by which the issues have been addressed, should be provided in the text of the EIS. The EIS should summarise the results of the community consultation program, providing a summary of the groups and individuals consulted, the issues raised, and the means by which the issues were addressed. The discussion should include the methodology used in the community consultation program including criteria for identifying stakeholders and the communication methods used. Information about identifying affected parties (as defined by the EPBC Act) and interested and/or affected persons (as defined by the	**List of agencies & key stakeholder contacts in Appendix D** **Summary of issues raised in s1.9** **Results of consultation**

	EP Act) should be included.	**program s13.3**
7.4	**Study Team** The qualifications and experience of the study team and specialist sub-consultants should be provided.	**Appendix A**
7.5	**Glossary of terms** A glossary of technical terms and acronyms should be provided.	**Appendix O**
7.6	**Technical data and baseline studies** Relevant supporting data and information generated from specialist studies undertaken as part of the EIS are to be included as appendices. These may include: • Geological surveys; • Soil surveys; • Flora and fauna studies; • Waterway hydrology and groundwater; • Air quality modelling; • Noise and vibration modelling; • Road impact assessment; • Cultural heritage studies; and • Social impact assessment.	**Appendix E - L**
7.7	**List of Proponent Commitments** 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.	**Integrated to 20 & EIS Summary**