

01 | Introduction



Section 01 Introduction

1.1 Project Proponent

The Alpha Coal Project (Rail) (herein referred to as the Project) proponent is Hancock Prospecting Pty Ltd (HPPL). HPPL is a privately owned diversified Australian prospecting and mining company that has discovered mineral deposits throughout Australia, some of which have underpinned Western Australia's iron ore export industry. Founded by Lang Hancock more than 50 years ago, Hancock has a long history in the minerals exploration and development industries across Australia. The company has held coal tenements in Queensland for more than 30 years.

1.2 Proponent's Environmental Record

HPPL has been exploring the Galilee Basin since the mid 1970's. HPPL has established the Hancock Integrated Management System (HIMS) that addresses the health, safety, environment, community and heritage impacts associated with our exploration Projects. The HIMS was developed using ISO14001 Environmental Management Systems, ISO9001 Quality Management Systems and AS4801 Occupational Health and Safety Management System standards.

HPPL requires its construction engineers to implement a Project Health, Safety, Environment, Community and Heritage (HSECH) management system that conforms with the HIMS. The management system will be required to meet standards such as ISO14001 Environmental Management Systems, ISO9001 Quality Management Systems and AS4801 Occupational Health and Safety Management Systems. The Project HSECH management system will also be required to address the relevant Project environmental performance commitments that form part of Ministerial approval for the Project.

HPPL has no previous or current actions against them in relation to environmental performance.

1.3 Project Description

HPPL is proposing to construct a standard gauge, single track, non-electrified, 495 km long railway line for the purposes of transporting processed coal from the Alpha Coal Mine to the Port of Abbot Point north of Bowen (refer to Figure 2-1 in Volume 3, Section 2 of this EIS).

The Project will link the Galilee Basin in Central Queensland with coal export ports at Abbot Point on the Central Queensland Coast. The Galilee Basin spans over 247,000 km² of land and holds over 14 billion tonnes of Joint Ore Reserves Committee (JORC) compliant coal that has been identified by several proponents. As such, the Project will be an essential part of opening up the Galilee Basin for export of thermal coal and will benefit the Central Queensland region, State of Queensland and the nation. As the northern section of the Project enters the Abbot Point State Development Area (APSDA) and ends at a rail loop and dump station immediately south of the proposed X110 Coal Terminal, it will also benefit future industrial development of the APSDA.

The Project will enable export of 60 million tonne per annum (Mtpa) of quality thermal coal for a lifespan of approximately 30 years. This capacity will provide for export of the expected 30 Mtpa from the Alpha Coal Mine and a further 30 Mtpa from HPPL's second Galilee mine, Kevin's Corner. With construction of additional passing loops to the single line track and selective partial duplication, there is potential to further increase the tonnage and thus service other potential miners from the Galilee

Basin. HPPL has undertaken to make the track available to third party users under a Voluntary Undertaking pursuant to the *Trade Practices Act 1974* (TPA).

In addition to the main line from the Alpha Coal Mine to the Port of Abbot Point, the Project also involves construction of the following:

- two load out loops, one at the Alpha Coal Mine and one at the Port of Abbot Point;
- eight passing loops each approximately five km long to accommodate export of 60 Mtpa of coal;
- maintenance tracks along the railway line;
- marshalling yard at the entry to the APSDA; and
- five workers' camps accommodating for 700 to 800 personnel per camp (three permanent camps and two temporary camps).

A detailed description of the railway and associated infrastructure is provided in Volume 3, Section 2 of this EIS.

HPPL commenced baseline studies for the Project in the first quarter of 2009. Investigations into the viability of the Project have included:

- Bankable Prefeasibility Study;
- Rail Bridging Study; and
- Bankable Feasibility Study.

Environmental assessment undertaken to date include:

- Climate and Green House Gas Assessment, included in Volume 6, Appendix C;
- Geology and Groundwater Assessment, included in Volume 6, Appendix D;
- Soils Assessment, included in Volume 6, Appendix E;
- Freshwater Aquatic Flora and Fauna Assessment included in Volume 6, Appendix F1;
- Terrestrial Ecology Assessment (including field surveys), included in Volume 6, Appendix F2;
- Abbot Point Surface Water Model included in Volume 6, Appendix G1;
- Surface Water assessment, included in Volume 6, Appendix G2;
- Air Quality Assessment, included in Volume 6, Appendix H;
- Noise and Vibration Studies, included in Volume 6, Appendix I;
- Non-indigenous Cultural Heritage Assessment (desktop), included in Volume 6, Appendix J;
- Social Impact Assessment in accordance with Department of Infrastructure and Planning Guidelines, included in Volume 6, Appendix K;
- Economic Impact Study, included in Volume 6, Appendix L;
- Consultation Report included as Volume 6, Appendix M; and
- Transport Assessment Report included in Volume 6, Appendix N.

Additional field studies are currently being undertaken and these will be reported as part of the supplementary information following Public Notification of the Draft EIS. These field investigations include:

- supplementary terrestrial ecological surveys;
- indigenous archaeological survey; and
- non-Indigenous archaeological survey.

1.4 Project Rationale

1.4.1 Overview

The Project is one of three key elements making up the overall Alpha Coal Project to be developed by HPPL, which are:

1. Alpha Coal Project (Mine): comprising an open cut thermal coal mine to be developed north of the township of Alpha. Full details of the coal project are provided in Volumes 2 and 5;
2. Alpha Rail Infrastructure: comprising 495 km of standard gauge rail line and associated infrastructure; and
3. X110 Coal Terminal: comprising of coal stockyards and associated infrastructure with a capacity of 30 Mtpa. HPPL is the preferred developer for this project which has been assessed by the Voluntary Environmental Assessment, undertaken by North Queensland Bulk Ports Corporation (NQBP).

The Project will export coal through the proposed Multi Cargo Facility (MCF) at the Port of Abbot Point which is currently being assessed by NQBP.

1.4.2 Expected Local, Regional, State and National Benefits

The Galilee Basin and its coal resources are currently undeveloped, and the demand for good quality thermal coal from Australia presents an opportunity to develop this area. The Alpha Coal Mine will be the biggest coal mine of its type in Australia. The Project meets Queensland Government objectives in realising the timely development of the Galilee Basin whilst ensuring the community benefits and environment objectives are supported.

Queensland will benefit from the development of rail infrastructure through long-term contributions of royalties to the State economy, employment and small business opportunities in areas surrounding the Project.

The Project aims to positively influence and benefit the Alpha community and the surrounding Barcaldine Region. The Project will involve one of the largest supply chain systems in Australia with significant integration and planning required.

1.4.3 Economic Benefit

The Project is a significant project within a local, state and national context. The Project will facilitate the export of up to 60 Mtpa of coal from the Alpha Coal Project (Mine) and other coal mine developments within the Galilee Basin.

The construction phase of the Project is likely to result in a major stimulus to the Queensland economy. Project purchases will result in broadly distributed stimuli across various industry sectors. The purchase of materials, locomotives and wagons will result in a major stimulus to the manufacturing sector. The actual construction workforce is to reach approximately:

- 600 workers in 2011;
- 2,500 workers in 2012;
- 1,050 workers in 2013; and
- 120 workers in 2014.

Approximately 225 workers will operate the railway. However, significant flow-on employment is anticipated throughout the economy and throughout the construction and operational phases of the Project.

1.4.4 Social Benefits

The Project will present increased opportunities for local employment in the region. HPPL will develop local employment and local procurement strategies. HPPL will develop an employment and procurement policy guided by industry standards and relevant government guidelines that will reflect:

- maximising local employment (including work readiness if appropriate);
- maximising Indigenous employment (including work readiness if appropriate); and
- employment of apprentices and trainees.

HPPL will work with contractors to ensure that their policy is applied when working on the Project.

1.4.5 Coal Infrastructure Strategic Plan

The Queensland government is currently developing the “Queensland Coal Infrastructure Strategic Plan” (QCISP). This plan aims to provide a medium to long-term plan for the provision of infrastructure required to meet the needs of the Queensland coal industry over the next 20 years (DIP, 2010).

The plan will:

- determine coal demand and production forecasts;
- identify individual and regional coal infrastructure requirements;
- determine development triggers; and
- estimate staging of infrastructure provision across regions (DIP, 2010).

The plan will undergo an extensive consultation process with stakeholders including government departments, infrastructure owners and operators, individual coal mining companies and industry peak bodies. This Project is a key infrastructure development for the Queensland coal industry and should be considered within the QCISP.

1.5 Relationship to Other Projects

In order to demonstrate the role of the Project within Central Queensland and to describe the relationship of the Project with other projects within the region, the following points are noted:

- Kevin's Corner Project – the railway as part of this Project will be utilised for the adjoining Kevin's Corner Project. The railway could also be used by other Galilee Projects;
- Abbot Point Coal Terminal X110 Expansion Project – HPPL is the preferred developer for the onshore X110 Coal Terminal through which the coal will be transferred to offshore shipping berths;
- Abbot Point Multi-Cargo Facility – HPPL is currently seeking to utilise this proposed facility for the development of shipping berths for export, as an alternate to offshore berths;
- Water for Bowen Project – SunWater is proposing the development of a water transport system that would provide up to 60 gigalitres of water annually from water allocations sourced from the Burdekin Falls Dam. This system will provide a raw water supply service to the Alpha Coal Project and other water users in the Galilee Basin;
- Galilee Basin Transmission Project – Powerlink is proposing the development of a new 275kV transmission line from its existing Lilyvale Substation (near Emerald) to a new substation near Alpha. This system will provide a high voltage power supply service to the Alpha Coal Project and other water users in the Galilee Basin;
- Galilee Coal Project - Waratah Coal Pty Ltd is proposing the development of a new coal mine in the Galilee Basin to supply thermal coal to overseas customers; and
- South Galilee Coal Project - a joint venture between AMCI (Alpha) Pty Ltd and Alpha Coal Pty Ltd is proposing the development of a new coal mine in the Galilee Basin to supply thermal coal to overseas customers.

In relation to opportunities for sharing infrastructure between new coal development projects in the Galilee Basin, HPPL has addressed the matter of shared rail infrastructure through two key mechanisms. The first is through third party access to the HPPL railway. The second is through the provision of a railway engineering solution that allows for future expansion in order to service the needs of other users on the railway.

1.5.1 Third Party Rail Access

The HPPL rail corridor has been in the public domain since February 2010, when it was publicly advertised as part of the Infrastructure Facility of Significance process. On 1st October 2010, the Queensland Government declared that the rail corridor is an Infrastructure Facility of Significance pursuant to Section 125 (1) (f) of the State Development and Public Works Organization Act 1971.

The criteria for declaration included the Project being of significance, particularly economically or socially, to Australia, Queensland or the region in which the facility is to be constructed. In considering whether the infrastructure facility would be of economic or social significance, the potential for the facility to contribute to community wellbeing and economic growth or employment levels was taken into account. Further, the contribution the infrastructure facility makes to agricultural, industrial; resource or technological development in Australia, Queensland or the region is a relevant consideration.

HPPL has agreed to, and is preparing a Voluntary Access Undertaking pursuant to the Trade Practices Act 1974. As noted in the HPPL application for Declaration of the Rail Corridor as an Infrastructure Facility of Significance, the Alpha Coal Project, when combined with the Kevin's Corner Coal Project has sufficient financial robustness to underwrite the economic and sustainable development of the railway. Capacity expansion over 60mtpa on behalf of other potential third party

users, which is foreshadowed also in this document, improves the net present value for the rail project. In other words, there is a financial incentive for Hancock to provide for third party access where capacity is available or can be economically made available.

No companies have, or will be excluded from the Undertaking process, which includes public consultation also by the Australian Competition and Consumer Commission. Such public consultation is anticipated to occur in the first half of 2011. On 5th October 2009, HPPL publicly noted the following:

“We have advised the Government that our transport infrastructure facilities will be open access and we would be happy to acquire a wider corridor to ensure long term growth from the Galilee Basin. Over 100 million tonnes can be easily accommodated on the railway currently being investigated in the field by Hancock Coal as part of the EIS.”

1.5.2 Railway Technical Solution

The proposed railway forming part of the Project is the result of several engineering studies including pre-feasibility, peer review, value engineering, and bridging studies. During those studies the railway design was refined from several options, commencing with narrow gauge systems linking into existing QR infrastructure, through to stand alone railway systems.

The decision to locate the port facilities at Abbot Point was a key input to the railway design, with the bridging study ultimately focused on a standard gauge railway system between the mine and the port of Abbot Point. This decision was encouraged by the State Government's preference for the port of Abbot Point, as noted in its 2009 State Budget papers:

“With regards to the Galilee Basin, Government is seeking to identify preferred options to deliver coal infrastructure to link the Basin to the Port of Abbot Point via a dedicated rail link. As such, the Government is keen to facilitate options involving private sector investment and development of this key infrastructure. This objective will be met through the provision of an integrated solution that provides equity of access to project proponents; ensures optimal supply chain solutions are facilitated from proponents singularly or collectively; and ensures any new export supply chain infrastructure provides open access to all Galilee Basin proponents.” Page 77, Budget Strategy and Outlook, 2009-2010, Queensland Treasury

The railway forming part of the Project is designed for transporting 60 Mtpa, thus satisfying the full production requirements of the Project and the adjacent Kevin's Corner Project. The railway is also designed to provide a sound base for expansion for third party users. The current single track system can be expanded to approximately 120 Mtpa by the addition of additional passing loops and rolling stock. Further expansion beyond that capacity can be achieved through selective duplication of the rail line within the rail corridor.

1.6 Socio-economic Cost and Benefits of the Projects

A Social Impact Assessment (SIA) has been undertaken for the Project (refer to Volume 3, Section 20 of this EIS). As identified in the SIA, the indirect and cumulative positive impacts will flow at the regional and State levels largely through increased employment opportunities arising during construction and operation. It is expected that the construction workforce will be housed in temporary accommodation-style facilities at strategic locations along the route.

1.7 Alternatives to the Project

1.7.1 Railway Alignment Options

In order to identify the most suitable railway alignment, assessment of key economic, engineering, geographic, geotechnical, environmental and social factors has been undertaken (refer to Volume 3, Section 2.3.4 of this EIS).

The key objectives of the rail alignment assessment were to:

- determine the lowest cost, lowest risk option to deliver the specified coal transport task;
- ensure operational scenarios and the potential alignment are viable and sustainable; and
- ensure the selected route is feasible from engineering, environmental and social perspectives.

Due to the scale of the Project and complexity of aforementioned factors approximately 200 various railway alignment options were analysed. These options were further refined into sub-options. The selection of the alignment was also dependent on the most suitable port location. The two port locations that were considered the most feasible for the overall Alpha Coal Project with the capacity to service the handling of 60 Mtpa of coal for export are the Port of Abbot Point and Dudgeon Point.

Following determination of the Port of Abbot Point being the preferred port option, the alignment was further refined on the basis of the following:

- consultation with affected landowners and identification of key social impacts such as dust and noise impacts, direct physical and economic property impacts; and
- location of significant vegetation, National Parks and State Forests.

Currently the preferred alignment avoids all Reserves, National Parks and State Forests. For further information regarding the process undertaken to determine the most suitable alignment refer to Volume 3, Section 2.3.4 of this EIS.

1.7.2 No Project Option

Should the Project not go ahead, the Galilee Basin area could remain undeveloped for an extended period of time. The opportunity for shared rail facilities will be put at risk, which could jeopardise other developments in the area. Australia will continue to lose market share with lower quality coals being provided to end users by the Asian market. In addition, potential future revenue to the State Government will not be realised, and further community development postponed (HPPL, 2009).

1.8 Co-location Opportunities

The Project traverses the following linear infrastructure, thereby reducing the overall impact on the local community and environment:

- Northern Missing Link - In the vicinity of the Newlands mine, the Project runs parallel to the Queensland Rail (QR) Northern Missing Link railway for approximately 70 km through a pass in the Leichhardt Range and parallel to the Newlands Railway to a point near the Bowen River; and
- North Queensland Gas Pipeline – The North Queensland Gas Pipeline intersects with the Project at chainage 275 km and then runs parallel to the Project up until reaching the 405 km mark of the alignment.

Aligning the railway with the above infrastructure lessens the overall impact on the local community and environment, including a reduction in vegetation removal, landscape changes, noise and dust impacts and property impacts.

1.9 Overview of Assessment Process

1.9.1 Introduction

The purpose of this section is to provide an outline of the approvals process, including the environmental impact assessment (EIA) process and any associated development application (DA) processes. It will identify the relevant stages of the approvals process and any interdependencies that may exist between the required approvals.

1.9.2 Controlled Action and Significant Project Declaration

On 18 September 2008, HPPL lodged an initial advice statement (IAS) for the overall Alpha Coal Project with the Queensland Coordinator-General to seek '*significant project*' declaration under the *State Development and Public Works Organisation Act 1971* (SDPWOA). The IAS provides an outline of the proposed project, including the project rationale and its potential impacts in accordance with the requirements of s.27(1)(a) of the SDPWOA.

On 21 October 2008, the Coordinator-General declared the project as a 'significant project for which an environmental impact statement (EIS) is required' pursuant to s.26(1)(a) of the SDPWOA. Matters considered by the Coordinator-General in making this declaration included information contained in the IAS, relevant planning schemes and policy frameworks, infrastructure impacts, employment opportunities, environmental effects, complexity of local, state and Commonwealth Government requirements, level of investment and the project's strategic significance.

The declaration initiates the statutory environmental impact assessment procedure under Part 4 of the SDPWOA, which requires the proponent to prepare an EIS for the Project.

On 21 November 2008, the proponent referred the Project to the Commonwealth Government Minister for the Environment, Heritage and the Arts for a decision as to whether the Project constitutes a 'controlled action' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (referral No. 2008/4648). On 13 January 2009, the Minister determined that the project constitutes a 'controlled action' as there is potential to impact on 'matters of national environmental significance' (MNES).

The Controlling provisions being:

- sections 12 and 15A (world heritage properties);
- sections 15B and 15C (national heritage places);
- sections 18 and 18A (listed threatened species and communities);
- sections 20 and 20A (listed migratory species); and
- sections 23 and 24A (Commonwealth marine areas).

The Minister has further determined that an environmental assessment of MNES is to be undertaken in accordance with Part 8 of the EPBC Act to be administered by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC). Following consultation between the Department of Infrastructure and Planning (DIP) and DSEWPC, it was agreed that the environmental

impact assessments under the SDPWOA and EPBC Act be conducted in parallel, based upon one term of reference (TOR) and one EIS study and report that would satisfy the requirements of both jurisdictions.

1.9.3 Community Infrastructure Designation under the *Sustainable Planning Act 2009 (SPA)*

Railway facilities are included as types of community infrastructure as listed in the *Sustainable Planning Regulation 2009, Schedule 2*. Community infrastructure designation (CID) will be sought for the Project on completion of the EIS.

The CID will be sought after the completion of the EIS as designation of the land for the Project must undergo adequate environmental assessment, including public consultation, and also adequate account of issues raised in the public consultation before designation can be granted by the Minister. One way in which the requirements for adequate environmental assessment and public consultation may be met is for the assessment of the proposed development to be carried out in accordance with an approved EIA process.

If the Project is granted CID, the development will not require approval under any local government planning scheme, nor need to meet any scheme requirements. This facilitates the efficient provision of the community infrastructure at the time work needs to commence. However, state-level legislation and regulatory requirements continue to apply, e.g. building and environmental management legislation.

1.9.4 State Development Area

The northern section of the Project, from approximately chainage 490 km to the end of the load out loop lies within the APSDA. The APSDA was declared by the Governor in Council and a Development Scheme for the APSDA was approved on 19 June 2008. The declaration of the APSDA is a crucial component of the *Northern Economic Triangle Infrastructure Plan 2007-2012*, which is a Queensland Government commitment to establish Mount Isa, Townsville and Bowen as a triangle of mineral processing and industrial development.

All proposals for material changes of use (MCU) within the APSDA must comply with the Development Scheme for the APSDA. The objectives of the Development Scheme will be addressed and the purpose/s of the relevant land use precinct/s, in the final EIS document. Development is managed through the Development Scheme for the APSDA, which is administered by the DIP on behalf of the Coordinator General (CG). MCU applications within the APSDA must be approved by the CG in accordance with the Development Scheme for the APSDA.

1.9.5 Infrastructure Facility of Significance

The Proponent has lodged an application with the Queensland Coordinator-General to have the Project approved under Section 125 (1) (f) of the SDPWOA as an "Infrastructure Facility of Significance" (IFS). Section 125 (1) (f) of the SDPWOA provides that the Governor-in-Council may approve by Gazette notice that an infrastructure has significance, particularly economically or socially to Australia, Queensland or the region in which the facility is to be constructed.

An approval by the Governor-in-Council pursuant to Section 125 (1) (f) represents the first step in a process under which the Coordinator-General may, to the extent he is lawfully able to do so, compulsorily acquire land (or easements) and native title for the Facility should voluntary negotiations

be unsuccessful. The Proponent is committed to negotiating voluntary arrangements with both indigenous and non-indigenous parties that may be affected by the proposed infrastructure facility. These negotiations must meet the requirements of the Guidelines made under the SDPWOA and, in particular, subsequent steps in the compulsory acquisition process cannot commence unless HPPL is able to demonstrate that reasonable attempts have been made to reach voluntary agreements with Landholders or Native Title Parties.

Under Section 125 (2) and (3) of the SDPWOA, when considering whether an infrastructure facility would be of economic or social significance, the potential for the facility to contribute to community wellbeing and economic growth or employment levels must be taken into account. When assessing these potentials, the contribution the infrastructure facility makes to agriculture, industrial, resource or technological development in Australia, Queensland or the region is a relevant consideration.

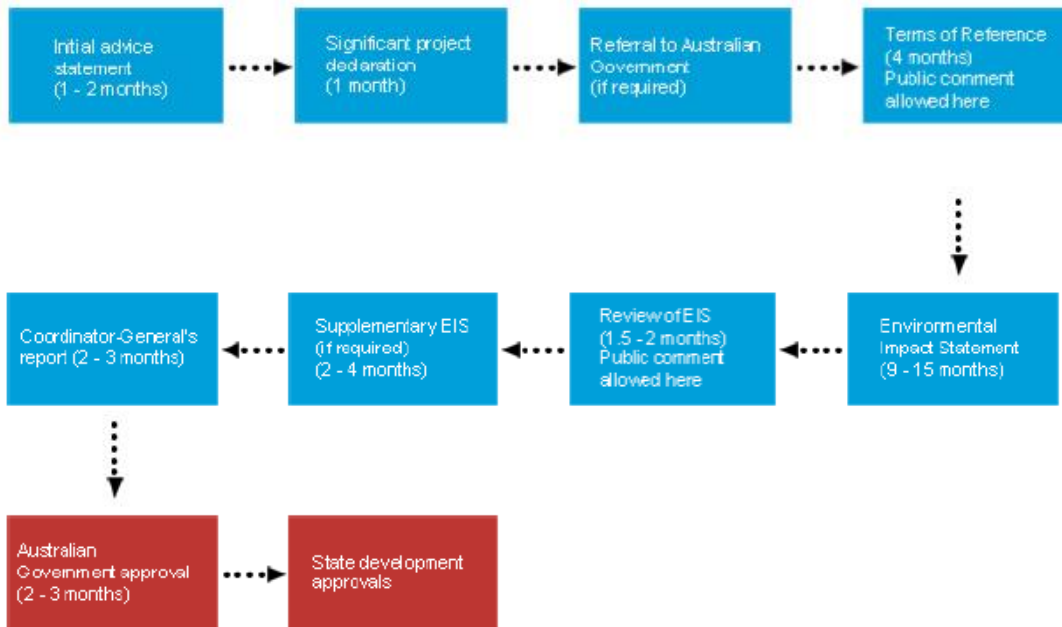
1.9.6 EIA Process

The EIA process depends on the complexity of the proposed development and may involve up to eight stages (DIP, 2010). As depicted in Figure 1-1, these are as follows:

- IAS which underpins the process that declares the project as a 'significant project';
- significant project declaration by the Coordinator General;
- referral of the project to the Australian Government pursuant to the *Environment Protection and Biodiversity Conservation Act 1994* (EPBC) to determine if a 'controlled action' is required;
- preparation of the TOR with public comment being provided at this stage;
- preparation of an EIS;
- preview and assessment of the EIS with public submissions being made at this stage;
- preparation of a supplementary EIS (if required); and
- preparation of the Coordinator-General's EIS evaluation report (DIP, 2010).

The CG report is sent to all relevant Commonwealth, State and local agencies which will be responsible for assessment of individual project development applications.

Figure 1-1: EIA Process (DIP, 2010)



1.9.7 EIA Relationship with State Approvals

In general, once an EIS has been completed and the Coordinator-General's report has been finalised, the Coordinator-General distributes the report to the Australian Government, relevant state government agencies and local authorities which are responsible for approvals and overseeing project development. This involves:

- Australian Government approval; and
- State development approvals.

State development approvals are required from local authorities and relevant state government agencies before the proposed development can progress. The proponent will need to seek appropriate approvals through:

- local authorities on such matters as building approvals and change of the material use of land; and
- state government agencies on such matters as gaining an environmental authority.

Local authorities and relevant state government agencies may also be responsible for the ongoing role of:

- overseeing the development of the project; and
- ensuring the conditions outlined in the Coordinator-General's report are adhered to.

Approvals that may be required prior to development of the project include but are not limited to the following:

- Community Infrastructure Designation under the SPA;
- MCU for an Environmentally Relevant Activities (ERA) under the *Environmental Protection Act 1994* (EP Act) and SPA;

- Registration Certificate for ERAs under the EP Act;
- Cultural Heritage Management Plan (CHMP) under the *Aboriginal Cultural Heritage Act 2003* (ACH Act);
- Vegetation Clearing under the *Vegetation Management Act 1999* (VM Act) and SPA;
- Protection of Wildlife and Vegetation under the *Nature Conservation Act 1992* (NCA); and
- Riverine Protection Permit (RPP) under the *Water Act 2000* (WA).

1.9.8 Methodology of the EIS

As described in Section 1.9.2 above, the Project is undergoing assessment as a “*significant project*” for which an EIS is required under Section 26(1) (a) of the SDPWOA. As such, it is subject to a set process which is described in Section 1.11 below.

The SDPWOA does not specify the methodology to be followed in preparation of an EIS but requires the EIS to address all matters raised in the TOR prepared under the SDPWOA.

The methodology adopted for this EIS is taken from the *International Association for Impact Assessment Principles of Environmental Impact Assessment Best Practice* (IAIA, January 1999). It also follows requirements set out in the TOR (2009). Broadly, the methodology encompassed the following steps:

- screening and scoping of potential impacts to allow appropriate studies to be undertaken;
- examination of alternatives that may have reduced impacts or enhanced benefits;
- analysis and evaluation of impacts;
- identification of measures to avoid, mitigate and manage actual and potential impacts; and
- analysis of significance of residual impacts, following mitigation.

In this document, a clear distinction is drawn between:

- EIA is a process or methodology used to identify and evaluate impacts of a particular activity or project on the environment; and
- EIS is a document that is produced to set out the outcomes of an EIA. In this case, the preparation of an EIS is a statutory requirement under the SDPWOA.

Note also that “environment” is taken in the broadest sense as defined in the *Queensland Environmental Protection Act 1994*:

Environment includes:

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

1.9.9 Objectives of the EIS

The objectives of this EIS are as follows:

- to provide information on the Project and development process to the community and decision makers;
- to comprehensively identify and evaluate all relevant issues associated with the Project;
- to identify all potential environmental, cultural, social, transport and land use planning impacts of the preferred concept, and recommend infrastructure and facility needs together with other design and operational measures required to minimise or compensate for adverse impacts and enhanced benefits;
- to consult with the community and relevant stakeholders in the process of identifying, assessing and responding to the impacts of the Project;
- to identify all necessary licences, planning and environmental approvals; and
- to provide an input to 'State and Australian Government' decision making processes, assisting with the determination of whether to accept or modify the proposal, approve it with conditions or carry out further studies.

This EIS addresses the environmental impacts associated with construction, operation and maintenance of the rail alignment. Impacts associated with the decommissioning of the corridor will be assessed during the operational phase of the project.

1.9.10 Submissions

The Draft EIS will be publicly notified in accordance with the requirements of the SDPWOA. This process allows for public comment on the Draft EIS. Submissions received during this time must be assessed by the HPPL and details provided in a report regarding how submissions have been addressed. The Coordinator General will then consider the submissions and responses as part of the assessment of the Project.

1.10 Public Consultation Process

1.10.1 Overview

A key objective of this EIS is to provide information to stakeholders in a way that is easily understood and transparent. In addition, the “*significant project*” process under the SDPWOA requires public participation to occur during preparation of an EIS.

1.10.2 Statutory Requirements

There are several statutory requirements for community consultation embedded in the “*significant project*” EIS process under the SDPWOA.

1.10.2.1 Terms of Reference

The SDPWOA requires a Draft TOR for an EIS to be made available for public comment. The draft TOR for the EIS was released for public and advisory agency comment from 7 February 2009 to 9 March 2009. A total of 22 submissions on the Draft TOR was received by the CG, including 18 from advisory agencies and four from members of the public and organisations.

1.10.2.2 Draft EIS

Consultation in relation to public review of this Draft EIS will take place as follows:

- advertisements will be placed in national, state and local newspapers advising that the Draft EIS is ready for review and that public comments are invited;
- the Draft EIS will be made available on-line for download;
- printed copies of the Draft EIS will be available for review at the Barcaldine and Whitsunday Regional Councils;
- printed copies or electronic copies on a CD will be available for purchase from HPPL at a reasonable cost;
- the proponent will conduct information and briefing sessions along the alignment for local stakeholders; and
- the Draft EIS will also be provided to Federal and State government agencies for review and comment.

Public submissions must be made in the following manner:

- in writing;
- provide the name and address of the submitter (s); and
- addressed to:

The Coordinator-General

Attention: EIS Project Manager–Alpha Coal Project

Significant Projects Coordination

Department of Infrastructure and Planning

PO Box 15009 City East Qld 4002 Australia

Fax 61 7 3225 8282

Following public review of the EIS, the Coordinator-General forwards all properly made submissions to the proponent. The proponent will then address any substantive issues raised in written submissions in a Supplementary Report. The Supplementary Report is distributed to all those who made submissions and made available on the internet.

The Coordinator-General will consider submissions and responses to submissions in the proponent's Supplementary Report when making decisions regarding the Project.

1.10.3 Other Engagement Activities

The following public consultation activities were undertaken for the EIS:

- Community Information Sessions – Alpha, Clermont, Collinsville and Bowen;
- SIA Stakeholder Consultations;
- meetings with Regional Councils - Barcaldine Regional Council, Isaac Regional Council, and Whitsunday Regional Council;
- SIA Landholder case studies;
- regional show displays – Alpha Show, and Clermont Show; and
- throughout the EIA process the Proponent maintained a 1300 279 766 hotline and project webpage on their website.

The results of these consultations are documented in the Community Consultation report included in Volume 6, Appendix M and are summarised in Volume 3, Section 20.3 of this EIS.

1.11 Project Approvals

1.11.1 Introduction

There are various legislative requirements for construction and operation of the Project under Commonwealth, State and Local legislative frameworks. As such, an assessment of the Project against relevant Planning Scheme provisions, policies and codes will be undertaken so as to identify the compliance of the Project with the relevant land use intents.

1.11.2 Commonwealth Legislation

1.11.2.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act is Commonwealth's principle piece of environmental protection legislation. Under Part 3 of the EPBC Act, a person must not take an action that has or is likely to have a significant impact on a MNES unless that person can rely on an exemption, or obtains an approval from the Commonwealth Minister.

The project could potentially have an impact on the following MNES:

- World Heritage Properties (Section 12 and 15A);
- National Heritage Places (Section 15B and 15C);
- Listed Threatened Species and Communities (Section 18 and 18A); and

- Listed Migratory Species (Section 20 and 20A).

As a result, the Project requires assessment and approval under the EPBC Act. The proposed works were declared to be a controlled action on 13th of January 2009 pursuant to Sections 75 and 87 of the EPBC Act (EPBC 2008/4648). The Project will be assessed under a bilateral agreement between the Commonwealth and State of Queensland. This agreement reduces duplication of environmental assessment between the Commonwealth and State legislation. The Project will be assessed under the SDPWOA and will then be referred to DSEWPC to obtain approval under the EPBC Act.

1.11.2.2 Great Barrier Reef Marine Park Act 1975

The *Great Barrier Reef Marine Park Act 1975* (GBRMP Act) establishes a framework for the establishment, control, management and development of the Great Barrier Reef Marine Park (GBRMP). The GBRMP Act is administered by the Great Barrier Reef Marine Park Authority (GBRMPA). The Project will cross rivers that feed into the GBRMP, which contains threatened and migratory species, and an unscheduled environmental incident could impact on the health and biodiversity of downstream-receiving environments, including the Great Barrier Reef World Heritage Area (GBRWHA). These concerns could be addressed through establishment and implementation of detailed environmental management measures and strategies during the design, construction and operational phases of the Project. However, based on the location of the railway line in relation to the GBRMP and the GRBWA the proposed works are not likely to have a significant impact on the values of the World Heritage Area (WHA) and the National Heritage.

1.11.2.3 Native Title Act 1993

The *Native Title Act 1993* (NAT) recognises the rights and interests of Indigenous people under their traditional laws and customs (DERM, 2010). A Native Title search has been undertaken on properties impacted by the Project. The search indicated that three Native Title Claims exist over the southern and central portions of the study area. The northern portion of the study area is not subject to a registered Native Title Claim, and Native Title exists on one property within the proposed investigation corridor. A CHMP will be prepared as part of this EIS (for further information refer to Volume 3, Section 18 of this EIS).

1.11.2.4 Commonwealth Native Title Act 1993

The *Commonwealth Native Title Act 1993* (CNTA) provides for Indigenous Land Use Agreements (ILUAs) to be arranged between Native Title holders and the proponents. Such agreements set out the ways by which the land will be used and managed in the future. The northern load out loop may traverse a property that has Native Title over it. In this case an ILUA will need to be arranged under the CNTA.

1.11.3 State Legislation

1.11.3.1 State Development Public Works Organisation Act 1971

The SDPWOA establishes an environmental assessment process for projects declared to be a 'significant project'. This process removes duplication with the EPBC Act, where the process is accredited by DSEWPC, and streamlines approval processes under the SPA.

The Alpha Coal Project has been declared as a 'significant project' requiring an EIS under Section 26 (1) (a) of the SDPWOA. Accordingly an EIS has been undertaken in accordance with the Final TOR

for the Project. The Project will be assessed under a bilateral agreement between the Commonwealth and State of Queensland. The Project will be assessed under the SDPWOA and will then be referred to DSEWPC to obtain approval under the EPBC Act.

The proposed Alpha Coal Project (Rail) is defined under the SDPWOA as an 'infrastructure facility'. An 'infrastructure facility of significance' is infrastructure categorised under Section 125 (1) (f) of the SDPWOA as being an infrastructure facility that is of significance, particularly economically or socially to Australia, Queensland or the region in which the facility is to be constructed and approved by Governor in Council by gazette notice as having that significance. As an infrastructure facility of significance, HPPL will have rights to exercise power of compulsory acquisition of interests in land required for construction and operation of the Project.

The SDPWOA also provides for establishment of State Development Areas (SDA) under Section 77 of the Act. The purpose of SDAs is to promote the creation of economic development and address areas of market failure in the industrial development of land and multi-user infrastructure corridors (DIP, 2010). According to DIP (2010) the State Development Areas aim to achieve these objectives through:

- provision of guidance and development certainty to industry;
- control of development in a way that is considerate of existing industry and surrounding development;
- protecting environmental values in the region; and
- ensuring an effective development assessment process.

As the northern end of the Project will be located within the APSDA assessment of the Project against the Development Scheme for the APSDA is undertaken in Volume 3, Section 6 of this EIS.

1.11.3.2 APSDA Development Scheme

All proposals for MCU developments within the APSDA must comply with the objectives of the Development Scheme for the APSDA and the land use intents of the relevant land use precincts. Properties within the APSDA consisting of the two railway loop options are located within the following land use precincts under the Development Scheme for the APSDA:

- environmental management/materials transportation precinct;
- restricted development precinct; and
- industry precinct.

The Project is defined as an 'Infrastructure Facility' under the Development Scheme and is considered to be a use that "may meet the purpose of the land use designation", and is therefore a consistent use in the above precincts.

The consistency of the Project with the general intent and purpose of each precinct has been discussed below.

1.11.3.2.1 Environmental Management/Materials Transportation Precinct

One of the intents for this precinct is to provide infrastructure where it is essential for transportation between the Industry Precinct and the Port of Abbot Point in a manner which ensures areas of ecological significance are recognised and managed taking into account environmental values.

The proposed infrastructure facility will provide for the transport of coal from the proposed Alpha Coal Mine to the Port of Abbot Point. The impact on areas of ecological significance has been detailed within this EIS and will be managed in accordance with an approved Environmental Management Plan (EMP). The alignment of the rail has been developed so as to avoid and manage the impact on areas of ecological significance and is therefore consistent with the intent of this precinct.

1.11.3.2.2 Industry Precinct

One of the intents for this precinct is to provide for the establishment of light industrial uses requiring co-location with regional, State and national significance industry and local utilities, waste disposal, extractive industry, and infrastructure facilities; provided they do not compromise the establishment of future industry of Regional, State and national significance.

The proposed rail infrastructure is defined as an “infrastructure facility” under the Development Scheme and is therefore consistent with the intent of this precinct. The project will provide State and nationally significant rail infrastructure to support the growth of the coal industry in the region.

1.11.3.2.3 Restricted Development Precinct

The key intent of this precinct is to restrict incompatible land uses from establishing near the Industry Precinct and to provide for the physical separation of significant industrial and infrastructure activities from sensitive land uses outside the APSDA.

The proposed infrastructure facility is a use that is not an incompatible use to be established near the Industry Precinct. The Project will provide an appropriate buffer between this precinct and the sensitive uses positioned outside the APSDA and is therefore consistent with the intent of this precinct.

1.11.3.3 Sustainable Planning Act 2009

Prior to December 2009, development within Queensland was regulated by the *Integrated Planning Act 1997* (IPA). This Act has been replaced by the new SPA, which came into effect on the 18th December 2009. SPA provides a more focussed and streamlined approach to the development framework. The Integrated Development Assessment System (IDAS) establishes a framework for assessment of development applications.

The SPA establishes the requirements for development assessment of applications triggered under the following acts:

- *Environmental Protection Act 1994;*
- *Vegetation Management Act 1999;*
- *Fisheries Act 1994;*
- *Coastal Protection and Management Act 1995;*
- *Water Act 2000;*
- *Land Title Act 1994;*
- *Wild Rivers Act 2005;*
- *Transport Infrastructure Act 1994;*
- *Land Protection (Pest and Stock Route Management) Act 2002;*

- *Queensland Heritage Act 1992;*
- *Aboriginal Cultural Heritage Act 2003; and*
- *Coastal Protection and Management Act 1995.*

Development approvals will be required for any assessable development under the SPA; including development assessable under each separate Local Government Planning Scheme relevant to land that is impacted by the Project. This includes approval for MCU, building works, reconfiguration of a lot and operational works (including bulk earthworks, clearing vegetation and roadworks). Approvals required for this Project have been identified in Table 1-5 below.

If the Project is given CID then development approval will not be required for any development made assessable development under a Local Government Planning Scheme. However approval will still be required for all other assessable development under the SPA.

The SPA also establishes a number of State Planning Policies (SPP) which are applicable to assessment of the Project. This assessment is demonstrated in Section 1.1.1 above.

SPPs relevant to the Project include:

- SPP 1/02 – Development in the Vicinity of Certain Airports and Aviation Facilities;
- SPP 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide;
- SPP 1/07 – Housing and Residential Development;
- SPP 1/10 Protecting wetlands of high ecological significance in Great Barrier Reef Catchments (temporary SPP);
- SPP 1/92 - Development and the Conservation of Good Quality Agricultural Land;
- SPP 2/02 – Planning and Managing Development involving ASS; and
- SPP 2/07 – Protection of Extractive Resources.

1.11.3.4 Environmental Protection Act (EP Act) 1994

The EP Act places emphasis on managing Queensland's environment within the principles of ecologically sustainable development. The EP Act is administered by the Department of Environment and Resource Management (DERM). Under the EP Act anyone undertaking an activity that may cause environmental harm must comply with the EP Act's general duty of care and approval is required for:

- activities that could cause actual or potential environmental harm via the generation of emissions or through carrying out the activity;
- ERAs;
- activities likely to cause land contamination (notifiable activities recorded on the Environmental Management Register (EMR)); and
- all other notifiable activities listed in Schedule 3 of the EP Act.

Sections 319 and 320 of the EP Act note that all persons have a duty of care to the environment. Therefore, it is not permissible to cause environmental harm (as defined in the EP Act) whilst undertaking any activity, unless all reasonable and practical means are taken to minimise that harm. To assist in meeting this duty of care, DERM has prepared Environmental Protection Policies (EPPs).

The EP Act outlines the scope and content for preparing EPPs to protect Queensland's environment. These policies may be made with regard to the environment or anything that affects, or may affect, the environment. It should also be noted that all subordinate legislation to the EP Act, such as the EPPs, binds all persons.

Schedule 2 of the *Environmental Protection Regulation 2008* (EP Regulation) under the EP Act lists various ERAs for which development approval and registration certificates are required to authorise those activities. Activities that have been identified as likely to cause land contamination are listed in Schedule 3 of the EP Act. Under the EP Act, landowners and local government must inform DERM that land has been, or is being, used for a notifiable activity. Land that has been, or is being, used for a notifiable activity, is recorded on the EMR, which is maintained by DERM. Part 8 of the EP Act deals with managing contaminated land. The Proponent will be required to advise DERM if notifiable activities are to occur on site.

The proposed works required for the construction and operation of the Project have potential to trigger a number of ERAs under the EP Regulation. These include and are not limited to the following:

- ERA 8 – Chemical Storage.

During the construction and operation stages storage of combustible diesel fuel (combustible liquid, Class 3) will be required. The fuel is likely to be stored within the maintenance facility area at the northern section of the Project.

- ERA 16 – Extractive and Screening Activities.

ERA 16 includes extraction of rock for purposes of quarrying activities. This permit may be required during the construction stage of the project for quarry operations that will supply construction material for the Project.

- ERA 50 – Bulk Material Handling.

This ERA is required for bulk material handling, particularly for the following:

- loading or unloading materials at a rate of 100t or more a day and in relation to port operations; and stockpiling material in relation to a port operation.

Other ERAs may be required for the construction stage of the Project and will be identified after the detail design phase of the Project.

1.11.3.5 Water Act 2000

The *Water Act 2000* is a regulatory framework guiding sustainable planning and management of Queensland's water resources. Water related development is regulated by the *Water Act 2000* in parallel to SPA.

Any water related development works that require taking or interfering with water from creeks is likely to require a development approval under the SPA.

The *Water Act 2000* covers rights to surface and groundwater resources, also the control of works with respect to surface and groundwater conservation and protection and irrigation, some aspects of water supply, drainage and flood control.

The *Water Act 2000* will require HPPL to obtain the relevant approvals/licenses for any works which may affect surface and groundwater. The following permits may be required:

- in accordance with Section 237 of the *Water Act 2000* for taking water from a watercourse, lake, spring or underground water source;
- in accordance with Section 286 of the *Water Act 2000* for any destruction of vegetation, placing fill or excavating in a watercourse (Riverine Protection Permit); and
- in accordance with Section 280 of the *Water Act 2000* for taking, getting, removing or otherwise interfering with quarry material in or from a watercourse or lake.

The following plans developed under the *Water Act 2000* are relevant to the area traversed by the Project:

- the Water Resource (Burdekin Basin) Plan 2007 (WRBBP) prescribes ways of sustainable water management; and
- the Burdekin Resource Operations Plan 2009 sets out rules that guide supplemented water management in the two water supply schemes, flow access rules and volumetric limits for un-supplemented water, and how water allocations can be traded and changed in other ways. The BRPOP also implements strategies to support a range of ecological outcomes and the water and ecosystem monitoring requirements that will be used to assess the effectiveness of the implemented Water Resource Plan (WRP).

These plans operate in conjunction with each other, and may become relevant if HPPL seeks a water allocation under the *Water Act 2000* for construction water or water supply to accommodation camps.

1.11.3.6 Transport Infrastructure Act 1994 (TI Act)

1.11.3.6.1 Strategic Port Land

The overall objective of the TI Act, consistent with the objectives of the *Transport Planning and Coordination Act 1994*, is to provide a regime that allows for, and encourages, effective integrated planning and efficient management of a system of transport infrastructure. For rail infrastructure, the objectives of the Act are intended to be achieved by:

- providing for the development and implementation of rail transport infrastructure strategies;
- providing a framework to allow railway managers to manage rail transport infrastructure in an effective and efficient way and to allow railway operators to operate rolling stock in an effective and efficient way; and
- providing for adequate levels of safety by having an accreditation system for railway managers and railway operators.

The TI Act establishes the approach for the development and management of land use for ports. Port land use plans identify land that is Strategic Port Land (SPL). In general, development which is a MCU undertaken on SPL and which is inconsistent with a land use plan approved under the TI Act triggers assessment under Schedule 3 of the SPA. Other development made assessable through Schedule 3 also applies on SPL. This includes, for example, a MCU for an ERA, or operational works for clearing native vegetation on freehold land (unless the clearing is an exception under Part 1, Schedule 8 of the TI Act). Reconfiguration of a lot on SPL is exempt development.

SPL is not subject to local government planning schemes. Instead, the Port Authority regulates development on SPL and is the assessment manager for all applications, regardless of whether the development is inconsistent or consistent with the land use plan. The only exception is applications for

building works assessable under the *Building Act 1975* (BA), which may be made to a private building certifier. While local governments are not responsible for assessing development on SPL, they are consulted during the preparation of the land use plan.

The Port of Abbot Point, under the authority of NQBP, has a Land Use Plan that was approved in 2008. A new Land Use Plan is currently being developed to include additional on-shore and off-shore areas as SPL.

The Land Use Plan for the Port of Abbot Point has been prepared in accordance with the TI Act and includes:

- a set of *Desired Environmental Outcomes* which provide the overall vision and future direction for the port and a set of outcomes to be reflected through the Land Use Plan;
- four *Land Use Plan Designations* which allocate all SPL (including land proposed as SPL) into a designation of similar land use and development functions, attributes or development intent and performance;
- a description of the *Intent* and a list of *Indicative Uses* that relate to each land use designation; and
- a *Development Guidelines* document that includes a set of codes against which development on SPL is to be assessed.

The northern railway loop of the Project will be located on SPL. Due to this land also being located in the APSDA, MCU development applications will be prepared in accordance with the Development Scheme for the APSDA under the SDPWOA and lodged to DIP. Applications regarding ERAs and Vegetation Clearing will be lodged to the Port Authority – NQBP.

1.11.3.6.2 Rail

The Department of Transport and Main Roads (DTMR) approves all new crossings of the rail corridor. As owner of the corridor for the purposes of the SPA the department can give resource entitlement for any development applications that affect the corridor. Under the TI Act approval is required from Queensland Rail prior to development on or adjacent to a railway. Due to the Project traversing the North Coast Line (approximately at chainage 495 km) an approval and resource entitlement from Queensland Rail will be required.

1.11.3.6.3 Roads

Under the TI Act and the *Transport Infrastructure (State-controlled Roads) Regulation 2006*, applicants wishing to undertake an activity, works or erect a structure within the road corridor must first apply for a Road Corridor Permit.

The project intercepts the following State Controlled Roads (SCR):

- Bruce Highway;
- Bowen Development Road;
- Suttor Development Road;
- Gregory Development Road; and
- Cerito Development Road.

Prior to any work occurring on these intersections, a permit will be required to be obtained from DTMR.

1.11.3.6.4 Tidal Works

A SPA application for tidal works will trigger a referral to Queensland Transport (QT) under the TI Act for a concurrence response from Marine Safety Queensland (MSQ) in relation to navigation safety.

1.11.3.7 Vegetation Management Act 1999

The *Vegetation Management Act 1999* (VMA), in conjunction with the SPA, regulates the clearing of native vegetation, excluding grasses and mangroves. Under the SPA, operational work, that is the clearing of native vegetation, is to be assessed against the purposes of the VMA.

DERM would assess any clearing required for this Project against the relevant Regional Ongoing Clearing Code. Only remnant vegetation (native vegetation that occurs in a mapped Regional Ecosystem (RE), or that meets the structural and species requirements to be mapped as a RE will be assessed under this process.

The type of vegetation clearing applications required for the proposed development is dependent on the type of vegetation present on the site. Under the VMA all remnant vegetation (including Endangered, Of Concern and Not of Concern Regional Ecosystems) irrespective of land tenure and all native vegetation on State Land (regardless if conservation status) is protected. Clearing of vegetation on State land is also listed as assessable development under the SPA.

DERM are responsible for assessing applications to clear remnant vegetation. Under the VMA, Division 6, Section 21(3) – ‘Modifying Effect on Vegetation Clearing Applications’, if the Chief Executive is a concurrence agency for the application, a Property Vegetation Management Plan (PVMP) must be provided by the applicant. For a PVMP to be lodged it will be necessary for a site visit to take place in order to produce a Property Map of Assessable Vegetation (PMAV).

The Project will require the disturbance of approximately 1,599 ha of regional ecosystem and regrowth vegetation. The area to be cleared has been minimised in the design phase by locating the Project footprint in areas that have been previously cleared or degraded by past land use practices.

DERM assesses applications for clearing of native vegetation against the Regional Vegetation Management Codes. The relevant assessment code for the proposed work sites is the Brigalow Belt and New England Tableland Bioregions. The application must contain the following components:

- a complete PVMP;
- a description of the purpose of clearing;
- a complete Part A and J of the IDAS forms and the assessment checklist; and
- applicable application fee.

Prior to submitting any vegetation clearing applications a letter will be sent to DERM seeking certification from the Chief Executive that the proposed clearing is for an authorised purpose under Section 22A of the VMA. An authorised purpose for vegetation clearing under Section 22A is for a project declared to be a significant works project under the SDPWOA. This provides further justification for any clearing of remnant vegetation as the Project construction and operation footprint has been declared as a State significant project.

1.11.3.8 Nature Conservation Act 1992 (NCA)

The object of the NCA is to conserve nature through:

- gathering of information and community education;
- dedication and declaration of protected areas;
- management of protected areas;
- protection of native wildlife and its habitat;
- use of protected wildlife and areas to be ecologically sustainable;
- recognition of interest of Aborigines and Torres Strait Islanders in nature and their cooperative involvement in its conservation; and
- cooperative involvement of landholders in the conservation of nature (Part 2 (5) NCA).

The NCA is administered by DERM. Under section 73 (a) of the NCA, DERM is required to conserve wildlife and its values to:

- ensure the survival and natural development of the wildlife in the wild;
- conserve the biological diversity of the wildlife to the greatest possible extent;
- identify, reduce or remove, the effects of threatening processes relating to the wildlife; and
- identify the wildlife's critical habitat and conserve it to the greatest possible extent.

Any activity that may have, or may have the potential to, impact on wildlife or its values in an area, may be seen as a threatening process and will be referred to DERM as part of the development approval process. In particular, the effect of the Project on Endangered, Vulnerable, or Rare wildlife, or the habitat on which that wildlife depends, will be of interest to DERM in regard to their obligations under Section 73 of the NCA.

The *Nature Conservation (Protected Plants) Conservation Plan 2000* (NCCP) has been updated on the 8 February 2008. One of the main changes in this plan is that plants listed as least concern (almost all native plants within Qld) now require a clearing permit from DERM prior to removal. Some exemptions exist and are in relation to freehold land and the landowner undertaking the activity.

Under Section 89 of the NCA, a licence, permit or authority (issued under the NCA), or an exemption is required to 'take' protected plants. The NCCP outlines how clearing permits, licences and exemptions can be issued to take protected plants.

Section 41 of the NCCP defines the circumstances where a clearing permit is not required. The most common exemption is where a least concern protected plant is being taken on private (freehold) land and the taking is conducted by the landholder.

A clearing permit is not required to take protected plants if:

- the taking is of least concern protected plants and is conducted by the landholder on private land;
- an activity that requires taking is approved by the Governor in Council under an Act other than the NCA. This may include EIS assessments in some situations; and

- an activity that requires taking is approved under an Act other than the NCA and the DERM Chief Executive expressly approves that the taking can occur; or the Chief Executive has provided an exemption for the activity or class of activities.

It should be noted that an approval under SPA or EP Act does not remove the need to obtain a clearing permit under the NCA (unless an exemption applies).

A clearing permit is always required to take rare and threatened plants – those species listed as a classification other than 'least concern' in the *Nature Conservation (Wildlife) Regulation 2006*. These classifications are: extinct in the wild, endangered, vulnerable, near threatened and rare.

1.11.3.9 Fisheries Act 1994 (FA)

The FA and *Fisheries Regulation 1995* are administered by Qld Department of Employment, Economic Development and Innovation (DEEDI). Under Section 123 of the Act, it is an offence to unlawfully remove, damage or destroy a 'marine plant' (defined in the Act as: a plant that usually grows on, or adjacent to, tidal land, whether it is living, dead, standing or fallen).

Under Schedule 3 Table 4 (8) of the SPA Regulation, operational work that is the removal, destruction or damage of a marine plant is assessable development and is assessed against the purposes of the FA. Marine plants located within the Caley Valley wetland area likely to be affected by the Project, particularly the northern railway loop.

When considering applications for development that is likely to affect marine plants, DEEDI considers the level of disturbance that is likely to occur (both at the construction and operation stage), alternative sites (and the extent to which they are suitable) and possible mitigation measures.

1.11.3.10 Coastal Protection and Management Act 1995

The *Coastal Protection and Management Act 1995* (CPMA) provides for the protection, conservation, rehabilitation and management of the coast including its resources and biological diversity. The development assessment process under the CPMA has been rolled into IDAS under the SPA.

Schedule 3 of the SPA Regulation identifies works within tidal waters and reclamation of land within tidal waters as assessable development. Tidal water is defined as the sea and any part of a harbour or watercourse ordinarily within the ebb and flow of the tide at spring tides. Tidal works means work in, on or above land under tidal water, or land that would or may be under tidal water because of development on or near land.

Under the SPA Regulation, operational works that are defined as tidal works under the CPMA are assessable development. The construction of (among other things) jetties, dockyards, seawalls, a wharf and any work in tidal waters associated with the construction of these structures, is tidal work and must be assessed against the purposes of the CPMA .

Under the CPMA, the chief executive considering an application for tidal works must consider:

- natural coastal, riverine and estuarine processes;
- natural topography and drainage of coastal land, including, for example, the integrity of dune systems and natural surface run-off;
- coastal wetlands and other coastal ecological systems, including, for example, the wildlife, biological diversity and water quality of the wetlands or systems. Coastal wetlands include tidal

wetlands, estuaries, salt marshes, Melaleuca or other coastal swamps, mangrove areas, marshes, lakes or minor coastal streams;

- places or objects that have cultural heritage, landscape, historical, anthropological, archaeological or aesthetic significance or value; and
- public access to foreshore.

For the purposes of the CPMA, the coastal zone includes all landward features, ecological or natural processes or human activities that affect, or potentially affect, the coast or coastal resources.

An application for works within tidal waters will be required for the rail component of the Project as the northern loop will be developed within tidal waters.

1.11.3.11 Land Title Act 1994 (LTA)

The objectives of the LTA is to consolidate and reform the law:

- about the registration of freehold land and interests in freehold land;
- to continue and improve the system for registering title to and transferring interests in freehold land;
- define the functions and powers of the registrar of titles; and
- to assist the keeping of the registers in the land registry (LTA, Section 4(3)).

The LTA will play a part in the land acquisition stage of the Project. Refer to Volume 3, Section 6 of this EIS for further detail on the area of land required for the construction of the Project.

The LTA designates road reserves for travelling stock purposes. These reserves include camping and water reserves, pasture reserves and trucking reserves. The relevant Local Government manages the reserves for travelling stock in accordance with the LTA.

1.11.3.12 Land Protection (Pest and Stock Route Management) Act 2002

The purpose of the *Land Protection (Pest and Stock Route Management) Act 2002* is to provide for pest management and for land and stock route network management.

A stock route is defined as a road reserve or road corridor, generally in the width of 60-1600 m that is used for the purposes of walking and agisting or stock grazing. Stock routes do not have a separate title or tenure as does a road reserve. Once a stock route's declaration is removed it remains a road but is not longer named a stock route (DERM, 2010). Stock routes are managed by the relevant Local Governments.

The Project intercepts the stock route network (SRN) at 15 separate locations (refer to Volume 3, Section 6.2.7 of this EIS). Where the project crosses the SRN mitigation and management measures will need to be implemented to protect its inherent values and to ensure it is available to serve its intended purpose.

1.11.3.13 Aboriginal Cultural Heritage Act 2003

The *Aboriginal Cultural Heritage Act 2003* (ACHA) establishes a 'cultural heritage duty of care', which requires that a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage.

The ACHA establishes a framework for the assessment of cultural heritage impact and processes to be undertaken in preparing CHMP. The ACHA states that where an EIS is required under a legislative

framework, then a CHMP must be prepared to manage all aspects of cultural heritage for the construction and operation of the Project.

As the Project does require the development of a formal EIS, a CHMP is required under legislation, and has been prepared for the Project in accordance with the requirements of the ACHA to manage all aspects of cultural heritage in relation to the Project development and operation.

1.12 Planning Assessment

1.12.1 Overview

The following section demonstrates the compliance of the Project against relevant Planning Scheme's in order to identify permits required for construction and operation of the Project. The majority of the properties immediately affected by the project are zoned as rural, and are located within the jurisdictions of the following planning schemes:

- properties located within the Barcaldine Regional Council (from the Alpha Coal Mine load out loop to approximately chainage 45 km) regulated by the Jericho Shire Planning Scheme (2006);
- properties within Isaac Regional Council area (chainage 45 km – chainage 282.5 km) regulated by the Belyando Shire Planning Scheme (2008);
- properties within the Whitsunday Regional Council (chainage 282.5 km – chainage 490 km) regulated by the Bowen Shire Planning Scheme (2006); and
- properties within the APSDA (chainage 490 km to the Abbot Point load out loop) regulated by the Abbot Point State Development Area Development Scheme 2009).

A summary of key development intents for each zone in accordance with the relevant planning schemes has been identified in the sections below. Assessment against the APSDA Development Scheme is outlined in Section 1.11.3.2 above.

It is important to note that this assessment has considered the aforementioned Planning Schemes for the purposes of land use and planning assessment. With the introduction of the newly gazetted *Sustainable Planning Act 2009* (SPA) and 2008 Local Government Area (LGA) amalgamations, these Schemes will be updated in the near future in accordance with the Queensland Planning Provisions (QPP) under SPA. As such, land use designations proposed under the QPP may differ to the ones identified in this EIS.

1.12.2 Jericho Shire Planning Scheme 2006

1.12.2.1 Overview

Properties located within the Barcaldine Regional Council area, particularly properties starting from the Alpha Coal Mine load out loop to chainage 45 km are regulated by the Jericho Shire Planning Scheme 2006. As such an assessment against the relevant codes of this Scheme has been undertaken in this section.

1.12.2.2 Planning Definitions

The Project will consist of the following uses as defined under the *Jericho Shire Planning Scheme 2006*:

- “*railway activities*” - *premises* used for the purposes of planning, construction, maintaining and operating rail infrastructure, facilities and rolling stock, including:
 - rail maintenance depots;
 - rail workshops; and
 - rail freight centres.
- “*accommodation unit*” – means any separate residential use area that is not self contained and is generally associated with temporary accommodation. This definition applies to Camp site 4, which is located at chainage 155 km on Lot 8 BL37 (refer to Figure 2-1 in Volume 3, Section 2 of this EIS).
- “*public utility*” – means “*premises*” used for a waste landfill site, the supply of water, hydraulic power, electricity or gas, or provision of telephone, sewerage, postal or drainage services or the provision or maintenance of roads or traffic controls or railways or railway controls.

1.12.2.3 Desired Environmental Outcomes (DEO)

1.12.2.3.1 DEO 3.1 The Environment

The main intent of *DEO 3.1 – Environment* is to protect the items and places of cultural, heritage, and ecological significance in Jericho Shire against inappropriate development.

The development of the Project will be undertaken in accordance with an approved EMP in order to manage and minimise any adverse impacts on cultural, heritage and ecological significance. The proposed rail alignment has been developed in order to avoid sensitive areas and be co-located with existing infrastructure. It is therefore considered the Project is consistent with this DEO.

1.12.2.3.2 DEO 3.2 Economic Development

The intent of *DEO 3.2 – Economic Development* is to ensure the economy of Jericho Shire is enhanced and diversified through the sustainable use of natural resources (including land and mineral resources) and through a wide range of other economic activities that respect the town hierarchy of Alpha, the main urban centre and the Jericho Township.

The Project will not impact upon the town hierarchy or small service role of the Alpha Township. The railway alignment will occur on productive rural land, however it will not impede upon the use of this land as a rural area.

It is anticipated that the Project will have a positive influence on the Alpha community and the surrounding Barcardine region through provision of employment and business opportunities. As a result, the Project is consistent with this DEO.

1.12.2.3.3 DEO 3.3 Community and Services

The intent of *DEO 3.3 – Community Services* is to ensure development is consistent with community expectations and needs, and contributes to community wellbeing through the enhancement of core community elements (including the built environment, services, facilities and infrastructure).

The Project will be developed in accordance with an approved Social Impact Management Plan (Volume 3, Section 27) and it is anticipated that it will benefit the community through provision of employment and business opportunities. The Project will also increase rail infrastructure that will in turn support the coal industry in the region. As a result, the Project is consistent with this DEO.

1.12.2.4 Zones

The Project is located within the Rural Zone. Development of Accommodation Units, Railway Activities and Public Utilities are Code Assessable within the Rural Zone. Therefore the development must be assessed against the Rural Zone Code of the JSPS.

1.12.2.5 Rural Zone Code

The rural zone is intended primarily for rural uses and associated activities, such as grazing, intensive agriculture and intensive animal industry. Development within this zone shouldn't compromise the existing mining and extractive industries, or impact adversely on infrastructure. The development of the Project is generally consistent with this intent. Assessment of the Project against the code is demonstrated in Table 1-1.

Table 1-1: Performance criteria, acceptable solutions and self assessable applicability – “Material change of Use”

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p>PC1 Non-“Rural activities” - Locational Criteria Non-“Rural activities” are located in the Rural “Zone” only where those activities:</p> <ul style="list-style-type: none"> (a) do not impact adversely on the amenity of the Rural “Zone”. (b) demonstrate a nexus with rural activities or natural or cultural resources. (c) do not prejudice the consolidation of like non-“Rural activities” in other more appropriate “Zones”. (d) do not prejudice the productive capacity of existing or future rural land. (e) protect the landscape values and scenic qualities of the rural “Zone”. 	<p>No acceptable solution is prescribed.</p>	<p>The development of the Project activities in the rural zone will not have an adverse impact on the amenity of the rural area. Vegetation removal and minor landscape changes will occur as part of the pre-construction works of the Project. These impacts are discussed further in Volume 3, Sections 7 and 9 of this EIS. The Project will be developed in accordance with an approved EMP that details the management and mitigation measures for the construction and operational impacts of the Project.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC2 Non-“Rural activities” – Scale Non-“Rural activities” are of an appropriate scale to protect the amenity of the Rural “Zone” and do not prejudice the operation and viability of other “Uses” or activities in the Rural “Zone” or other “Zones”.</p>	<p>AS2 The “Total use area” is less than 150m² on a lot.</p>	<p>The Project is of State significance and has been designed so as to avoid sensitive areas and align with existing infrastructure.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC3 Non-“Rural activities” - Operating Hours Non-“Rural activities” are operated so as to ensure that the activities and the operation of equipment occur at appropriate times to protect the amenity of the Rural “Zone”.</p>	<p>AS3 Non-“Rural activities” are operated only between the hours of 7:00am and 6:00pm.</p>	<p>The proposed development is for railway activities and will operate outside of the hours of 7 am and 6 pm. It is therefore considered the Project is not consistent with this Acceptable Solution.</p> <p>However, hours of operation will be in accordance with an approved Construction and Operational EMP. It is therefore considered the Project is consistent with this Performance Criteria. Noise and vibration impacts have been discussed further in Volume 3, Section 15 of this EIS.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC4 Non-“Rural activities” - Delivery of Goods</i></p> <p>The loading and unloading of goods in connection with non- “Rural activities” occurs at appropriate times to protect the amenity of the Rural “Zone”.</p>	<p>AS4.1 Loading and unloading occurs only between the hours of: (a) 7:00 am and 6:0 pm, Monday to Friday and (b) 7:00 am and 12:00 (noon) on Saturdays. AS4.2 No loading and unloading occurs on Sundays and Public Holidays.</p>	<p>The proposed development is for a railway and does not include loading and unloading of goods in the rural zone. Therefore this Performance Criteria does not apply.</p>
<p><i>PC5 “Residential Activities” – Density</i></p> <p>Land within the Rural “Zone” is maintained for rural activities.</p>	<p>For “Detached houses”: AS5.1 No more than 1 (one) “Detached house” per lot.</p> <p>For “Caretaker’s residences”: AS5.2 No more than 1 (one) “Caretaker’s residence” per lot.</p> <p>For all other “Residential activities”: No acceptable solution is prescribed.</p>	<p>A temporary construction camp is proposed at chainage 155 km on Lot 8 BL37 (refer to Figure 2-1 in Volume 3, Section 2 of this EIS). The camp will be largely self sufficient. The construction camps are to be made from demountable single units built on concrete slabs or gravel.</p> <p>The temporary construction camps will contain:</p> <ul style="list-style-type: none"> • septic sewerage system sufficient to accommodate the number of workforce personnel; • fuel, chemical and waster storage; and • parking facilities. <p>As the camp will be temporary in nature it will not permanently increase the density in the Rural Zone. It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC6 Height</i></p> <p>The height of “Buildings” and “Structures” does not impact adversely on the amenity of the Rural “Zone” and is consistent with the predominant rural form.</p>	<p>AS6 “Buildings” and “Structures” other than those within 100 m of the boundary of an “Airport” are less than 8.5 m in height and are not more than 2 (two) storeys at any point above natural ground level. (Except where establishing in an existing “Building” and no “Building works” are being undertaken for that existing “Building” and excluding windmills, silos and other rural operational equipment).</p>	<p>Detailed design drawings for the temporary camp have not been developed at this stage of the Project. However the buildings will be single demountables and are expected to be consistent with this Performance Criteria and Acceptable Solutions.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC7 Setbacks and Boundary Clearances</i></p> <p><i>“Buildings”</i> and <i>“Structures”</i> are located to ensure the rural amenity is protected and enhanced.</p>	<p>AS7.1 <i>“Buildings”</i> and <i>“Structures”</i> have a setback of not less than 20 m from any road frontage other than a State Controlled Road as identified on Land Characteristics Map – Features Map.</p> <p>AS7.2 <i>“Buildings”</i> and <i>“Structures”</i> have side and rear boundary clearances of not less than 15 m from property boundaries. (Except where establishing in an existing <i>“Building”</i> and no <i>“Building works”</i> are being undertaken for that existing <i>“Building”</i>).</p>	<p>The proposed development is for “railway activities” and “accommodation units”.</p> <p>The railway alignment traverses over property boundaries and roads. Therefore the setbacks for the Project will not comply with the Acceptable Solutions.</p> <p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>The setback of the buildings for the accommodation camp have not been set at this stage of the Project. However the buildings setbacks are expected to be consistent with this Performance Criteria and Acceptable Solutions. As such it is considered that the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC8 Transport Movements</i></p> <p>Transport movements associated with the use protect the amenity of the locality.</p>	<p>For <i>“Rural activities”</i> and <i>“Industrial activities”</i>: AS8 Transport movements do not occur through residential areas. For all other <i>“Uses”</i>: No acceptable solution is prescribed.</p>	<p>The acceptable solution does not apply as the development is not for rural and industrial activities.</p> <p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC9 “Building” and “Structure” Design</i></p> <p><i>“Buildings”</i> and <i>“Structures”</i> are designed such that the amenity of the Rural <i>“Zone”</i> is protected and maintained.</p>	<p>No acceptable solution is prescribed.</p>	<p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p>PC10 Ridgelines and Escarpments Ridgelines and escarpments are maintained in a natural state to protect rural character and landscape values.</p>	<p>AS10 All “Buildings” and “Structures” maintain a minimum 50 metre separation distance to a ridgeline or escarpment. (Except where establishing in an existing “Building” and no “Building works” are being undertaken and excluding windmills and other rural operational equipment.)</p>	<p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p>PC11 Landscaping and External Activity Areas Landscaping and external activity areas are provided on - site to:</p> <ul style="list-style-type: none"> (a) contribute to a pleasant and functional rural built form. (b) provide positive sun and breeze control. (c) make provision for recreation areas. (d) contribute to the Rural “Zone’s” positive visual qualities. 	<p>No acceptable solution is prescribed.</p>	<p>The proposed development is for “railway activities”. Landscaping and external activity areas are not proposed as part of this alignment.</p> <p>Landscaping and activity areas will be provided as part of the proposed construction camp and will be developed in accordance with this Performance Criteria.</p>
<p>PC12 Lighting The design of lighting does not prejudice the amenity of the Rural “Zone” through poorly directed lighting, lighting overspill or lighting glare.</p>	<p>AS12 Direct lighting or lighting does not exceed 8.0 lux at 1.5 m beyond the boundary of the site.</p>	<p>The proposed development is for “railway activities”. For safety and security all lighting will be developed in accordance with the appropriate standards for rail infrastructure.</p> <p>Detailed design for lighting for the construction camp has not been determined at this stage of the Project; however lighting is expected to be in accordance with this Performance Criteria and Acceptable Solution.</p>
<p>PC13 Separation of Incompatible Land Uses Separation distances are provided to ensure:</p> <ul style="list-style-type: none"> (a) the future viability of surrounding “Uses”. (b) infrastructure items are protected from incompatible “Development”. (c) an appropriate standard of amenity and public safety. 	<p>For all “Uses”: AS13.6 “Buildings”, “Structures” and “Outdoor Activity Areas” maintain a minimum separation distance to petroleum and gas pipelines (as identified on Land Characteristics Map – Features Map) and refuse tips (as identified in Schedule 2, Division 5: Refuse Tips, Section 5.1) as stated in Schedule 2, Division 4: Separation Distances – Infrastructure Items, Section 4.1.</p>	<p>The proposed development is for “railway activities”. The alignment has been designed to align with existing infrastructure and therefore may not comply with the Acceptable Solutions for setbacks. Aligning the railway with existing infrastructure will ensure the future viability of rural land and reduce the location of incompatible land uses.</p> <p>The setback of the buildings for the accommodation</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
(d) conflict arising from incompatible “Uses” is minimised.		camp have not been set at this stage of the Project. However the buildings setbacks are expected to be consistent with this Performance Criteria and Acceptable Solutions. It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.
<p><i>PC14 Water Supply</i></p> <p>All “Premises” have an adequate volume and supply of water for the “Use”, which is also adequate for fire fighting purposes.</p>	<p>AS14.1 “Premises” are connected to Council’s reticulated water supply system.</p> <p>or</p> <p>AS14.2 “Premises” are connected to an approved water allocation as provided by the relevant agency.</p>	<p>A combination of water bores, surface water harvesting and existing water pipelines will be used to supply water for the construction activities. A hydrogeology investigation will be undertaken as part of the detailed design stage to define water source locations.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC15 Effluent Disposal</i></p> <p>All “Premises” provide for the treatment and disposal of effluent and other waste water to ensure the protection of public health and environmental values.</p>	<p>AS15 “Premises” have an on-site effluent disposal system in accordance with Schedule 1, Division 4: Standards for Sewerage, Section 4.2.</p>	<p>Suitable effluent disposal infrastructure will be developed as part of the detailed design stage of the Project.</p> <p>Effluent disposal will be on-site disposal system in accordance with Schedule 1, Division 4: Standards for Sewerage, Section 4.2.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC16 Stormwater</i></p> <p>Stormwater is collected and discharged so as to:</p> <p>(a) protect the stability of buildings or the use of adjacent land;</p> <p>(b) protect and maintain environmental values</p>	<p>AS16 Stormwater is collected and discharged in accordance with Schedule 1, Division 5: Standards for Stormwater Drainage, Section 5.1.</p>	<p>Suitable stormwater infrastructure will be developed as part of the detailed design stage of the Project. The EMP in Volume 3, Section 25 of this EIS identifies the key stormwater measures that will be developed during the Project.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC17 Electricity</i></p> <p>"Premises" are provided with an adequate supply of electricity for the "Use".</p>	<p>AS17 All "Premises" have a supply of electricity.</p>	<p>Electricity is likely to be supplied from the existing electricity network. Electricity will only be required for the operation of the marshalling and maintenance facility.</p> <p>Solar power will be used for all remote wayside locations and points. Solar power has been effectively and efficiently employed on other lines in Australia. This would remove the need for power cables, generators and uninterrupted power supply (UPS) at passing loops. Backup battery capacity can be provided to run signalling equipment for a minimum number of days depending upon worst case weather patterns. For sites where power is available this could be used and backup supplies provided by automatically starting emergency diesel generators.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions</p>
<p><i>PC18 Vehicle Access</i></p> <p>Vehicle access is provided to ensure the safe and functional operation for motorists and pedestrians</p>	<p>For all other "Uses": AS18.2 All "Premises" must have vehicle access to a formed road. Access to be designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access Section 2.3(1).</p>	<p>No new access requirements are envisaged to be required for this Project. This Project is for railway activities and vehicle access will not be required along the entire alignment. Existing access at Bruce Highway, Bowen Development Road, Suttor Developmental Road, the new Cerito Elphinstone Road, the Gregory Developmental Road, and the Clermont Alpha Road will serve as the major access roads. Initially, however, some additional access paths may need to be negotiated with landowners to obtain access into sites if the construction contractor requires them. Where private farm roads are to be used, these will be negotiated with the landowner and be restricted to the main property road and major secondary roads.</p> <p>The Project is therefore considered consistent with this Performance Criteria and Acceptable Solutions.</p>

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Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC19 Vehicle Parking and Service Vehicle Provision</i></p> <p>Vehicle parking and service vehicle provision is adequate for the “Use” and ensures safe and functional operation for motorists and pedestrians.</p>	<p>AS19.1 All “Uses” provide vehicle parking in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.2(1)(a) AS19.2 Car parking, service vehicle parking and manoeuvring areas are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.2(1)(b).</p>	<p>This Project is for a railway activity and therefore does not require vehicle parking.</p> <p>The parking requirements for the accommodation camp have not been set at this stage of the Project. However the parking requirements are expected to be consistent with this Performance Criteria and Acceptable Solutions.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC20 Roads, Firebreaks and Fire Maintenance Trails</i></p> <p>Adequate all-weather road access is provided between the “Premises” and the existing road network. In high and medium bushfire hazard areas, adequate road access is provided for fire fighting/other emergency vehicles and for safe evacuation.</p>	<p>AS20.1 Roads are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Manoeuvring Areas and Access, Section 2.1(1) For “Uses” in high or medium bushfire hazard areas as identified on the Land Characteristics Map – Bushfire Hazard Areas: AS20.2 Roads, firebreaks and fire maintenance trails are designed and constructed in accordance with Schedule 1, Division 6: Standards for Roads in Bushfire Hazard Areas, Firebreaks and Fire Maintenance Trails, Sections 6.1, 6.2.</p>	<p>No new roads are envisaged to be required for this Project.</p> <p>Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p><i>PC21 “Electricity transmission line easement” - Vegetation</i></p> <p>Transmission lines within an “Electricity transmission line easement” are protected from vegetation.</p>	<p>AS21.1 Planted vegetation within an “Electricity transmission line easement” shall have a mature height not exceeding 2.5 m as shown in Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.2 Diagram 3. AS21.2 No part of planted vegetation, at its mature size, is located closer than 2.5 m to an electricity transmission line as shown in Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.2 Diagram 3.</p>	<p>No vegetation is proposed to be planted within a “Electricity transmission line easement”.</p> <p>Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC22 "Electricity transmission line easement" - Vegetated Buffers</i></p> <p>Vegetated buffers adjoining an "Electricity transmission line easement" are maintained to provide:</p> <p>(a) a visual buffer to the easement; and (b) a separation distance from the easement</p>	<p>AS22 Existing vegetation, comprising trees and/or shrubs, shall be retained within 20 m of an "Electricity transmission line easement" as shown in Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.2 Diagram 4.</p>	<p>Vegetation will be removed along the railway as part of development the Project. All vegetation will be removed in accordance with an approved Vegetation Management Plan and all required permits and approvals will be gained.</p> <p>Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p><i>PC23 "Electricity transmission line easement" - Separation Distance.</i></p> <p>"Habitable buildings" and "Child oriented uses" are located to ensure community safety.</p>	<p>AS23 "Habitable buildings" and "Child oriented uses" maintain a minimum separation distance from the most proximate boundary of an "Electricity transmission line easement" in accordance with Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.1 (1) and Section 3.1 Diagram 1.</p>	<p>This Project does not include habitable buildings in close proximity to an electricity transmission line easement. Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p><i>PC24 "Watercourses" and "Lakes" "Development"</i></p> <p>ensures the maintenance of riparian areas and water quality including protection from off-site transfer of sediment.</p>	<p>AS24 A minimum 50 metre wide buffer area is provided extending out from the high bank of any "Watercourse" or "Lake". Buffer areas include a cover of vegetation, including grasses.</p>	<p>The proposed development is for "railway activities". The alignment traverses over several watercourses, including the following:</p> <ul style="list-style-type: none"> • Lascelles Creek (100 km), • Miclere Creek (145 km), • Brown Creek (170 km), • Logan Creek (175 km), • Diamond Creek (195 km), • Englefield Creek (225 km). <p>Therefore the setbacks for the Project will not comply with the Acceptable Solutions. The Project will be developed in accordance with an approved EMP to protect water quality along the alignment. The impacts and associated management measures for surface water is discussed further in Volume 3, Section 11 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC25 Vegetation Retention</i> “Development” retains vegetation for the:</p> <ul style="list-style-type: none"> (a) protection of scenic quality. (b) protection of general habitat. (c) protection of soil quality. (d) establishment of open space corridors and networks. 	<p>AS25 Vegetation comprising 20% of each regional ecosystem type is retained within each lot with retained vegetation made up of woody remnant, regrowth or replanted natural species, excluding deep-rooted crops and clear fell plantation forestry. The shade lines are a minimum of 10 m in width; clumps have an area greater than 2 hectares.</p>	<p>Vegetation will be removed along the railway as part of development the Project. All vegetation will be removed in accordance with an approved Vegetation Management Plan and all required permits and approvals will be gained. Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p><i>PC26 Cultural Heritage</i> “Development” ensures the protection and maintenance of places and items of cultural heritage.</p>	<p>AS26.1 A minimum separation distance of 50 m is provided to the “Bed and banks” of “Watercourses” and “Lakes”. AS26.2 A minimum separation distance of 50 m is provided to cemeteries and burial sites as identified in Schedule 2, Division 6: Places and Items of Cultural Heritage, Section 6.1.</p>	<p>The proposed development is for “railway activities”. The alignment traverses over several watercourses. Therefore the setbacks for the Project will not comply with the Acceptable Solution AS26.1.</p> <p>The Project will be developed in accordance with an approved EMP to protect water quality along the alignment.</p> <p>The impacts and associated management measures for surface water is discussed further in Volume 3, Section 11 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p> <p>The Project is not developed on a site as identified in Schedule 2, Division 6: Places and Items of Cultural Heritage, Section 6.1. Therefore AS26.2 does not apply to this Project.</p>
<p><i>PC27 Air Emissions</i> Air emissions from “Premises” do not cause environmental harm or nuisance to adjoining properties or “Sensitive land uses”.</p>	<p>No acceptable solution is prescribed</p>	<p>The Project will be developed in accordance with an approved EMP to protect air quality along the alignment.</p> <p>The impacts and associated management measures for Air Emissions is discussed further in Volume 3, Section 13 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC28 Noise Emissions</i></p> <p>Noise emissions from “Premises” do not cause environmental harm or nuisance to adjoining properties or “Sensitive land uses”.</p>	No acceptable solution is prescribed	<p>The Project will be developed in accordance with an approved EMP to protect sensitive land uses along the alignment.</p> <p>The impacts and associated management measures for Noise Emissions is discussed further in Volume 3, Section 15 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC29 Water Quality</i></p> <p>The standard of effluent and / or stormwater runoff from “Premises” ensures the quality of surface and underground water is suitable for:</p> <ul style="list-style-type: none"> (a) the biological integrity of aquatic ecosystems. (b) recreational use. (c) supply as drinking water after minimal treatment. (d) agricultural use. (e) industrial use 	No acceptable solution is prescribed	<p>The Project will be developed in accordance with an approved EMP to protect water quality along the alignment.</p> <p>The impacts and associated management measures for Water Quality is discussed further in Volume 3, Sections 11 and 12 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria</p>
<p><i>PC30 Excavation or Filling</i></p> <p>Excavating or filling of land:</p> <ul style="list-style-type: none"> (a) ensures safety and amenity for the users of the “Premises” and land in close proximity. (b) minimises soil erosion. (c) limits detrimental impacts on water quality. 	<p>AS30.1 Batters have a maximum slope of 25%, are terraced at every rise of 1.5 m and each terrace has a minimum depth of 750 mm.</p> <p>AS30.2 Excavation or filling within 1.5 m of any site boundary is battered or retained by a wall that does not exceed 1 metre in height.</p> <p>AS30.3 Excavation or filling is undertaken in accordance with Schedule 1, Division 1: Standards for Construction Activities</p>	<p>Detailed construction drawings have not yet been developed/. However all construction activities will be undertaken in accordance with an approved Construction EMP.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria</p>
<p><i>PC31 Construction Activities</i></p> <p>Erosion control measures and silt collection measures ensure that environmental values are protected during construction activities.</p>	AS31 During construction soil erosion and sediment is controlled in accordance with standards contained in Schedule 1, Division 1: Standards for Construction Activities, Section 1.1	<p>Detailed construction drawings have not yet been developed/. However all construction activities will be undertaken in accordance with an approved Construction EMP. It is therefore considered the Project is consistent with this Performance Criteria</p>

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Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC32 “Development” in the vicinity of “Airports”</i> <i>“Development” in the vicinity of “Airports”.</i></p> <p>(a) protects the operation of the “Airport”.</p> <p>(b) is designed and located to achieve a suitable standard of amenity for the proposed activity.</p> <p>(c) does not restrict the future operational requirements of the “Airport”. 4</p>	<p>AS32 “Buildings” and “Structures” within 100 m of the boundary of an “airport” are less than 7.5 m in height at any point above natural ground level. (Except where establishing in an existing “Building” and no “Building works” are being undertaken for that existing “Building”).</p>	<p>The Project is not being developed within 100 m of an airport. As such this Performance Criteria is not applicable to the Project.</p>
<p><i>PC33 Good Quality Agricultural Land Areas</i> Good Quality Agricultural Land areas as identified on the Land Characteristics Map – Good Quality Agricultural Land are conserved and managed for the longer term and protected from development that may lead to its alienation or diminished productivity.</p>	<p>No acceptable solution is prescribed</p>	<p>It is difficult to not fragment Good Quality Agricultural Land (GQAL) resources with a linear project. Consultation with affected landowners will be required to be undertaken to limit the impact of the Project by locating the alignment in suitable locations away from GQAL resources, stock routes etc. and managing the construction and operations on the activities carried out on the land.</p> <p>Management and mitigation measures are proposed for affected GQAL in Volume 3, Section 5.8 of this EIS.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria</p>
<p><i>PC34 Flooding</i> <i>“Premises” are designed and located so as:</i></p> <p>(a) not to be adversely impacted upon by flooding.</p> <p>(b) to protect life and property.</p> <p>(c) not to have an undesirable impact on the extent or magnitude of flooding</p>	<p>No acceptable solution is prescribed</p>	<p>Detailed hydraulic modelling will be undertaken in the design stage to minimise the effects of increased flood heights and local flow velocity as the result of new bridges and culverts.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC35 Protected Areas</i> <i>“Development” is undertaken to ensure areas of significant biodiversity and habitat value and high scenic quality are protected</i></p>	<p>AS35 A minimum separation distance of 100 m is provided to Protected Areas as identified on Land Characteristics Map – Features Map and as identified in Schedule 2, Division 7: Artesian Springs, Section 7.1</p>	<p>Currently the preferred alignment avoids all Reserves, National Parks and State Forests.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
<p><i>PC36 Sloping Land</i></p> <p><i>“Development”</i> is undertaken to ensure:</p> <p>(a) vulnerability to landslip, erosion and land degradation is minimised.</p> <p>(b) safety of persons and property is not compromised</p>	<p>AS36 <i>“Development”</i> is not undertaken on slopes greater than 15%.</p>	<p>Detailed design drawings are not available at this stage of the Project. It is anticipated that some of the alignment may traverse slopes greater than 15%.</p> <p>The Project will be developed in accordance with an approved sediment and erosion control plan.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC37 Bushfire Hazard</i></p> <p><i>“Development”</i> is located to maintain the safety of people and property from Bushfire Hazard.</p>	<p>AS37 <i>“Development”</i> is undertaken in Low Bushfire Hazard Areas as identified on Land Characteristics Map – Bushfire Hazard Areas</p>	<p>The Project will traverse areas of low and medium bushfire hazard areas as identified on the Land Characteristics Map – Bushfire Hazard Areas.</p> <p>A fire management plan is to be prepared in consultation with the local fire service for each camp, identifying fire wardens, warning signal and evacuation and emergency procedures. All residents of the camp will be made aware of the requirements outlined in the fire management plan during induction training.</p> <p>The hazard and risk components of the Project are detailed further in Volume 3, Section 23 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC38 High and Medium Bushfire Hazard Areas</i></p> <p><i>“Development”</i> in High or Medium Bushfire Hazard Areas, as identified on Land Characteristics Map – Bushfire Hazard Areas, maintains the safety of people and property by mitigating the risk through:</p> <p>(a) the siting of buildings, ensuring setbacks from hazardous vegetation are maximised and elements least susceptible to fire are sited closest to the bushfire hazard;</p> <p>(b) the provision of firebreaks to ensure adequate setbacks between <i>“Buildings”</i>, <i>“Structures”</i> and <i>“Hazardous vegetation”</i></p>	<p>For <i>“Development”</i> in areas of High or Medium Bushfire Hazard as identified on Land Characteristics Map – Bushfire Hazard Areas, and on lots greater than 2500m²:</p> <p>AS38.1 <i>“Buildings”</i> and <i>“Structures”</i>: (a) are sited within the lowest bushfire hazard area; (b) achieve minimum setback distances from hazardous vegetation of 1.5 times the predominant mature canopy tree height or 10 m, which ever is the greater; and (c) achieve a setback distance from any retained vegetation strips or small areas of vegetation of 10 m. For <i>“Development”</i> in areas of High or Medium Bushfire Hazard as identified on</p>	<p>The Project will traverse areas of low and medium Bushfire hazard Areas as identified Land Characteristics Map – Bushfire Hazard Areas.</p> <p>A fire management plan is to be prepared in consultation with the local fire service for each camp, identifying fire wardens, warning signal and evacuation and emergency procedures. All residents of the camp will be made aware of the requirements outlined in the fire management plan during induction training.</p> <p>The hazard and risk components of the Project are detailed further in Volume 3, Section 23 of this EIS.</p>

Performance Criteria (PC)	Acceptable Solution (AS)	Response
	<p>Land Characteristics Map – Bushfire Hazard Areas, and on lots less than or equal to 2500m²:</p> <p>No acceptable solution is prescribed.</p> <p>For “<i>Development</i>” in areas of High or Medium Bushfire Hazard as identified on Land Characteristics Map – Bushfire Hazard Areas: AS38.2 Firebreaks or fire maintenance trails are provided in accordance with Schedule 1, Division 6: Standards for Roads in Bushfire Hazard Areas, Firebreaks and Fire Maintenance Trails, Section 6.2.</p>	<p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC39 Transport Infrastructure</i></p> <p>Separation distances are provided to ensure:</p> <p>(a) transport infrastructure items are protected from incompatible “<i>Development</i>”.</p> <p>(b) an appropriate standard of amenity and public safety is provided to adjoining “<i>Uses</i>”.</p>	<p>AS39 “<i>Buildings</i>” and “<i>Structures</i>” maintain a minimum separation distance to Rail Lines and State Controlled Roads (as identified on Land Characteristics Map – Features Map) as stated in Schedule 2, Division 4: Separation Distances – Infrastructure Items, Section 4.1.</p>	<p>The proposed development is for “railway activities”. The alignment has been designed to align with existing infrastructure and therefore may not comply with the Acceptable Solutions for setbacks.</p> <p>Aligning the railway with existing infrastructure will ensure the future viability of rural land and reduce the location of incompatible land uses.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

1.12.3 Belyando Shire Planning Scheme 2008

Properties located within the Isaac Regional Council area, particularly properties starting from chainage 45 km to chainage 282.5 km are regulated by the *Belyando Shire Planning Scheme 2008*.

1.12.3.1 Planning Definitions

The Project will consist of the following uses as defined under the *Belyando Shire Planning Scheme 2008*:

- “*railway activities*” - *premises* used for the purposes of planning, construction, maintaining and operating rail infrastructure, facilities and rolling stock, including:
 - rail maintenance depots;
 - rail workshops; and
 - rail freight centres.
- “*public utility*” - means “*premises*” used for a waste landfill site, the supply of water, hydraulic power, electricity or gas, or provision of telephone, sewerage, postal or drainage services or the provision or maintenance of roads or traffic controls or railways or railway controls.

1.12.3.2 Desired Environmental Outcomes

1.12.3.2.1 DEO 3.1 The Natural Environment and Cultural Heritage

The main intent of DEO 3.1 – The Natural Environment and Cultural Heritage is to protect the items and places of cultural, heritage, and ecological significance in Belyando Shire against inappropriate development.

The development of the Project will be undertaken in accordance with an approved EMP in order to manage and minimise any adverse impacts on cultural, heritage and ecological significance. The proposed rail alignment has been developed in order to avoid sensitive areas and be co-located with existing infrastructure. It is therefore considered the Project is consistent with this DEO.

1.12.3.2.2 DEO 3.2 Economic Development

The intent of DEO 3.2 – Economic Development is to protect the viability of the mining industry, while the economy of Belyando Shire is diversified in a manner that supports the intended land use structure and character of the urban centres of Clermont and Moranbah and the rural parts of the Shire.

The Project is for the development of rail infrastructure to support the local mining industry. It is therefore considered the Project is consistent with this DEO.

1.12.3.2.3 DEO 3.3 Community Wellbeing

The intent of DEO 3.3 – Community Wellbeing is to ensure development is consistent with community expectations and needs, and contributes to community wellbeing through the enhancement of core community elements (including the built environment, services, facilities, employment and infrastructure).

The Project will be developed in accordance with an approved SIMP and it is anticipated that the Project will benefit the community through the provision of employment and business opportunities. The Project will increase rail infrastructure in the region, which will in turn support the mining industry

growth and development within the region. It is therefore considered the Project is consistent with this DEO.

1.12.3.3 Zones

The Project is located within the Rural Zone. Development of Accommodation Units, Railway Activities and Public Utilities are Code Assessable within the Rural Zone. Therefore the development must be assessed against the Rural Zone Code of the BSPS.

1.12.3.4 Rural Zone Code

The rural zone is intended primarily for rural uses and associated activities, such as grazing, intensive agriculture and intensive animal industry. Development within this zone will not compromise the existing mining and extractive industries, or impact adversely on infrastructure. The development of the Project is generally consistent with this intent.

Table 1-2 demonstrates the planning assessment against this Code.

Table 1-2: Performance criteria, acceptable solutions and self assessable applicability – “Material change of Use”

Performance Criteria	Acceptable Solution	Response
<p><i>PC1 Non -“Rural Activities” - Locational Criteria</i></p> <p>Non-“rural activities” are located in the Rural “Zone” only where those activities:</p> <p>(a) do not unduly impact on the character and amenity of the locality.</p> <p>(b) are directly and primarily associated with rural activities, a natural resource related industry or natural or cultural resources.</p> <p>(c) cannot reasonably be located in another more appropriate zone.</p> <p>(d) do not prejudice the existing or future productive capacity of rural land or other natural resources.</p> <p>(e) do not adversely affect the landscape values and scenic qualities of the locality.</p>	<p>No acceptable solution is prescribed.</p>	<p>The development of the Project in the rural zone will not have an adverse impact on the amenity of the rural area. Vegetation removal and minor landscape changes will occur as part of the Project. These impacts are discussed further in Volume 3, Sections 5 and 9 of this EIS. The Project will be developed in accordance with an approved EMP that details the management and mitigation measures for the construction and operational impacts of the Project.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC2 Non -“Rural Activities” - Scale</i></p> <p>Non-“rural activities” are of a scale that is consistent with the amenity and character of the locality and do not prejudice the operation and viability of other “uses” or activities in the Rural “Zone” or other “zones”.</p>	<p>AS2 The “total use area” is less than 150 m²</p>	<p>The Project is of State significance and has been designed so as to avoid sensitive areas and to align with existing infrastructure.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC3 Non -“Rural Activities” - Operating Hours</i></p> <p>Non-“rural activities” are operated so as to ensure that the activities and the operation of equipment occur at appropriate times to protect the amenity of the locality.</p>	<p>AS3 Non -“rural activities” are operated only between the hours of 7:00 am and 6:00 pm.</p>	<p>The Project consists of construction and operation of a railway line that will operate outside of the hours of 7 am and 6 pm.</p> <p>It is therefore considered the Project is not consistent with this Acceptable Solution. However, hours of operation will be in accordance with an approved Construction and Operational EMP. Noise and vibration impacts have been discussed further in Volume 3, Section 15 of this EIS.</p>

Performance Criteria	Acceptable Solution	Response
<p><i>PC4 Non -“Rural Activities” - Delivery of Goods</i></p> <p>The loading and unloading of goods in connection with non- “rural activities” occurs at appropriate times to protect the amenity of the locality.</p>	<p>AS4.1 Loading and unloading occurs only between the hours of:</p> <p>(a) 7:00 am and 6:00 pm, Monday to Friday.</p> <p>(b) 7:00 am and 12:00 (noon) on Saturdays.</p> <p>AS4.2 No loading and unloading occurs on Sundays and public holidays.</p>	<p>The Project consists of construction and operation of a railway line and does not include loading and unloading of goods in the rural zone. Therefore this Performance Criteria does not apply.</p>
<p><i>PC5 “Residential Activities”</i></p> <p>Land within the Rural “Zone” is maintained for rural activities.</p>	<p>AS5 For “caretaker’s residences”: No more than 1 (one) “caretaker’s residence” per lot.</p> <p>For all other “residential activities”: No acceptable solution is prescribed.</p>	<p>As the proposed development is for ‘railway activities’ this Performance Criteria does not apply.</p>
<p><i>PC6 Height</i></p> <p>The height of “buildings” and “structures” does not impact adversely on the amenity of the locality and is consistent with the predominant rural form.</p>	<p>AS6 “Buildings” and “structures” other than those within 100 m of the boundary of an “airport” are not more than:</p> <p>(a) 8.5 m; and</p> <p>(b) 2 (two) storeys</p> <p>At any point above natural ground level. (Except where establishing in an existing “building” and no “building works” are being undertaken for that existing “building”, and excluding windmills, silos and other rural operational equipment).</p>	<p>The proposed development is for “railway activities”. There are no buildings or structures proposed greater than 8.5 m high.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC7 Setbacks and Boundary Clearances</i></p> <p>“Buildings” and “structures” are located to ensure the rural amenity is maintained.</p>	<p>AS7.1 “Buildings” and “structures” have a setback of not less than 20 m from any road frontage other than a State Controlled Road as identified on Land. Characteristics Map – Features Map.</p> <p>AS7.2 “Buildings” and “structures” have side and rear boundary clearances of not less than 15 m from property boundaries (except where establishing in an existing “building” and no “building works” are being undertaken for that existing “building”).</p>	<p>The proposed development is for “railway activities”. The alignment traverses over property boundaries and roads. Therefore the setbacks for the Project will not comply with the Acceptable Solutions.</p> <p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity. It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

Performance Criteria	Acceptable Solution	Response
<p><i>PC8 Transport Movements</i></p> <p>Transport movements associated with the use protect the amenity of the locality.</p>	<p>AS8 For “rural activities” and “industrial activities”: Transport movements do not occur through residential areas.</p> <p>For all other “uses”: No acceptable solution is prescribed.</p>	<p>The acceptable solution does not apply as the development is not for rural and industrial activities.</p> <p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC9 “Building” and “Structure” Design</i></p> <p>“Buildings” and “structures” are designed such that the amenity of the locality is protected and maintained.</p>	<p>No acceptable solution is prescribed.</p>	<p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC10 Ridgelines and Escarpments</i></p> <p>Ridgelines and escarpments are maintained in a natural state to protect rural character, landscape values, and visual amenity.</p>	<p>No acceptable solution is prescribed.</p>	<p>The Project will be developed in accordance with management measures proposed in Volume 3, Section 7 of this EIS to mitigate impacts upon rural amenity.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC11 Landscaping and External Activity Areas</i></p> <p>Landscaping and external activity areas are provided on-site to:</p> <ul style="list-style-type: none"> (a) contribute to a pleasant and functional rural built form. (b) provide positive sun and breeze control. (c) make provision for recreation areas. (d) contribute to the positive visual qualities of the locality. 	<p>No acceptable solution is prescribed.</p>	<p>The proposed development is for “railway activities”. Landscaping and external activity areas are not proposed as part of the alignment.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>

Performance Criteria	Acceptable Solution	Response
<p><i>PC12 Lighting</i></p> <p>The design of lighting does not prejudice the amenity of the locality through poorly directed lighting, lighting overspill or lighting glare.</p>	<p>AS12 Direct lighting or lighting does not exceed 8.0 lux at 1.5 m beyond the boundary of the site.</p>	<p>The proposed development is for “railway activities”. For safety and security all lighting will be developed in accordance with appropriate standards for rail infrastructure. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC13 Separation of Incompatible Land Uses</i></p> <p>Separation distances are provided to ensure:</p> <p>(a) the future viability of surrounding “uses”.</p> <p>(b) infrastructure items are protected from incompatible “development”.</p> <p>(c) an appropriate standard of amenity and public safety.</p> <p>(d) conflict arising from incompatible “uses” is minimised.</p>	<p>AS13.1 For “sensitive land uses” and “rural activities” other than “intensive animal industries”: Minimum separation between “sensitive land uses” and “rural activities” are as stated in Schedule 2, Division 1: Separation Distances – Agricultural and Residential Uses</p> <p>For “sensitive land uses” and “intensive animal industries”:</p> <p>AS13.2 Minimum separation distances between “sensitive land uses” and “intensive animal industries” are as stated in Schedule 2, Division 2: Separation Distances – Intensive Animal Industries, Section 2.1.</p> <p>For “grazing”:</p> <p>AS13.3 Pens and yards maintain a minimum separation distance of 300 m to “sensitive land uses” not associated with the “grazing”. For “uses” other than “sensitive land uses” 16 and “extractive industries”:</p> <p>AS13.4 “Buildings”, “structures” and “outdoor activity areas” maintain a minimum separation distance to “extractive industries” as stated in Schedule 2, Division 3:</p> <p>Separation Distances – Extractive Industries, Section 3.1. For all “uses”:</p> <p>AS13.5 “Buildings”, “structures” and “outdoor activity areas” maintain a minimum separation distance to petroleum and gas pipelines and refuse tips as stated in Schedule 2, Division 5: Separation Distances – Infrastructure Items, Section 5.1.</p>	<p>The proposed development is for “railway activities”. The alignment has been designed to align with the existing infrastructure and therefore may not comply with the Acceptable Solutions for setbacks.</p> <p>Aligning the railway with existing infrastructure will ensure the future viability of rural land and reduce the location of incompatible land uses.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

Performance Criteria	Acceptable Solution	Response
<p><i>PC14 Water Supply</i></p> <p>All “premises” have an adequate volume and supply of water for the “use</p>	<p>AS14.1 “Premises” are connected to Council’s reticulated water supply system.</p> <p>or</p> <p>AS14.2 “Premises” are connected to an approved water allocation as provided by the relevant agency.</p> <p>or</p> <p>For “detached houses” or “caretakers residences”:</p> <p>AS14.3 “Premises” are connected to a rain water tank with a minimum capacity of:</p> <p>(a) 45, 000 litres where not in a reticulated water supply area; and</p> <p>(b) 22, 000 litres where in a reticulated water supply area</p>	<p>A combination of water bores, surface water harvesting and existing water pipelines will be used to supply water for the construction activities. A hydrogeology investigation will be undertaken as part of the detail design to define water source locations.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC15 Effluent Disposal</i></p> <p>All “premises” provide for the treatment and disposal of effluent and other waste water to ensure the protection of public health and environmental values.</p>	<p>AS15.1 “Premises” are connected to Council’s reticulated sewerage system.</p> <p>or</p> <p>AS15.2 “Premises” not in a sewerred area have an on-site effluent disposal system in accordance with Schedule 1, Division 4: Standards for Sewerage Supply, Section 4.2.</p>	<p>Suitable effluent disposal infrastructure will be developed as part of the detailed design stage of the Project.</p> <p>Effluent disposal will be on-site disposal system in accordance with Schedule 1, Division 4: Standards for Sewerage, Section 4.2.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>
<p><i>PC16 Stormwater</i></p> <p>Stormwater is collected and discharged so as to:</p> <p>(a) protect the stability of buildings or the use of adjacent land; and</p> <p>(b) protect and maintain environmental values</p>	<p>AS16 Stormwater is collected and discharged in accordance with Schedule 1, Division 5: Standards for Stormwater Drainage, Section 5.1.</p>	<p>Suitable stormwater infrastructure will be developed as part of the detailed design stage of the Project. The EMP in Volume 3, Section 25 of this EIS identifies the key stormwater measures that will be developed during the Project.</p> <p>It is therefore considered that the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

Performance Criteria	Acceptable Solution	Response
<p><i>PC17 Electricity</i></p> <p>“Premises” are provided with an adequate supply of electricity for the “use”.</p>	<p>AS17 All “premises” have a supply of electricity.</p>	<p>Electricity is likely to be supplied from the existing electricity network. Electricity will only be required for the operation of the marshalling and maintenance facility.</p> <p>Solar power will be used for all remote wayside locations and points. Solar power has been effectively and efficiently employed on other lines in Australia. This would remove the need for power cables, generators and uninterrupted power supply (UPS) at passing loops. Backup battery capacity can be provided to run signalling equipment for a minimum number of days depending upon worst case weather patterns. For sites where power is available this could be used and backup supplies provided by automatically starting emergency diesel generators.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions</p>
<p><i>PC18 Vehicle Access</i></p> <p>Vehicle access is provided to ensure the safe and functional operation for motorists and pedestrians.</p>	<p>For all self assessable uses:</p> <p>AS18.1 All “premises” have vehicle access to a formed road. Access is designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Maneuvering Areas and Access, Section 2.3(2).</p> <p>For all other “uses”:</p> <p>AS18.2 All “premises” have vehicle access to a formed road.</p>	<p>No new access requirements are envisaged to be required for this Project. This Project is for railway activities and vehicle access will not be required along the entire alignment.</p> <p>Existing major roads such as the Bruce Highway, Bowen Development Road, Suttor Developmental Road, the new Cerito Elphinstone Road, the Gregory Developmental Road, and the Clermont Alpha Road will serve as the major access roads. Initially, however, some additional access paths may need to be negotiated with landowners to obtain access into sites if the construction contractor requires them. Where private farm roads are to be used, these will be negotiated with the landowner and be restricted to the main property road and major secondary roads.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

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Performance Criteria	Acceptable Solution	Response
<p><i>PC19 Vehicle Parking and Service Vehicle Provision</i> Vehicle parking and service vehicle provision is adequate for the "Use" and ensures safe and functional operation for motorists and pedestrians.</p>	<p>AS19.1 All "Uses" provide vehicle parking in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Maneuvering Areas and Access, Section 2.2(1)(a) AS19.2 Car parking, service vehicle parking and maneuvering areas are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Maneuvering Areas and Access, Section 2.2(1)(b).</p>	<p>This Project is for a railway activity and therefore does not require vehicle parking. Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p><i>PC20 Roads, Firebreaks and Fire Maintenance Trails</i> Adequate all-weather road access is provided between the "Premises" and the existing road network. In high and medium bushfire hazard areas, adequate road access is provided for fire fighting/other emergency vehicles and for safe evacuation.</p>	<p>AS20.1 Roads are designed and constructed in accordance with Schedule 1, Division 2: Standards for Roads, Carparking, Maneuvering Areas and Access, Section 2.1(1). For "Uses" in high or medium bushfire hazard areas as identified on the Land Characteristics Map – Bushfire Hazard Areas: AS20.2 Roads, firebreaks and fire maintenance trails are designed and constructed in accordance with Schedule 1, Division 6: Standards for Roads in Bushfire Hazard Areas, Firebreaks and Fire Maintenance Trails, Sections 6.1, 6.2.</p>	<p>No new roads are envisaged to be required for this Project. Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p><i>PC21 "Electricity transmission line easement" - Vegetation</i> Transmission lines within an "Electricity transmission line easement" are protected from vegetation.</p>	<p>AS21.1 Planted vegetation within an "Electricity transmission line easement" shall have a mature height not exceeding 2.5 m as shown in Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.2 Diagram 3. AS21.2 No part of planted vegetation, at its mature size, is located closer than 2.5 m to an electricity transmission line as shown in Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.2 Diagram 3.</p>	<p>No vegetation is proposed to be planted within a "Electricity transmission line easement". Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>

Performance Criteria	Acceptable Solution	Response
<p>PC22 “Electricity transmission line easement” - Vegetated buffers adjoining an “Electricity transmission line easement” are maintained to provide:</p> <p>(a) a visual buffer to the easement.</p> <p>(b) a separation distance from the easement</p>	<p>AS22 Existing vegetation, comprising trees and/or shrubs, shall be retained within 20 m of an “<i>Electricity transmission line easement</i>” as shown in Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.2 Diagram 4.</p>	<p>Vegetation will be removed along the railway during the pre-construction works of the Project. All vegetation will be removed in accordance with an approved Vegetation Management Plan (VMP) and all required permits and approvals will be gained.</p> <p>Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p>PC23 “Electricity transmission line easement” - Separation Distance “Habitable buildings” and “Child oriented uses” are located to ensure community safety.</p>	<p>AS23 “Habitable buildings” and “Child oriented uses” maintain a minimum separation distance from the most proximate boundary of an “Electricity transmission line easement” in accordance with Schedule 2, Division 3: Powerline / Electricity Easements, Section 3.1 (1) and Section 3.1 Diagram 1.</p>	<p>This Project does not include habitable buildings within the planning scheme jurisdiction. Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>
<p>PC24 “Watercourses” and “Lakes” “Development” ensures the maintenance of riparian areas and water quality including protection from off-site transfer of sediment.</p>	<p>AS24 A minimum 50 metre wide buffer area is provided extending out from the high bank of any “Watercourse” or “Lake”. Buffer areas include a cover of vegetation, including grasses.</p>	<p>The proposed development is for “railway activities”. The alignment traverses over several watercourses, including the Native Companion Creek (at chainage 4 km) and the Belyando River (at chainage 4.5 km). Therefore the setbacks for the Project will not comply with the Acceptable Solutions.</p> <p>The Project will be developed in accordance with an approved EMP to protect water quality along the alignment.</p> <p>The impacts and associated management measures for surface water are discussed further in Volume 3, Section 11 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC25 Vegetation Retention “Development” retains vegetation for the:</p> <p>(a) protection of scenic quality;</p> <p>(b) protection of general habitat; (c) protection of soil quality; and</p> <p>(d) establishment of open space corridors and networks</p>	<p>AS25 Vegetation comprising 20% of each regional ecosystem type is retained within each lot with retained vegetation made up of woody remnant, regrowth or replanted natural species, excluding deep-rooted crops and clear fell plantation forestry. Shade lines are a min 10 m in width; clumps have an area greater than 2 ha</p>	<p>Vegetation will be removed along the railway during the pre-construction works of the Project. All vegetation will be removed in accordance with an approved VMP and all required permits and approvals will be gained. Therefore the Performance Criteria and Acceptable Solutions do not apply to this Project.</p>

Performance Criteria	Acceptable Solution	Response
<p>PC26 Cultural Heritage “Development” ensures the protection and maintenance of places and items of cultural heritage.</p>	<p>AS26.1 A minimum separation distance of 50 m is provided to the “Bed and banks” of “Watercourses” and “Lakes”.</p> <p>AS26.2 A minimum separation distance of 50 m is provided to cemeteries and burial sites as identified in Schedule 2, Division 6: Places and Items of Cultural Heritage, Section 6.1.</p>	<p>The proposed development is for “railway activities”. The alignment traverses over several watercourses, including the Native Companion Creek (at chainage 4 km) and the Belyando River (at chainage 4 km). Therefore the setbacks for the Project will not comply with the Acceptable Solution AS26.1.</p> <p>The Project will be developed in accordance with an approved EMP to protect water quality along the alignment.</p> <p>The impacts and associated management measures for surface water are discussed further in Volume 3, Section 11 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p> <p>The Project is not developed on a site as identified in Schedule 2, Division 6: Places and Items of Cultural Heritage, Section 6.1. Therefore AS26.2 does not apply to this Project.</p>
<p>PC27 Air Emissions Air emissions from “Premises” do not cause environmental harm or nuisance to adjoining properties or “Sensitive land uses”.</p>	<p>No acceptable solution is prescribed.</p>	<p>The Project will be developed in accordance with an approved EMP to protect air quality along the alignment.</p> <p>The impacts and associated management measures for Air Emissions are discussed further in Volume 3, Section 13 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC28 Noise Emissions Noise emissions from “Premises” do not cause environmental harm or nuisance to adjoining properties or “Sensitive land uses”.</p>	<p>No acceptable solution is prescribed.</p>	<p>The Project will be developed in accordance with an approved EMP to protect sensitive land uses along the alignment.</p> <p>The impacts and associated management measures for Noise Emissions are discussed further in Volume 3, Section 15 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>

Performance Criteria	Acceptable Solution	Response
<p><i>PC29 Water Quality</i> The standard of effluent and / or stormwater runoff from “Premises” ensures the quality of surface and underground water is suitable for:</p> <ul style="list-style-type: none"> (a) the biological integrity of aquatic ecosystems. (b) recreational use. (c) supply as drinking water after minimal treatment. (d) agricultural use. (e) industrial use. 	<p>No acceptable solution is prescribed.</p>	<p>The Project will be developed in accordance with an approved EMP to protect water quality along the alignment.</p> <p>The impacts and associated management measures for Water Quality are discussed further in Volume 3, Sections 11 and 12 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC30 Excavation or Filling</i> Excavating or filling of land:</p> <ul style="list-style-type: none"> (a) ensures safety and amenity for the users of the “Premises” and land in close proximity. (b) minimises soil erosion. (c) limits detrimental impacts on water quality. 	<p>AS30.1 Batters have a maximum slope of 25%, are terraced at every rise of 1.5 m and each terrace has a minimum depth of 750 mm.</p> <p>AS30.2 Excavation or filling within 1.5 m of any site boundary is battered or retained by a wall that does not exceed 1 metre in height.</p> <p>AS30.3 Excavation or filling is undertaken in accordance with Schedule 1, Division 1: Standards for Construction Activities, Section 1.1</p>	<p>Detailed construction drawings have not yet been developed. However all construction activities will be undertaken in accordance with an approved Construction EMP.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p><i>PC31 Construction Activities</i> Erosion control measures and silt collection measures ensure that environmental values are protected during construction activities</p>	<p>AS31 During construction soil erosion and sediment is controlled in accordance with standards contained in Schedule 1, Division 1: Standards for Construction Activities, Section 1.1</p>	<p>Detailed construction drawings have not yet been developed. However all construction activities will be undertaken in accordance with an approved Construction EMP. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC32 “Development” in the vicinity of “Airports” “Development” in the vicinity of “Airports”:</p> <ul style="list-style-type: none"> (a) protects the operation of the “Airport”. (b) is designed and located to achieve a suitable standard of amenity for the proposed activity. (c) does not restrict the future operational requirements of the “Airport”. 	<p>AS32 “Buildings” and “Structures” within 100 m of the boundary of an “airport” are less than 7.5 m in height at any point above natural ground level. (Except where establishing in an existing “Building” and no “Building works” are being undertaken for that existing “Building”.)</p>	<p>The Project is not being developed within 100 m of an airport, as such this performance criteria is not applicable.</p>

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Performance Criteria	Acceptable Solution	Response
PC33 GQAL as identified on the Land Characteristics Map – Good Quality Agricultural Land are conserved and managed for the longer term and protected from development that may lead to its alienation or diminished productivity.	No acceptable solution is prescribed.	<p>It is difficult to not fragment GQAL resources with a linear project.</p> <p>Consultation with affected landowners will be undertaken to limit the impact of the Project by locating the alignment in suitable locations away from GQAL resources, stock routes etc. and managing the construction and operations on the activities carried out on the land.</p> <p>Management and mitigation measures are proposed for affected GQAL in Volume 3, Section 5.8 of this EIS. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC34 Flooding “Premises” are designed and located so as:</p> <p>(a) not to be adversely impacted upon by flooding.</p> <p>(b) to protect life and property.</p> <p>(c) not to have an undesirable impact on the extent or magnitude of flooding.</p>	No acceptable solution is prescribed.	<p>Detailed hydraulic modelling will be undertaken in the detailed design stage of the Project to minimise the effects of increased flood heights and local flow velocity as the result of new bridges and culverts.</p> <p>It is therefore considered the Project is consistent with this Performance Criteria.</p>
PC35 Protected Areas “Development” is undertaken to ensure areas of significant biodiversity and habitat value and high scenic quality are protected.	AS35 A minimum separation distance of 100 m is provided to Protected Areas as identified on Land Characteristics Map – Features Map and as identified in Schedule 2, Division 7: Artesian Springs, Section 7.1.	<p>The alignment has been designed so as to avoid the location of significant vegetation, National Parks and State Forests.</p> <p>Currently the preferred alignment avoids all Reserves, National Parks and State Forests. It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC36 Sloping Land “Development” is undertaken to ensure:</p> <p>(a) vulnerability to landslip, erosion and land degradation is minimised.</p> <p>(b) safety of persons and property is not compromised</p>	AS36 “Development” is not undertaken on slopes greater than 15%.	<p>Detailed design drawings are not available at this stage of the Project. It is anticipated that some of the alignment may traverse slopes greater than 15%.</p> <p>The Project will be developed in accordance with an approved Sediment and Erosion Control Plan (SECP). It is therefore considered the Project is consistent with this Performance Criteria.</p>

Performance Criteria	Acceptable Solution	Response
<p>PC37 Bushfire Hazard “Development” is located to maintain the safety of people and property from Bushfire Hazard 7</p>	<p>AS37 “Development” is undertaken in Low Bushfire Hazard Areas as identified on Land Characteristics Map – Bushfire Hazard Areas.</p>	<p>The Project will traverse areas of low and medium Bushfire Hazard Areas as identified on the Land Characteristics Map – Bushfire Hazard Areas.</p> <p>The Project is for railway activities and is therefore not a use that will impede upon the safety of people or property in the event of a bushfire.</p> <p>Hazard and risk components of the Project are detailed further in Volume 3, Section 23 of this EIS. The Project will be developed in accordance with an approved Bushfire Management Plan (BMP). It is therefore considered the Project is consistent with this Performance Criteria.</p>
<p>PC38 High and Medium Bushfire Hazard Areas “Development” in High or Medium Bushfire Hazard Areas, as identified on Land Characteristics Map – Bushfire Hazard Areas, maintains the safety of people and property by mitigating the risk through:</p> <p>(a) the siting of buildings, ensuring setbacks from hazardous vegetation are maximised and elements least susceptible to fire are sited closest to the bushfire hazard.</p> <p>(b) the provision of firebreaks to ensure adequate setbacks between “Buildings”, “Structures” and “Hazardous vegetation”.</p>	<p>For “Development” in areas of High or Medium Bushfire Hazard as identified on Land Characteristics Map – Bushfire Hazard Areas, and on lots greater than 2500m²:</p> <p>AS38.1 “Buildings” and “Structures”:</p> <p>(a) are sited within the lowest bushfire hazard area.</p> <p>(b) achieve minimum setback distances from hazardous vegetation of 1.5 times the predominant mature canopy tree height or 10 m, which ever is the greater.</p> <p>(c) achieve a setback distance from any retained vegetation strips or small areas of vegetation of 10.</p> <p>For “Development” in areas of High or Medium Bushfire Hazard as identified on Land Characteristics Map – Bushfire Hazard Areas, and on lots less than or equal to 2500m²: No acceptable solution is prescribed. For “Development” in areas of High or Medium Bushfire Hazard as identified on Land Characteristics Map – Bushfire Hazard Areas:</p>	<p>The Project will traverse areas of low and medium bushfire hazard areas as identified on the Land Characteristics Map – Bushfire Hazard Areas.</p> <p>The Project is for railway activities and is therefore not a use that will impede upon the safety of people or property in the event of a bushfire.</p> <p>Hazard and risk components of the Project are detailed further in Volume 3, Section 23 of this EIS.</p> <p>The Project will be developed in accordance with an approved BMP. As such, it is considered the Project is consistent with this Performance Criteria.</p>

Performance Criteria	Acceptable Solution	Response
	AS38.2 Firebreaks or fire maintenance trails are provided in accordance with Schedule 1, Division 6: Standards for Roads in Bushfire Hazard Areas, Firebreaks and Fire Maintenance Trails, Section 6.2.	
<p><i>PC39 Transport Infrastructure</i> Separation distances are provided to ensure:</p> <p>(a) transport infrastructure items are protected from incompatible <i>“Development”</i>; and</p> <p>(b) an appropriate standard of amenity and public safety is provided to adjoining <i>“Uses”</i>.</p>	<p>AS39 <i>“Buildings”</i> and <i>“Structures”</i> maintain a minimum separation distance to Rail Lines and State Controlled Roads (as identified on Land Characteristics Map – Features Map) as stated in Schedule 2, Division 4: Separation Distances – Infrastructure Items, Section 4.1</p>	<p>The proposed development is for “railway activities”. The alignment has been designed to align with existing infrastructure and therefore may not comply with the Acceptable Solutions for setbacks.</p> <p>Aligning the railway with existing infrastructure will ensure the future viability of rural land and reduce the location of incompatible land uses. It is therefore considered the Project is consistent with this Performance Criteria and Acceptable Solutions.</p>

1.12.4 Bowen Shire Planning Scheme 2006

Properties within the Whitsunday Regional Council area, particularly from approximately chainage 282.5 km to chainage 490 km are regulated by the *Bowen Shire Planning Scheme 2006*.

1.12.4.1 Planning Definitions

The Project will consist of the following uses as defined under the *Bowen Shire Planning Scheme 2006*:

- accommodation building - premises for the purposes of providing accommodation, comprising only rooming units, (including motels, boarding-houses, guest houses, itinerant workers accommodation, hostels, serviced rooms, student accommodation, or any similar use), but does not include a bed and breakfast, caravan park, institutional residence, retirement village, or any other separately defined residential premises.

The term includes a building or buildings or any parts thereof used for the provision of meals to residents (whether or not such facilities are open to public use), common room facilities and the like, or for the purposes of a manager's residence/office, restaurant and conference facilities.

- major utility - premises for the purposes of any installation or undertaking for any State or Federal government infrastructure/utility purpose not defined as a Special use.

1.12.4.2 Desired Environmental Outcomes

The following section identifies relevant DEOs and demonstrates the Project's compliance.

The DEOs for Bowen Shire are:

- a) Development does not adversely affect the values of the Shire's natural environment including coastal areas, wetlands, beaches, headlands, waterways, Protected Areas, undeveloped hillslopes, and areas of significant native vegetation, from any adverse effects accruing from clearing, soil degradation and pollution due to erosion and contamination, acidification, salinity, waste disposal and any modifications to natural processes.*

The development of the Project will be undertaken in accordance with an approved EMP in order to manage and minimise any adverse impacts on cultural, heritage and ecological significance. The proposed rail alignment has been developed in order to avoid sensitive areas and be co-located with existing infrastructure. It is therefore considered the Project is consistent with this DEO.

- b) Development does not adversely affect the quality and quantum of water available for a range of consumptive uses throughout the Shire.*

There is currently limited information available on the source and supply of water for the construction and operational activities. A hydrogeology investigation will be undertaken as part of the detailed design to define water source locations.

A combination of water bores, surface water harvesting and existing water pipelines will be used to supply water for the construction and operational activities. A hydrogeology desktop investigation is planned to be conducted to identify all potential water supply locations for the Project. The results of this investigation will be available at a later date.

Impacts on water quality are discussed further in Volume 3, Section 11 and 12 of this EIS. The development of the Project will be undertaken in accordance with an approved EMP in order to manage and minimise any adverse impacts on water quality.

It is therefore considered the Project is consistent with this DEO.

c) Risks to safety, property and the environment are not increased by the interaction of development and natural or other hazards, including flooding, bushfire, disturbance of acid sulfate soils, storm surge, cyclonic weather events and landslide.

Risks associated with flooding, bushfire, disturbance of acid sulfate soils, storm surge, cyclonic weather events and landslide are discussed further in Volume 3, Sections 5 and 23 of this EIS.

The development of the Project will be undertaken in accordance with an approved EMP in order to manage and minimise risks to safety, property and the environment. It is therefore considered the Project is consistent with this DEO.

d) Development protects the economic values of natural resources including good quality agricultural land, extractive and mineral resources, vegetation and water.

The Project is for the development of rail infrastructure to support the local mining industry. The proposed rail alignment has been developed in order to avoid sensitive areas and be co-located with existing infrastructure. It is therefore considered that the Project is consistent with this DEO.

e) Development provides a benefit to and satisfies an economic demand of residents of the area in which it is located.

The Project is for the development of rail infrastructure to support the local mining industry. This infrastructure is required to meet the economic demand of the local residents as it will create employment and economic growth in the area. It is therefore considered the Project is consistent with this DEO.

f) Opportunities for maintaining and improving employment resulting from advancements in information technology and emerging business/industry trends are maximised.

The Project is for the development of rail infrastructure to support the local mining industry. This infrastructure is required to meet the economic demand of the local residents as it will create employment and economic growth in the area. It is therefore considered the Project is consistent with this DEO.

g) The Shire's tourism industry is strengthened and expanded based on the sustainable use of natural, cultural and man-made assets and the orderly provision of services and facilities.

The proposed development is for a railway and does not include tourism related businesses. However the alignment of the railway has been designed so as to avoid sensitive areas, therefore reducing impacts on natural tourism assets in the region. It is therefore considered the Project is consistent with this DEO.

h) Bowen continues to function as the main business centre and administrative hub for the Shire.

The proposed development will not impact upon the function of Bowen as the main business centre as it does not provide any commercial activities. It is therefore considered the Project is consistent with this DEO.

- i) *Growth and community development within the Shire focussed on the existing Bowen and Collinsville urban areas to facilitate the efficient use, timely and orderly expansion and continued operation of infrastructure.*

The proposed development will not impact upon growth and community development in the shire as it does not provide any permanent residential or commercial areas. The development will provide important rail infrastructure to support the local mining industry. It is therefore considered the Project is consistent with this DEO.

- j) *Development facilitates diverse housing choice, including affordable housing that is responsive to the changing demographic structure of the Shire's population and promotes equity in access to goods and services.*

The proposed development will provide temporary housing for construction workers, required for the Project. It is therefore considered the Project is consistent with this DEO.

- k) *Development promotes the efficient use and provides for the orderly expansion of the Shire's movement system, including motorised and non-motorised modes.*

The Project is consistent with this DEO as it is providing a rail line to move coal from the local mining industry.

- l) *Development occurs in an area:*

- i. *which is suitable and compatible with the nature of the development; and*
- ii. *in which services and facilities required in respect of the development are existing, planned or provided by the development.*

The Project is consistent with this DEO as it is providing a rail line to support the local mining industry. The location for the railway is appropriate as it will move coal from the Alpha Coal Mine to the Port of Abbott Point, and is the most suitable alignment.

- m) *Development does not adversely affect:*

- i. *the community's health and safety.*
- ii. *the amenity enjoyed by people in different areas of the Shire.*
- iii. *the safe and efficient operation of the transport, energy and other infrastructure supporting the Shire and surrounding region.*

The Project will be developed in accordance with an approved SIMP and it is anticipated that the Project will benefit the community through the provision of employment and business opportunities. The Project will increase rail infrastructure in the region that will support the mining industry in the region. It is therefore considered the Project is consistent with this DEO.

- n) *Development reflects the community's reasonable expectations and harmonises with the natural environment and does not prejudice the Shire's existing scenic amenity, particularly along the coastal plain.*

The development of the Project will be undertaken in accordance with an approved EMP in order to manage and minimise any adverse impacts on cultural, heritage and ecological significance. The proposed rail alignment has been developed in order to avoid sensitive areas and be co-located with existing infrastructure. It is therefore considered the Project is consistent with this DEO.

- o) *The community values of places and landscapes reflecting the community's history and identity are not detrimentally affected by development.*

The Project will be developed in accordance with an approved CHMP. The CHMP will be developed in consultation with the local community to ensure the community values of places and landscapes reflecting the community's history and identity are not detrimentally affected by development. It is therefore considered the Project is consistent with this DEO.

1.12.4.3 Zones

The Project is located within the Rural Zone. Development of Accommodation Buildings and Major Utilities are Impact Assessable within the Rural Zone. Therefore the development must be assessed against the DEOs and Rural Zone Code of the *Bowen Shire Planning Scheme 2006*.

1.12.4.4 Rural Zone Code

1.12.4.4.1 Purpose

The rural zone is intended primarily for rural uses and associated activities, such as grazing, intensive agriculture and intensive animal industry. Development within this zone will not compromise the existing mining and extractive industries, or impact adversely on infrastructure. Mineral and extractive resources and associated transport routes are protected from incompatible development.

The development of the Project will support the existing and proposed extractive industries and supply a new transport route and is therefore generally consistent with this intent.

Table 1-3: Elements and specific outcomes – *Rural Zone*

Elements	Specific Outcomes	Response
(a) Land Use and Development		
(i) Consistent Uses	<p>O1 (e) Only uses consistent with the overall outcomes for, and preferred for development within the Rural zone, are established in the zone.</p> <p>(f) The following uses and use classes are consistent with, and preferred, within the Rural zone:</p> <p>(j) All Rural Purposes.</p> <p>O2 Provided the following uses are developed to:</p> <ul style="list-style-type: none"> • be compatible with surrounding Rural Purposes by being of similar scale, intensity and character; • support preferred uses; • not adversely affect the amenity of the locality; and • provide recreational or community facilities that are more appropriately located in the Rural zone. <p>They are consistent uses within the Rural Zone:</p> <p>(e) Major utility.</p>	<p>The Project is not for rural purposes and is not considered a use that is consistent with the rural zone. Therefore the Project is considered not to be consistent with Specific Outcome 1 and 2 of this code.</p> <p>The Project is of State significance and has been designed so as to avoid sensitive areas and align with existing infrastructure. The Project will be developed in accordance with an approved EMP to ensure it does not impact significantly on the surrounding rural and sensitive areas.</p>
(ii) Inconsistent Uses	<p>O3 Uses other than:</p> <ul style="list-style-type: none"> • preferred uses nominated in O1; and • consistent uses developed to comply with the provisos set out in O2; do not establish in the Rural zone, do not comply with the overall outcomes sought for the Rural Zone and conflict with this code. 	<p>The Project is not for rural purposes and is not considered a use that is consistent with the rural zone. Therefore the Project is considered not to be consistent with Specific Outcome 1, 2 and 3 of this code.</p> <p>The proposed development is of State significance and has been designed so as to avoid sensitive areas and align with existing infrastructure. The Project will be developed in accordance with an approved EMP to ensure it does not impact significantly on the surrounding rural and sensitive areas.</p>
(iv) Density	<p>O5 The density of residential development is compatible with local amenity expressed by the overall outcomes sought for the Rural Zone.</p>	<p>Two temporary construction camps are proposed at approximately chainages 275 km and 470 km. The camps will be largely self sufficient. The construction camps are to be made from demountable single units built on concrete slabs or gravel.</p>

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Elements	Specific Outcomes	Response
		<p>The temporary construction camps will contain:</p> <ul style="list-style-type: none"> • septic sewerage system sufficient to accommodate the number of workforce personnel; • fuel, chemical and waste storage; and • parking facilities. <p>As the camp will be temporary in nature it will not permanently increase the density in the Rural Zone. It is therefore considered the Project is consistent with this Specific Outcome.</p>
(v) Character and Amenity	<p>O6 Uses and works are located, designed and operated to minimise adverse impacts on:</p> <ul style="list-style-type: none"> • existing environmental conditions relating to air, water and soil; • the amenity of adjacent properties and public spaces; • significant local and distant views or prominent natural features and landmarks, the health and safety of people using the premises and adjacent premises; and • existing community infrastructure. 	<p>The development of the proposed railway activities in the rural zone will not have an adverse impact on the amenity of the rural area. Vegetation removal and minor landscape changes will occur as part of the Project. These impacts are discussed further in Volume 3, Section 7 and 9 of this EIS. The Project will be developed in accordance with an approved EMP that details the management and mitigation measures for the construction and operational impacts of the Project.</p> <p>It is therefore considered the Project is consistent with this Specific Outcome.</p>
	<p>O7 Uses and works are located, designed and operated to prevent adverse impacts on the existing quality of the groundwater, streams and surface water storages of the Shire and which provide:</p> <ul style="list-style-type: none"> • bunding, impervious surfaces and integrated drainage and treatment systems to manage water borne pollutants; and • properly designed and constructed, secure, sealed storage facilities for temporary onsite storage of liquid wastes, including waste water pending discharge to a sewer or removal from the site for treatment and disposal at a lawful facility. 	<p>The alignment traverses over several watercourses, including the following:</p> <ul style="list-style-type: none"> • Rosella Creek (335 km); • Pelican Creek (370 km); and • Bogie River (440 km). <p>Detailed design drawings have not been developed for this stage of the Project. However, the Project will be developed in accordance with an approved EMP to protect water quality along the alignment.</p> <p>The impacts and associated management measures for surface water and groundwater are discussed further in Volume 3, Sections 11 and 12 of this EIS.</p> <p>It is therefore considered the Project is consistent with this Specific Outcome.</p>

Elements	Specific Outcomes	Response
	<p>O8 Building and structures are:</p> <ul style="list-style-type: none"> • of a type and scale which have an attractive, functional appearance; • constructed of materials and finishes compatible with other development in the area; • integrated with the physical attributes of the site, including appropriate provision for access to natural light and ventilation, privacy, noise attenuation, drainage, landscaping, outlook and off-street parking; and • designed to adequately screen materials stored outside buildings when viewed from adjacent premises and public spaces. 	<p>Detailed design drawings for the accommodation buildings and marshalling yards have not been developed for this stage of the Project. However, it is anticipated that the Project will be developed in accordance with the requirements set out in Specific Outcome 9.</p>
(vi) Safety and Security	<p>O9 Personal safety and property security are optimised by incorporating features nominated in Schedule 6 to this planning scheme in the design of buildings and spaces, including:</p> <ul style="list-style-type: none"> • opportunities for surveillance; and • clear definition of boundaries between private and public spaces. <p>robust construction materials.</p>	<p>Detailed design drawings for the accommodation buildings and marshalling yards have not been developed for this stage of the Project. However, it is anticipated that the Project will be developed in accordance with the requirements set out in Specific Outcome 9.</p>
(vii) Vegetation Management and Landscaping	<p>O10 Development does not impact adversely on the ecological or landscape values of land.</p>	<p>Vegetation will be removed along the railway as part of pre-construction works of the Project. All vegetation will be removed in accordance with an approved VMP and all required permits and approvals will be gained.</p> <p>It is therefore considered the Project is consistent with this Specific Outcome.</p>
	<p>O11 Landscaping is designed, established and maintained in a manner to:</p> <ul style="list-style-type: none"> • be an appropriate scale relative both to the width of the street; • reserve and to the size and nature of development; • incorporate significant existing vegetation where possible; 	<p>Detailed design drawings for the accommodation buildings and marshalling yards have not been developed for this stage of the Project. However, it is anticipated that the Project will be developed in accordance with the requirements set out in Specific Outcome 11.</p>

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Elements	Specific Outcomes	Response
	<ul style="list-style-type: none"> • be sensitive to site attributes, such as streetscape character, - natural landform, existing vegetation, views and drainage; • allow adequate lighting and pedestrian and vehicular safety; • effectively screen storage and service areas from views from outside the site; • provide visual relief and shade, particularly throughout open parking areas; and • minimise impact on electricity infrastructure. 	
(viii) Cultural Heritage Values	O12 Cultural heritage values associated with the landscape features of a site and its surroundings or relics of past activities found during development of the site are respected and are not subjected to changes that would significantly reduce the capacity to appreciate those areas, places and sites, their character or the memories or history they represent, in terms of visual detraction, public accessibility or physical change, damage or removal	<p>The Project will be developed in accordance with an approved CHMP. The CHMP will be developed in consultation with the local community to ensure the cultural heritage values are not detrimentally affected by development.</p> <p>It is therefore considered the Project is consistent with this Specific Outcome.</p>
(ix) Steep Land Management	O13 Public safety, lives and property are not placed at unacceptable levels of risk through inappropriately designed development on land with excessive slope or geological instability.	<p>Detailed design drawings are not available at this stage of the Project. The Project will be developed in accordance with an approved Sediment and Erosion Control Plan.</p> <p>The hazard and risk components of the Project are detailed further in Volume 3, Section 23 of this EIS. It is therefore considered the Project is consistent with this Specific Outcome.</p>
(x) Flood Immunity	O14 Land on which buildings and structures associated with development nominated in Column 1 of Schedule 7 will be constructed, is immune from a flood event of at least the annual exceedence probability specified in Column 2 of Schedule 7 for the development	<p>Detailed hydraulic modelling will be undertaken in the design stage to minimise the effects of increased flood heights and local flow velocity as the result of new bridges and culverts.</p> <p>Detailed design drawings for the accommodation buildings and marshalling yards have not been developed for this stage of the Project. However, it is anticipated that the Project will be developed in accordance with the requirements set out in Specific Outcome 14.</p>

Elements	Specific Outcomes	Response
(xi) Vehicle Parking and Movement	<p>O15 Development is provided with on-site parking and movement system designed and constructed to:</p> <ul style="list-style-type: none"> • integrate with the site layout including; • direct access to a road providing a level of service required to accommodate traffic generated by the use; • appropriately designed footpath crossovers, and provision for safe pedestrian movement between the public footpath and facility entry points; • accommodate all modes of transport generated by the use; • facilitate non discriminatory accessibility; • provide for safe and efficient loading and unloading of goods and allow for vehicular queuing necessary for the use; and • provide for passenger set down/pick up necessary for the use. 	<p>This Project is for a railway activity and therefore does not require vehicle parking.</p> <p>The parking requirements for the accommodation camp and marshalling yards have not been set at this stage of the Project. However the parking requirements are expected to be consistent with this Specific Outcome.</p>
(b) Infrastructure	<p>O16 Water supply, wastewater and sullage, drainage, roads, power and communications are provided to meet the appropriate standards of service and construction at least whole-of-life cost, which:</p> <ul style="list-style-type: none"> • comprise components and materials that are; • readily accessible and available; • robust and reliable in terms of operational life and purpose; • easily maintained without unnecessarily requiring specialist expertise or equipment; and • are integrated with the design, construction and operation of existing systems and facilitate orderly provision of future systems. 	<p>Detailed design drawings for water supply, wastewater, drainage, roads, power and communications have not been developed for this stage of the Project. It is anticipated that these services will be provided for in accordance with this Specific Outcome. Further information regarding infrastructure is detailed in Volume 3, Section 2 of this EIS.</p>

1.12.5 Assessment against State Planning Policies

1.12.5.1 SPP 1/92 – Development and the Conservation of Good Quality Agricultural Land

The SPP for the Development and Conservation of GQAL aims to assist local government authorities to include GQAL guidelines in planning assessment. To assist in determining land which is suitable for future development, four agricultural land classes have been developed. These classifications comprise of the following:

- **Class A Crop Land** - Land that is suitable for current and potential crops with limitations to production which range from none to moderate levels;
- **Class B Limited Crop Land** - Land that is marginal for current and potential crops due to severe limitations; and suitable for pastures. Engineering and/or agronomic improvements may be required before the land is considered suitable for cropping;
- **Class C Pasture Land** - Land that is suitable only for improved or native pastures due to limitations which preclude continuous cultivation for crop production; but some areas may tolerate a short period of ground disturbance for pasture establishment; and
- **Class D Non-agricultural land** - Land not suitable for agricultural uses due to extreme limitations. This may be under disturbed land with significant habitat, conservation and/or catchment values or land that may be unsuitable because of very steep slopes, shallow soils, rock outcrop or poor drainage (Queensland Government, 1992).

Agricultural Land classes have been developed according to their suitability for agricultural uses and ability to maintain a level of productivity. Factors included in the assessment of agricultural lands comprise of soil type, topographic and climatic limitations.

SPP1/92 provides that GQAL should not be developed for non-rural purposes unless there is an overriding public need.

Analysis of relevant Planning Schemes for the study area indicated the following presence of GQAL:

- Jericho Shire Planning Scheme 2006 (Jericho Barcaldine Regional Council, 0 km – 45 km);
- Belyando Shire Planning Scheme 2008 (Isaac Regional Council, 45 km – 282.5 km); and
- Bowen Shire Planning Scheme 2006 (Whitsunday Regional Council, 282.50 km – 490 km).

The rail corridor transects each of the GQAL Classes at various areas along the alignment.

Volume 3, Section 5.2.2 of this EIS provides a description of GQAL within the Project area and Volume 3, Section 5.3.7 of this EIS provides an assessment of the Project in relation to GQAL.

Table 1-4 below provides a summary of the percentage and area of GQAL classes within the rail corridor (5 km buffer). The major extent of Class A GQAL land is from approximately chainage 300 km to chainage 400 km, in particular where the alignment travels parallel to the Bowen River.

Table 1-4: Impact on GQAL within a 5 km buffer around the rail corridor

GQAL Class	Total Area (Ha)	Percentage of Total
A	77191.90	14.77
B	79845.49	15.28
C	347427.86	66.47
Unallocated (Assumed to be Class D)	18192.32	3.48
Total	522657.56	100.00

1.12.5.2 SPP 2/02 – Planning and Managing Development involving Acid Sulfate soils (ASS)

ASS are generally confined to low-lying coastal areas of Holocene to Quaternary-aged marine and estuarine sediments. With respect to local planning policies, developments that have the potential to disturb in-situ ASS fall under the assessment of the SPP 2/02 Planning and Managing Development that Involves ASS. The SPP 2/02 requires an ASS assessment if the Project falls in an area mapped as containing ASS or is below the 5 m AHD elevation.

The rail loop after approximately chainage 495 km through to chainage 510 km traverses low-lying areas with a ground surface elevation ranging from less than 1 m to 5 m AHD. Under the SPP 2/02, the proposed development will require an ASS assessment and if required preparation of an ASS Management Plan. A desktop assessment has therefore been conducted for the rail loop area beyond chainage 493 km.

The disturbance to ASS has been investigated further in Volume 3, Section 5.3.4 of this EIS.

1.12.5.3 SPP 1/02 – Development in the Vicinity of Certain Airports and Aviation Facilities

This SPP sets out broad principles for protecting airports and aviation facilities, which is an essential component of the State's transport infrastructure and national defence system.

The Project area is not in close proximity to aviation facilities or airports (i.e. located on land affected by an Obstacle Limitation Surface). Therefore this SPP is not applicable.

1.12.5.4 SPP 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide

The SPP for mitigating the adverse impacts of Flood, Bushfire and Landslide seeks to minimise the potential adverse impacts of natural hazards, by adequately considering these impacts when making decisions about specific development.

Section A1.1 in Annex 1 of the SPP specifies development to which the policy applies. Generally this is related to development which increases the number of people working within a potentially hazardous area. Further information on mitigating the adverse impacts of flood, bushfire and landslide is detailed in Volume 3, Section 23 of this EIS.

1.12.5.5 SPP 1/07 – Housing and Residential Development

The SPP for Housing and Residential Development took effect on the 29 January 2007 and seeks to identify housing needs for certain Local Governments in Queensland.

This SPP only applies to local governments that meet the following criteria:

- a population of 10,000 or more within at least one urbanised area; and
- a minimum average dwelling approval rate of 100 dwellings per annum over the latest five year period.

As a result, this SPP does not apply to the Project.

1.12.5.6 SPP 2/07 – Protection of Extractive Resources

The SPP 2/07 for the Protection of Extractive Resources commenced officially on the 3 September 2007. The purpose of this policy is to identify and protect extractive resource areas of State or regional significance, from activities that could potentially constrain or sterilise resources.

In accordance with the policy definitions, extractive resources comprise sand, gravel, quarry rock, clay and soil. The policy identifies a number of Key Resource Areas (KRA) throughout the State. A fundamental objective of the policy is to prevent conflict between extractive industry and other, incompatible land uses that have the potential to sterilise the availability of the extractive resource.

The Project area does not contain any land recognised as a KRA and thereby this SPP is not relevant to the Project.

1.12.5.7 Temporary State Planning Policy 1/10 Protecting Wetlands of High Ecological Significance in Great Barrier Reef Catchments

The policy outcome sought by the Temporary State Planning Policy 1/10 (TSPP 1/10) can be described as follows:

“Development in or adjacent to wetlands of high ecological significance in Great Barrier Reef catchments is planned, designed, constructed and operated to minimise or prevent the loss or degradation of the wetlands and their values, or enhances these values.”

Developments that have potential to cause loss or degradation of wetlands, introduce pollutants and nutrients to wetlands, or change the natural water regime of wetlands are subject to the TSPP 1/10.

The TSPP 1/10 applies to assessable development under Schedule 3, Part 1 of the SPA Regulation, if the development is operational work that involves high impact earthworks in a Great Barrier Reef Wetland Protection Area (GBRWPA), other than operational work for a domestic housing activity. The Project will require assessment against the TSPP 1/10 as it requires high impact earthworks in the Caley Valley Wetlands.

1.12.6 Assessment against Coastal Planning Policies

1.12.6.1 Coastal Use and Development

1.12.6.1.1 Policy 2.1.1 Areas of state significance (social and economic)

The policy applies to the areas neighbouring or adjoining areas of state significance (social and economic significance). SPL is considered an area of state significance.

This policy requires that “the integrity and functioning of ‘areas of state significance (social and economic)’ are maintained and protected from incompatible land uses and activities that may adversely affect the continued use of these areas”.

The railway development is adjoining tidal areas designated as SPL and land within a SDA and is being developed as part of a port related industry. Therefore, the integrity and functioning of the port (or area of state significance) is maintained and protected from incompatible land uses and activities that may adversely affect the continued use of this area.

1.12.6.1.2 Policy 2.1.2 Settlement pattern and design

This policy applies to the coast, existing urban areas on the coast, or new urban areas containing coastal resources and their values.

This policy requires that “the coast is conserved in its natural or non-urban state outside of existing urban areas and urban growth is managed to protect coastal resources and their values by minimising adverse impacts”.

This policy does not apply to the Project, as the land is within a SDA and is being developed as a port related industry. The development of the Project will be conducted so that the coastal resources and their values are protected and adverse impacts are minimised.

1.12.6.1.3 Policy 2.1.3 Coastal-dependent land uses

The policy applies to the land on and neighbouring the foreshore, and land containing coastal resources and their values.

This policy requires that when:

“planning for appropriate land uses in areas adjoining the foreshore, adequate provision needs to be made for coastal-dependent land uses. Where there is competition for available land, preference should be given to necessary coastal-dependent land uses ahead of other urban land uses.

Planning for the location and design of new coastal-dependent land uses outside of existing coastal townships should be undertaken so as to avoid or minimise adverse impacts on coastal resources and their values”.

The proposed development is to be developed on land within a SDA for a port related use. It is therefore considered that the development is consistent with this policy, as the Project is a coastal dependent land use (i.e. port expansion).

1.12.6.1.4 Policy 2.1.4 Canals and dry land marinas

The development of a canal or dry land marina is not proposed as part of this Project. It is therefore considered that this policy does not apply to the Project.

1.12.6.1.5 Policy 2.1.5 Maritime infrastructure

This policy advises “that maritime infrastructure (such as ports) have an important role in the state’s economy and is appropriate where there is a demonstrated public need, no net loss of public access to the coast (in accordance with policy 2.3.1) and adverse impacts on coastal resources and their values are avoided where practicable, or minimised.”

It is considered that the location of the Project adjacent to SPL and within a SDA is a compatible land use for the subject site and is consistent with this policy, as it consolidates port related industry in one area.

The public access aspects of this policy are detailed further in Policy 2.3.1 Public Access.

1.12.6.1.6 Policy 2.1.6 Extractive industry

This policy will not apply, as the Project does not involve an extractive industry.

1.12.6.1.7 Policy 2.1.7 Mining and petroleum activities

This policy will not apply, as the Project does not involve a Mining and petroleum activity.

1.12.6.1.8 Policy 2.1.8 Dredging

This policy will not apply, as the rail component of the Project does not involve a dredging activity.

1.12.6.1.9 Policy 2.1.9 Reclamation

This policy requires that the need for any reclamation must be carefully examined, as well as the extent and nature of any potential adverse impacts on coastal resources and their values.

Land below the highest astronomical tide is maintained in its natural state. It may only be reclaimed where:

- it is for coastal-dependent land uses or other 'areas of state significance (social and economic)' and there is a demonstrated net benefit for the state or a region; and
- it is necessary for the operation of a port or harbour.

For the above, it needs to be demonstrated that there are no alternative sites available that do not require reclamation.

This policy applies to the Project, as it involves reclamation for the northern rail loop in the Caley Valley Wetlands. The proposed reclamation is consistent with this policy as it is for a State Significant Project, being located within a SDA and adjacent to SPL. The reclamation for the railway loop is required in the proposed location so it is strategically aligned with the Port of Abbott Point.

1.12.6.1.10 Policy 2.1.10 Tourism and recreational activities

This policy will not apply, as the Project does not involve tourism and recreational activities.

1.12.6.1.11 Policy 2.1.11 Rural land uses

This policy requires that "rural land uses are sustainably managed to maintain their important economic role in Queensland, as well as to protect coastal resources and their values, particularly coastal waters and wetlands".

Land adjacent to the Project including the Caley Valley wetland system is currently used for cattle grazing. The Rural Land Uses policy seeks to manage the rural use of land so as not to impact on the environmental values of wetlands such as Caley Valley. As the Project does not comprise a rural use, this policy does not apply to the Project.

1.12.6.1.12 Policy 2.1.12 Managing water resources

The Project does not involve taking of water from a watercourse, or the interference of flow of water in a watercourse. Therefore the policy does not apply to the Project.

1.12.6.1.13 Policy 2.1.13 Fishing

This policy will not apply, as the Project does not involve the development of new fishing activities in the region.

1.12.6.1.14 Policy 2.1.14 Aquaculture

This policy will not apply, as the Project does not involve the development of aquaculture.

1.12.6.2 Physical Coastal Processes

1.12.6.2.1 Policy 2.2.1 Adaptation to climate change

This policy requires that:

“Knowledge and understanding of greenhouse issues and climate change impacts should be improved amongst the public and private sectors with the aim of setting the foundation for cost effective adaptation measures. The four target areas are: avoidance of development on vulnerable areas; improved knowledge and understanding of climate change; assessments of impacts and vulnerability; and incorporating adaptation strategies into coastal planning and management”.

The climate change aspects of the Project are discussed further in Volume 3, Section 3 of this EIS and a Project specific EMP will be developed for the construction and operation stages of the Project to appropriately manage and mitigate any impacts upon greenhouse issues and climate change.

1.12.6.2.2 Policy 2.2.2 Erosion prone areas

This policy will not apply, as the Project does not involve the development within an erosion prone area.

1.12.6.2.3 Policy 2.2.3 Shoreline erosion management

This policy specifies that:

“Regional coastal management plans will identify any priority areas for erosion management.

These areas will be taken into account when considering:

- (a) applications for renewal or conversion of leases for leasehold land on the coast;*
- (b) issuing any approvals for coastal protection works; and*
- (c) assessing applications for funding proposals for coastal management programs”.*

The Project does not involve any of the aforementioned application types and is therefore not applicable.

1.12.6.2.4 Policy 2.2.4 Coastal hazards

This policy requires that:

“When determining new areas for urban land uses on the coast, an evaluation is to be carried out to identify the level of potential risk to life and property from coastal hazards. This evaluation should be based on mapping of storm tide hazard areas in addition to considering the impact of physical coastal processes, including any impacts from potential sea level rise. Development in areas on the coast identified as having a risk of being affected by coastal hazards needs to be carefully considered and

wherever possible, be retained undeveloped. Where areas vulnerable to storm tide inundation have been developed, further development in these areas needs to address: (a) its vulnerability to sea level rise and storm tide inundation; and (b) the proposed access to, and protection of, evacuation routes.

In such areas, local government should have in place counter-disaster plans to address these coastal hazards.”

A Project specific EMP will be developed for the construction and operation stages of the Project, to appropriately manage and mitigate any impacts caused by coastal hazards.

1.12.6.2.5 Policy 2.2.5 Beach protection structures

This policy will not apply, as the Project does not involve the development of new beach protection structures.

1.12.6.3 Public Access to the Coast

1.12.6.3.1 Policy 2.3.1 Future need for access

This policy requires that:

“There is no net loss of public access to the foreshore or of public useability of coastal waters. This is to be maintained, protected and enhanced where the provision and operation of infrastructure of state economic significance and protection of coastal (natural and cultural) resources is not compromised”.

The public will not be able to access the coastal area directly affected by Project, however there will be no net loss of public access to the foreshore or public usability of coastal waters. Public access to the railway alignment is discussed further in Volume 3, Section 2 of this EIS.

1.12.6.3.2 Policy 2.3.2 Design of Access

This policy does not apply, as no public access is being provided as part of the Project.

1.12.6.3.3 Policy 2.3.3 Coastal Road Network

This policy does not apply, as the coastal road network does not form part of the Project.

1.12.6.3.4 Policy 2.3.4 Vehicle use on beach

This policy does not apply, as the Project does not include provisions for the use of vehicles on the adjacent beaches.

1.12.6.4 Water Quality

The coastal management outcome for water quality under the State Coastal Plan requires the following:

“Where environmental values and water quality objectives have been determined for coastal waters in accordance with the Environmental Protection (Water) Policy 1997 (EPP (Water))¹, development and use of the coastal zone is planned and managed to protect the identified values and achieve the water quality objectives.

¹ Note that the EPP (Water) has been updated since the coastal policies were released, and the current version is EPP (Water) 2009

Where environmental values and water quality objectives have not been determined for coastal waters, development and use of the coastal zone is planned and managed to minimise adverse impacts on water quality and achieve the general environmental values and water quality objectives outlined in the EPP (Water)."

There are six policies for water quality under the plan, these include:

- 2.4.1 Water quality management;
- 2.4.2 Wastewater discharges to coastal waters;
- 2.4.3 Waste-disposal facilities;
- 2.4.4 Stormwater management;
- 2.4.5 Groundwater quality; and
- 2.4.6 ASS.

Water quality management is discussed further in Volume 3, Sections 11 and 12 of this EIS and a Project specific EMP has been developed for the construction and operation stages of the Project, to appropriately manage and mitigate any impacts upon water quality in accordance with the EPP (Water).

1.12.6.5 Indigenous Traditional Owner and Cultural Resources

The coastal management outcome for Indigenous Traditional Owner and Cultural Resources under the State Coastal Plan requires that "the living culture of Indigenous Traditional Owners and their connection with cultural resources within the coastal zone is valued and continues for future generations of Indigenous Traditional Owners."

There are two policies for Indigenous Traditional Owner and Cultural Resources under the plan, these include:

- 2.5.1 Areas of state significance (Indigenous Traditional Owner cultural resources); and
- 2.5.2 Involvement of Indigenous Traditional Owners in managing their cultural resources.

Indigenous Cultural Heritage is discussed further in Volume 3, Section 18 of this EIS and a Project specific CHMP will be developed for the construction and operation stages of the Project, in consultation with Traditional Owners and in accordance with Section 87 of the ACH Act. This will ensure that the Project meets the requirements of this policy.

1.12.6.6 Cultural Heritage

The coastal management outcome for Cultural Heritage under the State Coastal Plan requires "that places, buildings and objects with important cultural heritage values located on the coast are appreciated, conserved, managed and passed on to future generations."

There are two policies for Cultural Heritage under the plan, these include:

- 2.6.1 Areas of state significance (cultural heritage); and
- 2.6.2 Cultural heritage.

Cultural Heritage is discussed further in Volume 3, Section 19 of this EIS and a Project specific CHMP will be developed for the construction and operation stages of the Project. This will ensure that the Project meets the requirements of this policy.

1.12.6.7 Coastal Landscapes

1.12.6.7.1 Policy 2.7.1 Areas of state significance (scenic coastal landscapes)

This policy discusses incorporating areas of state significance into regional coastal plans and planning schemes. As the Project is part of a planning policy document this policy does not apply.

1.12.6.7.2 Policy 2.7.2 Other coastal landscape values

This policy requires that:

“When assessing landscape values, the importance of coastal landscapes to the state and regional community is to be addressed. In particular, the relevant Indigenous Traditional Owner communities are to be involved in the assessment of landscape values (refer to policy 2.5.2).

In addition to policy 2.7.1 which focuses on scenic values of coastal landscapes of state significance, regional coastal plans will assess the following:

- (a) for areas identified as ‘areas of state significance (scenic coastal landscapes)’ — other coastal landscape values such as cultural and spiritual values that are of state or regional importance;
- (b) for areas not identified as ‘areas of state significance (scenic coastal landscapes)’ — the importance of coastal landscape character and associated values; and
- (c) the coastal landscapes’ sensitivity to development and change.

Investigations into landscape values will be undertaken as part of the preparation of regional coastal plans to identify the values identified in this policy. Other relevant and current landscape studies for the region will be identified and used in these investigations.

Regional planning strategies and local government planning schemes for coastal areas should protect areas with state and regionally important coastal landscape values, identified by regional coastal plans, from incompatible land uses.

Where state and regionally significant coastal landscape values have not been identified by a regional coastal plan, regional planning strategies and planning schemes are encouraged to protect coastal landscape values that are consistent with this policy.”

The Project is adjacent to the existing Port environs of Abbot Point and within the APSDA, therefore representing existing industrial developed areas.

1.12.6.8 Conserving Nature

1.12.6.8.1 Policy 2.8.1 Areas of state significance (natural resources)

This policy requires that “land identified to be developed in the future for urban, maritime and rural land uses in regional plans, planning schemes and port land use plans is to be located outside of ‘areas of state significance (natural resources)’. Existing urban, maritime and rural land uses within ‘areas of state significance (natural resources)’ will not expand in these areas unless it can be demonstrated that there will be no adverse impacts on coastal resources and their values. If a use or

activity that has adverse effects is to occur within 'areas of state significance (natural resources)', it must have a demonstrated net benefit for the state as a whole.'

The proposed northern rail loop will cross the Caley Valley Wetland. Details in relation to potential impacts associated with the proposed development of the Project are provided in Volume 3, Section 10 of this EIS. Location of the railway alignment has been conducted based on a detailed analysis of the potential impacts and crosses the most degraded part of the wetland.

The Project represents a significant development of necessary rail infrastructure to support the development of the Alpha Coal Project. It has a clearly demonstrable benefit to the State economy.

1.12.6.8.2 Policy 2.8.2 Coastal wetlands

This policy requires that "further loss or degradation of coastal wetlands is to be avoided and impacts on coastal wetlands prevented, minimised or mitigated (in order of preference)."

The policy addresses matters that are relevant to the conservation and management of Queensland's coastal wetlands, including land within 100 m of a coastal wetland. The Project is located within a wetland or within 100 m of a wetland (i.e. Caley Valley wetland). This wetland is located on privately owned cattle grazing land.

The proposed northern rail loop will cross the Caley Valley Wetland. Details in relation to potential impacts associated with the proposed development of the Project are provided in Volume 3, Section 10 of this EIS. Location of the railway alignment has been conducted based on a detailed analysis of the potential impacts and crosses the most degraded part of the wetland.

1.12.6.8.3 Policy 2.8.3 Biodiversity

This policy requires that "biodiversity on the coast is to be safeguarded through conserving and appropriately managing the diverse range of habitats including coral reefs, seagrass, soft bottom (benthic) communities, dune systems, saltflats, coastal wetlands and riparian vegetation."

Development of the Project has an unavoidable impact on Caley Valley Wetland. Management and mitigation measures are proposed to minimise these impacts as detailed in Volume 3, Section 25 of this EIS.

1.12.6.8.4 Policy 2.8.4 Rehabilitation of coastal resources

This policy requires that "rehabilitation of degraded coastal areas and resources is encouraged. For existing activities in the coastal zone, a proactive voluntary approach to rehabilitation working in partnership with landholders, community groups (such as catchment management), local government (including Aboriginal Councils and Island Councils) and local Indigenous Traditional Owner groups is supported. The priority for rehabilitation is the restoration of degraded coastal ecosystems to their natural ecological, physical and aesthetic condition".

Development of the Project has an unavoidable impact on Caley Valley Wetland. Management and mitigation measures are proposed to minimise these impacts as detailed in Volume 3, Section 25 of this EIS.

1.12.6.8.5 Policy 2.8.5 Pest species management

This policy requires that:

“The focus of pest management activities is on minimising the risk of introducing new pest species and reducing or at least controlling the impact of pest species infestations. Management of pest species will have regard to:

- (a) preventing the introduction, establishment and spread of pest species in the coastal zone; and
- (b) managing the impacts of existing and new pest species”.

The Caley Valley wetland is in a degraded state due to current and past land practices. Management practices are proposed to ensure that no further degradation associated with the introduction of pests would occur as a result of the Project. Operation of the Project will implement legislated practices to minimise the potential for introduced species associated with increased rail activity.

1.12.6.9 Coordinated Management

“Coordinated management is coordinated and integrated across all levels of government and within the community”.

There are five policies for Coordinated Management under the plan, these include:

- 2.9.1 Regional coastal management plans;
- 2.9.2 Coordinated management of jurisdictions;
- 2.9.3 State land on the coast;
- 2.9.4 Private use of State land on the coast; and
- 2.9.5 Control districts.

These policies deal with the coordination and implementation of the State Coastal Plan into regional and local planning documents, and therefore are not applicable to this Project.

1.12.6.10 Research and Information

The coastal management outcome for Research and Information is “research programs, and data and information collection and management focus on, support and enhance effective coastal management”.

There are three policies for Research and Information under the plan, these include:

- 2.10.1 Information management;
- 2.10.2 Inter-agency coordination; and
- 2.10.3 Monitoring.

These policies deal with the coordination of data management by Government departments and are therefore not applicable to the Project.

1.13 Summary of Approval Requirements

Table 1-5 provides a summary of the approvals that are expected to be required as part of the Project.

Table 1-5: Approvals summary

Permit, Approval or Licence	Why it applies	Administrating Authority	Applies ✓/x
<i>Environmental protection and Biodiversity Conservation Act 1999</i>	If the project is declared a “Controlled Action” under the EPBC Act	Department of Sustainability, Environment, Water, Population and Communities	✓ Declared a Controlled Action (EIS required).
<i>State Development and Public Works Organisation Act 1971 Significant Project (EIS required)</i>	If a project is declared a significant project by the Coordinator General and requires an EIS.	DIP	✓ Declared a Significant Project declaration (EIS required).
Material Change of Use <i>State Development and Public Works Organisation Act 1971</i>	If use of property is changed or intensified within a State Development Area. Relevant for development of the Rail and access roads.	DIP	✓ Area of development within the APSDA.
Material Change of Use <i>Sustainable Planning Act 2009</i>	If existing use of property is changed or intensified within a Local Government Area. Applies to rail development, construction camps and marshalling yards.	Relevant local council	Will apply to all development within a local government area if the Project is not given CID.
Reconfiguring of a lot <i>Sustainable Planning Act 2009</i>	If a new easement(s) or change of property boundary is likely to be required.	The Department of Infrastructure and Planning, DERM	If a new easement(s) or change of property boundary is likely to be required.
Operational works <i>Coastal Protection and Management Act 2003</i>	For the construction of tidal works	DERM	✓ For areas within Caley Valley wetland
Code Assessable Operational Works Development Approval <i>Sustainable Planning Act 2009</i>	Interfering with or taking of water from a watercourse or lake.	DERM	✓ Area of development within the APSDA.
Vegetation Clearing Permit <i>Vegetation Management Act 1999</i>	Where a RE or remnant vegetation is disturbed by the construction and operation of the infrastructure. Relevant to the clearing of RE along the alignment.	DERM	✓ Most likely required.

Permit, Approval or Licence	Why it applies	Administrating Authority	Applies ✓/x
Vegetation Clearing Permit <i>Vegetation Management Act 1999</i>	Clearing of least concern vegetation on freehold land. Relevant to the clearing of vegetation along the alignment.	DERM	✓ Most likely required.
Permit for taking or interfering with a protected plant or animal <i>Nature Conservation Act 1994</i>	Where the Project interferes or requires the removal of a protected plant or animal. Potentially applies if protected plants are identified during clearing.	DERM	Must be investigated.
Marine Plant Removal <i>Fisheries Act 1994 1994</i>	Interference (eg trim, remove, destroy or damage) with marine plants (eg mangroves, salt water couch etc) requires approval. Relevant to clearing for the alignment.	DEEDI	✓ Within Caley Valley wetland.
Water Licence required under Chapter 2, Part 6, 206 1(a) under the <i>Water Act 2000</i>	For taking water out of the creeks.	DERM	Most likely for construction water.
CHMP <i>Aboriginal Cultural Heritage Act 2003</i>	An EIS is required for the Project, therefore an approved CHMP must also be developed for approval	DERM	✓ EIS requirement.
Community Infrastructure Designation <i>Sustainable Planning Act 2009</i>	In order to eliminate the need to gain approvals under the local government planning schemes.	DIP	Must be investigated