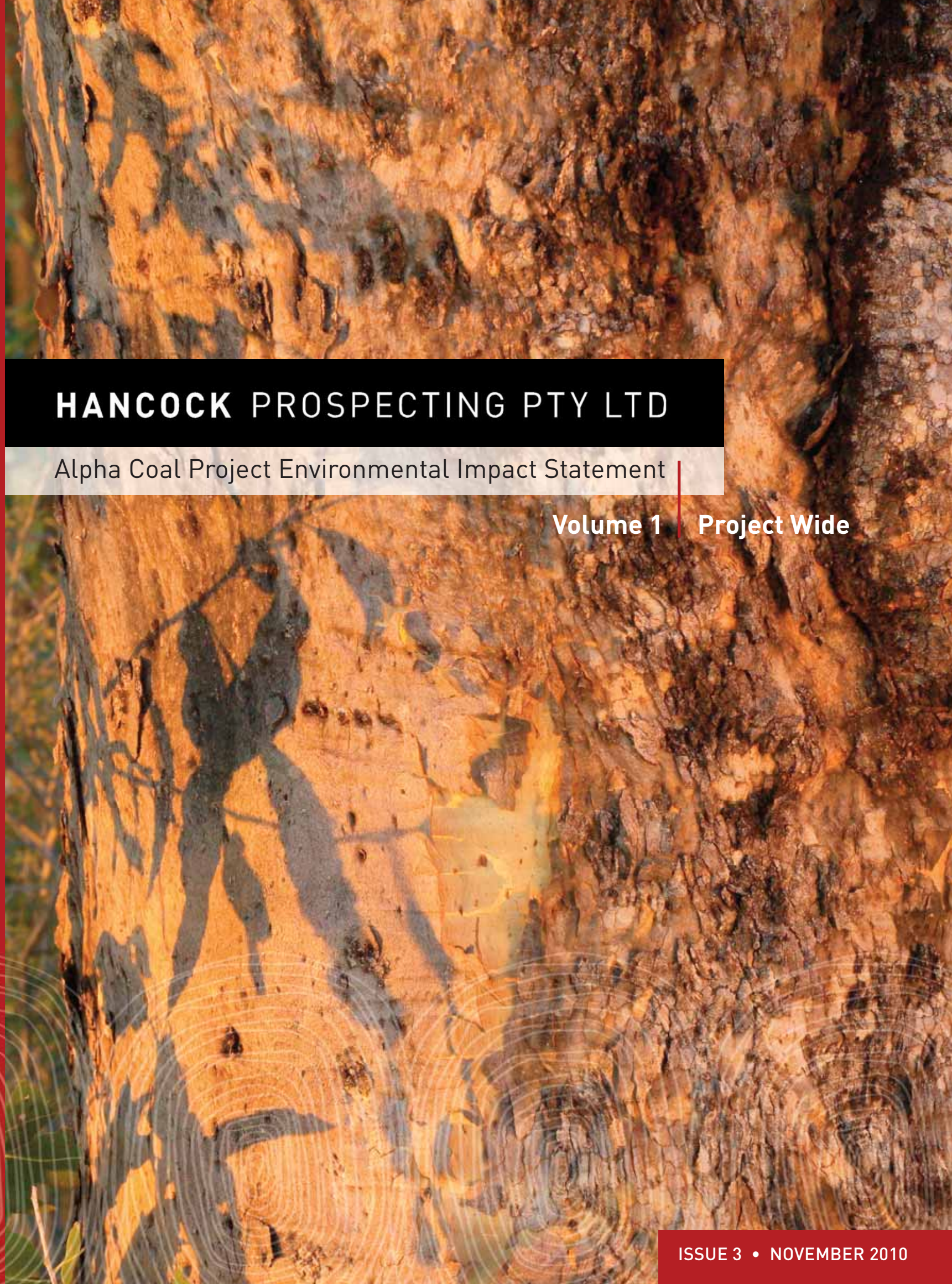

HANCOCK PROSPECTING PTY LTD

Alpha Coal Project Environmental Impact Statement

Volume 1 | Project Wide

ISSUE 3 • NOVEMBER 2010

HANCOCK PROSPECTING PTY LTD

Alpha Coal Project Environmental Impact Statement

Vol 1

Project Wide

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00 Executive Summary

Section 00 Executive Summary

0.1 Introduction

Hancock Prospecting Pty Ltd has prepared this Environmental Impact Statement to assess the environmental, social, and economic impacts associated with developing an open cut mine that is targeting the thermal coal seams in the Upper Permian coal measures of the Galilee Basin in Queensland, Australia. The proposed Alpha Coal Project includes the development of a standard gauge 495 kilometre railway line, for transporting processed coal to the Port of Abbot Point in North Queensland, for exporting to international customers, and construction of new stockpiling and ship loading facilities at the port.

Hancock Prospecting (the Proponent) has prepared this Environmental Impact Statement in accordance with Part 4 of the *State Development and Public Works Organisation Act 1971 (Qld),* the *Environment Protection and Conservation Act 1999 (Cwth)* and Terms of Reference that were issued by the Queensland Coordinator-General in June 2009.

The Proponent, through its wholly owned subsidiary Hancock Coal Pty Ltd, in December 2009 submitted mining lease application MLA 70426 to the Queensland Government. The Proponent proposes to develop a new open cut coal mine to produce 30 million tonnes of thermal coal for the export market annually for 30 years. The mine is situated in central Queensland approximately 130 kilometres south-west of Clermont, 420 kilometres west of Rockhampton and 50 kilometres north of the township of Alpha, the nearest residential area to the Project site.

Figure 0-1 provides an overview of the Project's location within a regional context.

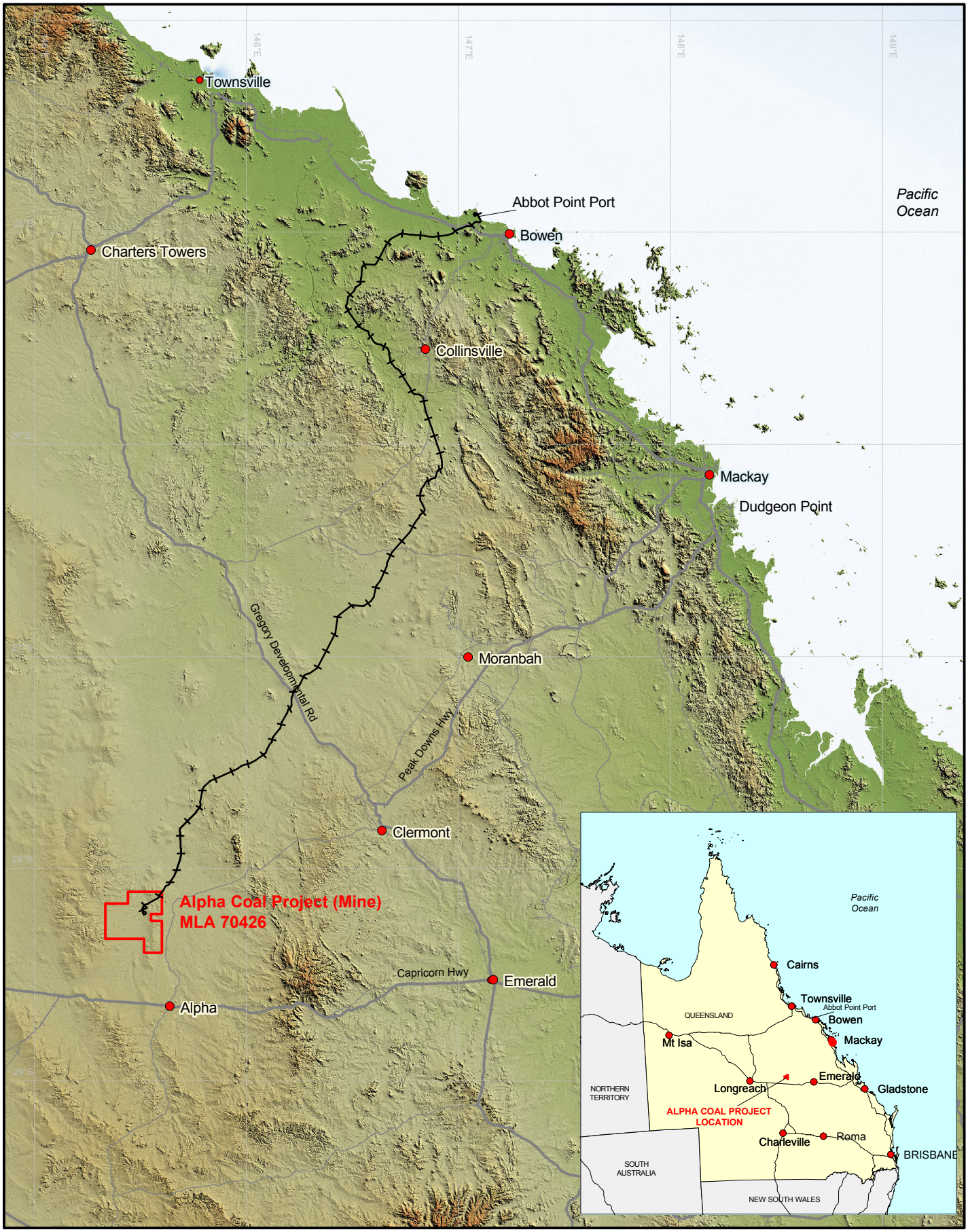
The railway corridor traverses the Barcaldine, Isaac and Whitsunday Regional Councils in regional Queensland. The rail component of the Project comprises a single track, non-electrified rail corridor extending between the mine and Abbot Point, and includes eight passing loops, maintenance sidings, signalling, a marshalling yard, a balloon loop at the mine and at the port, and accommodation facilities at selected locations along the rail corridor.

The coal will be stockpiled and transferred to ship at Abbot Point Coal Terminal, an existing port facility that is owned and operated by North Queensland Bulk Ports Corporation. The existing port facilities will be expanded to accommodate the throughput from the Alpha Coal Project. It is noted that North Queensland Bulk Ports Corporation is obtaining separate environmental approvals for the port facilities expansion, and those activities are excluded from this Environmental Impact Statement.

The Alpha Coal Project will provide a range of substantial benefits including:

- Employment for construction, operations and other indirect employment benefits;
- Regional economic benefits;
- Export income; and
- Significant State and Commonwealth Government taxes and royalties.

Overall, this Environmental Impact Statement demonstrates that the Project meets the Queensland Government's objectives for development of the Galilee Basin whilst ensuring the achievement of environmental sustainability. This Environmental Impact Statement also describes the benefits that will be delivered to the community as a result of the Project's implementation.



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Mining Lease Application (MLA70426) Boundary

Railway Corridor

Source: See Copyright Details below and for full disclosure Please Refer to the EIS ***Volume 4 - References***

0 25 50km

Scale 1:2 000 000 (A4)

Datum: GDA94, MGA Zone55

N W E S

HANCOCK PROSPECTING PTY LTD

Alpha Coal Project
Environmental Impact Statement

PROJECT LOCATION

Job Number	4262 6580
Revision	A
Date	24-09-2010

Figure: 0-1

File No: 42626580-g-1021.wor

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0.2 Project Proponent

The Proponent, Hancock Prospecting Pty Ltd, is an Australian company that has engaged in mineral resources exploration and development for over 50 years, with capability encompassing iron ore, thermal coal, uranium, molybdenum, lead, zinc, gold, diamonds, and petroleum.

The pioneering spirit of Hancock Prospecting, that led development of the Pilbara region in Western Australia, is now being directed to the vast potential of the Galilee Basin in Queensland with the Alpha Coal Project. The company has a long-standing interest in development of the Galilee Basin, having held substantial coal tenements and conducted investigations in the Alpha region since the 1970s.

The Proponents contact details are as follows:

Address:	Managing Director Coal,
	Hancock Prospecting Pty Limited,
	Level 8, 307 Queen Street,
	Brisbane QLD 4000, Australia
Postal:	Managing Director Coal,
	GPO Box 963
	Brisbane QLD 4001, Australia
Phone:	+617 3231 9600

0.3 Project Overview

The proposed Alpha Coal Project involves the following key elements:

- Mining Lease Application MLA 70426 covers the Alpha Coal Project mine site, which extends over Exploration Permit Coal EPC 1210 and Mineral Development Licences MDL 285 and MDL 333;
- An open cut coal mine that is capable of producing 30 million tonnes of thermal coal annually for the export market for a 30 year period;
- The mine contains sufficient resources to extend the Project life beyond 30 years;
- The Project is envisaged to commence in late 2011 upon receipt of the Mining Lease and other key project approvals. Following an initial development period of 30 months, first shipments of product coal from Abbot Point to international customers are expected to commence in early 2014;
- The Project mine plan comprises four open cut pits with a total strike length of 24 km. Coal will be mined from open cut pits and transported to an onsite coal processing plant for processing prior to dispatch by rail to Abbot Point for export. The coal mine ancillary infrastructure includes an above ground tailings storage facility, environmental water and raw water dams, water supply and treatment infrastructure, quarry pits, access roads, workshops, fuel and oil storage, communications and power infrastructure, offices and accommodation facilities;
- The rail component of the Project comprises a standard gauge, single track, non-electrified railway line, approximately 495 kilometres in length, two balloon loops, eight passing loops, maintenance sidings, signalling, a marshalling yard and accommodation facilities at selected locations along the rail corridor between the mine and the port facilities at Abbot Point;

- Approvals for the water and power supplies required for the project will be conducted by third party proponents. As part of these approvals they will be required to consider the impacts on the States resources.
- The overall scope of the Project includes expansion of the existing port facilities at Abbot Point. The expansion works are the subject of separate environmental approvals that are being procured by North Queensland Bulk Ports Corporation; the port owner and operator; and
- The coal will be stockpiled and transferred to ship at the expanded Abbot Point Coal Terminal.

0.4 Aims and Objectives

Prior to the preparation of this Environmental Impact Statement the Proponent conducted a detailed Pre-feasibility Study with the aim of analysing the Project's viability. All critical success factors were assessed, including the existing environmental conditions, local and regional communities, cultural heritage requirements and the regulatory regime in which the Project would operate. The studies confirmed that the Project could be developed and operated at acceptable levels of technical risk and at the same time satisfy anticipated regulatory, social and environmental criteria.

From a commercial perspective, rising world economic growth leads to continued world energy demand increases, and notwithstanding other energy sources, the studies confirmed that demand for coal as an energy source will remain strong. While the coal industry in Australia has seen substantial consolidation, major international customers are supporting independent producers such as Hancock Prospecting because of the strategic importance of product diversity. These factors, plus the ability to produce a competitive product at acceptable levels of return, underpin the commercial viability of the Project. Accordingly, the Proponent has prepared this Environmental Impact Statement in order to achieve the objective of establishing the framework in which the Project can be successfully developed, and operated, as a world-class independent source of good quality thermal coal.

0.5 Project Needs and Benefits

As an important fuel for electricity generation and an integral component in the steel industry, coal will have a major role to play in supporting the needs of both economic and social development worldwide for many years to come. The proposed Alpha Coal Project is aimed at the widening gap between existing global coal production and worldwide demand by becoming a provider within the world thermal coal market, especially to the growth markets in Asia.

Export revenue from the Project will bring substantial benefits through positive impacts on the national trade balance. Queensland will also benefit through direct royalties and infrastructure improvements. The Project will provide major regional employment and economic benefits for the local and regional communities, especially the townships of Alpha and Bowen and surrounding communities.

0.6 Alternatives Considered

The Pre-feasibility Study assessed a range of strategic options for developing the Project and whilst there are many factors that affect viability such as production costs, thermal coal price forecasts and sovereign risk, the main development options that were assessed were focused upon extracting, processing and transporting the product coal to international markets.

Due to the Galilee Basin's remote location, when compared other Queensland coal basins, it is not feasible to conduct the mining operations using existing infrastructure. A detailed exploration program

demonstrated that the relatively shallow depth, flat gradient and coal seam stratigraphy was more suited to open cut mining methods than underground mining. Conventional coal handling and washing methods were selected in response to coal product characteristics and in order to maximise operating plant yield and reliability, given the very large scale of production required to achieve commercial viability. The two coal export terminal options of Dudgeon Point and Abbot Point were reviewed and the latter was selected due to minimised environmental impacts and the more advanced stage of development at Abbot Point. Figure 0-2 provides an overview of the Alpha Coal Project mine site.

0.7 Consequences of Not Proceeding

If the Project did not proceed - the opportunity for filling the widening gap between existing global coal production and worldwide demand would be lost. The cost to Queensland of not proceeding includes:

- Approximately 1,060 mine construction jobs and 2,680 rail construction jobs will not be created;
- Long term employment of approximately 2,300 mining, 225 rail and 125 port operations jobs, plus indirect flow on employment opportunities for the region, will not be created;
- Significant export income and injection of revenue into the regional economy would not occur;
- Significant taxes and royalties would not be generated; and
- The economic opportunity to develop a viable coal resource which is in demand won't be realised.

The benefits of not proceeding appear to be avoiding environmental impacts. But continuing global coal demand will generate project development elsewhere in the world and there is no guarantee those projects will be based on the ecological sustainable development principles proposed herein.

0.8 Relationship to other projects

The Alpha Coal Project is dependant on a range of additional key services and facilities for effective implementation. Those additional services and facilities include the following projects that are currently the subject of separate environmental approvals:

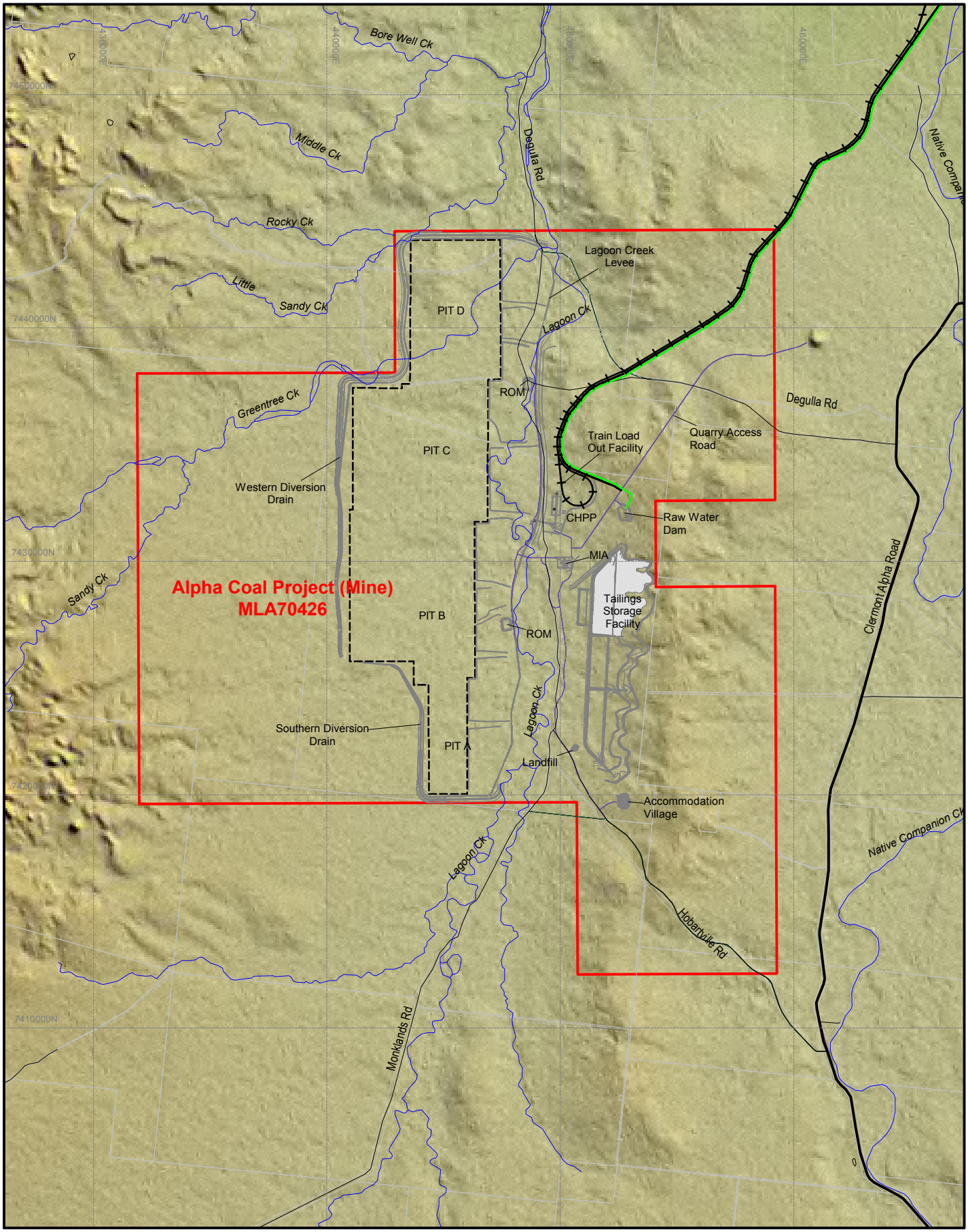
- The proposed expansion of coal handling facilities at Abbot Point by North Queensland Bulk Ports Corporation to enable handling of the Project's targeted annual production of 30 million tonnes;
- The proposed Connors River Dam and Moranbah to Galilee Basin Pipeline projects by SunWater, aimed to provide water to the mine and other Galilee Basin projects; and
- The proposed high voltage power transmission line, termed the Galilee Basin Transmission Project by Powerlink, aimed to provide power to the mine site and other Galilee Basin projects.

0.9 Infrastructure Facility of Significance

The Proponent in February 2010 submitted to the Queensland Coordinator-General an application to have the proposed coal rail corridor declared an Infrastructure Facility of Significance under section 125 of the *State Development and Public Works Organisation Act 1971 (Qld*). This provision enables the Governor-in-Council to advise by Gazette notice that a Facility has significance, particularly economically or socially to Australia, Queensland or the region in which the Facility is constructed.

The declaration will not in any way constitute approval or endorsement of the Project, but 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, easements and native title for the Facility, should voluntary

negotiations be unsuccessful. The Proponent is committed to negotiating voluntary arrangements with all parties that may be affected by the proposed Infrastructure Facility and negotiations with those parties are currently underway.



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Mining Lease Application (MLA70426) Boundary
Water Pipeline
Railway

Source: See Copyright Details below and for full disclosure Please Refer to the EIS ***Volume 4 - References***

0 2.5 5km
Scale 1:220 000 (A4)

Datum: GDA94, MGA Zone55

N W E S

HANCOCK PROSPECTING PTY LTD
Alpha Coal Project
Environmental Impact Statement

PROJECT SITE

Job Number	4262 6580
Revision	A
Date	24-09-2010

Figure: 0-2

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0.10 Stakeholders and Consultation

The Proponent has undertaken an extensive community consultation and stakeholder engagement program relating to the Alpha Coal Project, which aimed to identify community issues or concerns and respond to and mitigate those issues wherever possible. The Proponent continues proactively working with stakeholders with the aim to establish long term relationships between the Project and the community. Key stakeholders include:

- Regional Councils including Barcaldine, Central Highlands, Isaac, Longreach, Whitsunday and Mackay Regional Councils;
- Community organisations including sporting associations, historical groups, theatre, arts, Rotary, show societies, youth and aged care groups;
- Queensland Government departments including Health, Aboriginal & Islander Health, Social Welfare, Water & Waste Management, Roads and Highways and Resources Council;
- Emergency services providers including Police, Ambulance, and Fire and Rescue;
- Education centres including day care, kindergartens, schools, colleges and universities;
- Indigenous groups;
- Non Governmental Organisations;
- Landowners;
- Community members;
- Transport organisations; and
- Business owners and related service providers.

0.11 Environmental Impact Statement

This Environmental Impact Statement (EIS) has been prepared to inform decision makers, interested and affected parties and the general public about potential environmental, social and economic issues relating to development and operation of the Alpha Coal Project, and how the Proponent will manage those issues. The content of the EIS addresses the requirements of Terms of Reference that were issued by the Coordinator-General for the Project in June 2009.

The EIS has been made publicly available for comment, and submissions are sought from individuals and organisations. After consideration of this EIS and submissions received, the Department of Infrastructure and Planning will review the Project to identify any uncertainties or omissions. A request for supplementary data may be forthcoming to cover any additional matters of concern. A final decision on the overall acceptability of the Project will be made on the basis of the information provided in the EIS, and if necessary, a supplementary report.

The EIS process allows for community consultation and environmental protection by consideration of potential impacts and management strategies. The Department of Infrastructure and Planning is responsible for coordinating the impact assessment process for this Project.

The objective of the EIS process is to ensure that all impacts, direct and indirect, particularly environmental, social and economic impacts are fully examined and addressed. The EIS aims to be a self-contained and comprehensive document that provides for:

- Interested bodies and persons; a basis for understanding the Project, alternatives and preferred solutions, the existing environment that would be affected by the Project, the positive and negative impacts that may occur, and the measures to be taken to mitigate all adverse impacts;
- The Department of Infrastructure and Planning and the Advisory Bodies; a framework for assessing the impacts of the Project, in view of legislative and policy provisions; and
- The Proponent; a definitive statement of measures or actions to be undertaken to mitigate any adverse impacts during and following the implementation of the Project. An Environmental Management Plan is included as part of the EIS, describing environmental management strategies designed to meet agreed performance criteria.

The EIS addresses the entire life of the Project including construction, operation, maintenance, decommissioning and rehabilitation. The EIS enables reasonable, environmentally sound, cost effective, and technically achievable conditions to be developed to ensure that the potential social and environmental impacts of the Project are reduced to acceptable levels and positive impacts are optimised. The level of analysis and detail in the EIS reflects the environmental risks and level of significance of particular impacts.

0.12 Environmental Overview - Mine

An overview of the mine's environmental values and mitigations are outlined below.

0.12.1 Climate

The climate assessment of the mine site describes rainfall patterns, humidity, air temperature, wind speed and direction, stability class and mixing height. The following climatic patterns were identified:

- A mean annual rainfall of 662mm with approximately 49% of rainfall occurring in summer;
- The site is subject to typically hot days during summer with mean maximum daytime temperatures around 35 °C falling to 23 °C during the winter months. Overnight temperatures are generally cool throughout the year and cold during the winter months, with mean minimum daily temperatures of 7 °C in July, rising to greater than 21 °C between December and February;
- The site has a mean relative humidity that is generally higher from February to June and lower from September to December; and
- Winds at the site are predominantly from the east through to northeast. The site is characterized by occasional light winds from south and southeast and very infrequent winds from the west.

0.12.2 Geology

The Alpha coal deposit in the Galilee Basin is a sequence of Late Carboniferous to Middle Triassic sedimentary rocks overlying Late Devonian to Early Carboniferous sedimentary and volcanic rocks of the Drummond Basin, exposed in a linear belt between Pentland in the north and Tambo in the south.

The rocks of the Galilee Basin are of Later Permian ages, similar to those of the Bowen Basin, and are exposed east of the Drummond Basin. The Bowen and Galilee basins are separated along a north-trending structural ridge between Anakie and Springsure, referred to as the Springsure Shelf. Much of the western portion of the Galilee Basin is interpreted as occurring beneath Mesozoic sediments of the Eromanga Basin.

Late Permian, coal-bearing strata of the Galilee Basin sub-crop are found in a linear, north-trending Belt in the central portion of the exposed section of the Basin with shallow dipping to the west. No major regional scale fold and fault structures have been identified in regional mapping of the Project area, thus the geology is considered to be very stable and consistent throughout the region.

0.12.3 Soils

Ten soil management units were identified within the mine site. Each type will require varying levels of management to limit the impact on the environment and soil resource.

All but two of the units are suitable for topsoil stockpiling for post mine rehabilitation. All soils are largely deficient of major soil nutrients, so topsoil stockpiles will be ripped and seeded to maintain soil biota and a viable seed bank. Appropriate use of fertiliser will enhance the growing medium. An assessment of Good Quality Agricultural Land (GQAL) on the site concluded that the disturbance area impinged on Class C2 grazing land under the DERM Land Classification System (DERM 2010).

0.12.4 Land Use and Tenure

The mine is located wholly within the Barcaldine Regional Council, formed by amalgamation of the Jericho, Barcaldine and Aramac Shires in March 2008. The landscape is cleared and maintained for grazing, which is the current dominant land use, although there remains some remnant mid height woodland dominated by Boxwood and Ironbark. The current land cover comprises a combination of open forest and woodland, several ephemeral creeks and improved open grazing pastures. Existing improvements include two homesteads and some farming infrastructure including several surface water dams. The Proponent proposes to acquire the properties subject to the Project proceeding.

Pursuant to the *Mineral Resources Act 1989 (Qld)* the Proponent has submitted Mining Lease Application MLA 70426 for the proposed mine. The Proponent currently holds Mineral Development Licenses MDL 285 and MDL 333 and Exploration Permit for Coal EPC1210 that extend across the area of the proposed mining lease. The mining area is also the subject of exploration permits for petroleum tenements under *Petroleum and Gas (Production and Safety) Act 2004 (Qld*), and as required by that Act the Proponent is liaising with those tenement holders on matters related to the proposed developments.

0.12.5 Landscape Character

The character of the landscape within and surrounding the mine area has been altered over many years by agricultural improvements and cattle grazing. The landscape characteristics are generally robust with a low sensitivity toward the changes arising from mining development and operation.

Although the mine development will require the removal of some existing woodland vegetation, the influence and resultant visual impacts will be contained within the limited viewshed by woodland vegetation and landform within and adjoining the Project area. There will be very low visibility of the mine from roads in the local vicinity.

0.12.6 Land Contamination

Searches of the Queensland Department of Environment and Resource Management Environmental Management Register and Contaminated Land Register were carried out for the site. The results of the register search indicated no lots were listed on either register. Site inspections identified a small number of land contamination instances due to fuel storage, contaminated liquid disposal, and rubbish burning activities. The site area has generally been well maintained.

0.12.7 Terrestrial Ecology

Research and surveys over the mine area have indentified the following matters:

- No environmentally sensitive areas or important habitat were identified;
- There is some open woodland of False Sandalwood in the Cudmore National Park and Cudmore Resource Reserve and nature refuge, which are nearby to the mine site;
- The Squatter Pigeon (Southern) (Geophaps scripta scripta) is the only species listed under the *Environment Protection and Biodiversity Conservation Act 1999* to be identified on the site;
- The Little Pied Bat (Chalinolobus picatus) is the only species listed under the *Nature Conservation (Wildlife) Regulation 2006* to be identified on the site;
- No protected areas under the *Nature Conservation Act 1992* are within or near the site;
- Twelve distinct vegetation communities were identified on the site of which 11 are classed as remnant vegetation under the *Vegetation Management Act 1999*;
- There were 418 flora species identified but none are listed under State or Commonwealth legislation as species of conservation significance;
- Three class 2 weed species and eight introduced pest fauna species under the *Land Protection (Pest and Stock Route Management) Act* were identified. These included feral cats (*Felis catus*), feral pigs (*Sus scrofa*), european rabbits (*Oryctolagus cuniculus*), feral goats (*Capra hircus*) as well as dingos and wild dogs (*Canis familiaris dingo*); and
- There were 94 bird species, 36 mammals (four introduced), 27 reptiles and 10 amphibians (one introduced) identified during the wet and dry season fauna surveys;

Measures will be implemented to manage environmental communities and minimise the effects of weeds and pests. Matters of national environmental significance (MNES) including wetlands, listed species, habitats and endangered regional ecosystems are not anticipated to be impacted by mining.

0.12.8 Aquatic Ecology

The main watercourse draining the mine site is Lagoon Creek, which flows south to north across the site and merges with Sandy Creek near the northern end of the site. These are ephemeral waterways. Sandy Creek then flows north to the Belyando River and onto the Burdekin River system. The aquatic environment of these waterways have reduced environmental value due to grazing pressure, bank erosion, in-stream degradation, and basic habitat structure offering limited options for aquatic inhabitants. The poor water quality further detriments the overall health of the existing environment.

There are no declared fish or stygofauna habitats, aquatic reserves, heritage or historic areas, national estates, world heritage listings or areas of significance related to biodiversity identified on the site.

A range of measures will be implemented to manage aquatic environmental values including aquatic ecology monitoring, water quality management, and weed and sediment management.

0.12.9 Surface Water

The mine site is located within the Lagoon and Sandy Creek catchments and forms the south-westerly portion of the Belyando River system, which is part of the Burdekin Basin catchment. The Lagoon Creek catchment is bounded on the western side by the Great Dividing Range and on the eastern side by a range of low hills that extend northwards from Capricorn Highway. There are five streams within

the site area that are defined watercourses in accordance with section 5 of the *Water Act 2000 (Qld),* although they have highly ephemeral conditions and therefore limited beneficial use.

In conjunction with assessing the existing water environment and water uses, technical assessments of flooding, geomorphology, hydrology, water quality and water balance were carried out so that the mine water management strategy addresses active and passive water management issues. Relevant aspects include water supply, stream diversions, flood protection, sewage and stormwater, and mine water management including containment, reuse, treatment and discharge. Site water infrastructure will be designed, constructed and operated in accordance with regulatory requirements. The current designs will be further developed to obtain the required approvals which occur after EIS approval, such as separate approvals for stream diversions, flood protection levees (as regulated structures) and hazardous dams. Further investigations will also be undertaken particularly to assess geotechnical conditions at various locations and suitability of materials for construction.

Preliminary water balance modelling has shown the mine water management system will not supply all needs and make-up water is required to sustain operations. It is expected that make-up water supply will be sourced from a combination of groundwater pumped from local aquifers as part of the advance mine dewatering, and a new bulk supply pipeline operated by SunWater from Moranbah. With these arrangements the Proponent will not be seeking to extract natural flows from the local watercourses.

Diversion of defined watercourses for Lagoon Creek, Sandy Creek and Spring Creek will be required in order to gain unimpeded access to coal reserves. Levee banks are also required to protect the mine open cut and overburden dump areas from flooding. Designs will incorporate sustainable concepts including meandering and habitat enhancement.

Runoff containment systems will capture and contain mine affected water and prevent uncontrolled discharge. The system will allow mine water to be collected and reused in mine operations and reduce requirements for external water supply, and will allow dewatering of mine pits to sustain operations. The system will take account of catchments, local climate and runoff volumes, dewatering volumes, usage demands and discharge criteria. Adopting best practices, water within the mine site will be segregated according to its quality to optimise the storage and preferential reuse of mine water.

The concept designs incorporated into the EIS will ensure impacts on hydrology (local water course stream flow), surface water quality, flooding and stream stability (geomorphology) are minimised.

0.12.10 Ground Water

While groundwater in the area is considered potable in some instances, the existing agricultural activities use groundwater resources predominantly for stock watering supply. The groundwater has metals and metalloids that exceed drinking water guidelines and is not suitable for consumption without complex treatment. Thus groundwater in the area has no value as a drinking water source.

Mining will occur below the level of the regional water table and it will be necessary to remove groundwater in advance of operations to allow mining to occur safely to the intended depth. Mine dewatering will also be required for geotechnical reasons such as to depressurise behind the pit walls and below the floor of the mine, to prevent slope failure and floor heave, and to prevent uncontrolled inflows to the mine that would result in wet digging and associated safety issues. It is anticipated that all water removed from the water table will be utilised as a component of the mine water supply.

Mine dewatering will affect the groundwater in ways which may cause a change in groundwater levels, flow direction, hydrochemistry, and recharge and discharge mechanisms. The surface infrastructure

that is required to operate the mine may introduce risk of aquifer contamination. Modelling indicates that groundwater level impacts may be experienced at distances up to 20 km from the mine, elongated along the open cut pit length in a north-south direction.

The Project will develop alternate water supply agreements with landholders who will potentially be impacted by mine dewatering. They will be provided with an alternate water supply of comparable yield and quality. It is expected that this may include strategies such as:

- Lowering pumps within an existing borehole or supplying pumps with a greater capacity; and
- Drilling new bores to a greater depths where groundwater is not affected by mining operations.

0.12.11 Air Quality

Emissions from mining will be primarily generated from activities that move overburden and coal and the main contaminant is dust. Other emissions from combustion of diesel fuel include sulphur dioxide, nitrogen dioxide, and trace quantities of volatile organic compounds, although they are not expected to be sufficient quantities to impact significantly on air quality at receptor locations adjacent the mine.

The affected receptors are existing homesteads in the surrounding vicinity of the mine. The air quality assessment has estimated the ground level concentrations of dust at receptor locations and there is some probability that some receptor locations adjacent the mine will under adverse meteorological conditions be impacted by dust levels above regulated guidelines. Engineering control measures such as dust suppression and prompt exposed surface rehabilitation will be implemented. Appropriate compensation arrangements will be established with affected adjacent landholders.

0.12.12 Green House Emissions

Greenhouse gas emissions from the mine have been calculated for scope 1 and scope 2 emissions in accordance with the *National Greenhouse and Energy Reporting Act 2007.* Scope 1 emissions include coal seam gas fugitive emissions gas and emissions from vehicles, stationary energy and explosives. Scope 2 emissions relate to energy consumption. Mine emissions are expected to peak in year 29 of mine operations and at that time are estimated to be 0.47% of the Australian national total or 1.68% of the Queensland total.

Consistent with national and state objectives the Proponent will implement strategies to maximise energy conservation and minimise emissions arising from mining activities. These will be developed during the detailed design stage of the Project and will include selection of energy efficient systems and equipment, automation, and procedures to maximise operating efficiencies.

0.12.13 Noise and Vibration

Noise and vibration emissions from construction and mining operations will be primarily generated from the operation of mining equipment, onsite coal handling and preparation plant, and the train load out facilities. Air blast overpressure and ground vibration from explosives use will also be generated. The affected receptors are existing homesteads in the surrounding vicinity of the mine, and background noise levels are low due to the rural environment.

Noise levels generated by proposed operations are predicted to be within the established noise limits at all receptor locations outside the mining lease boundary under all meteorological conditions. It is expected that noise levels at existing receptors within the mining lease boundary will be above the limits and compensation arrangements will be established with affected landholders.

0.12.14 Waste

The key waste management objective is to minimise impacts on land resources, water and air quality and to manage waste so as to avoid direct or indirect impacts on the environment or health of people working at the mine or living in the community. Key strategies will include cleaner production, waste minimisation, segregation for recycling, and safely disposing wastes at appropriate facilities.

The overburden produced by mining will be stored in out-of-pit spoil emplacement in the early years of operations, and revert to in-pit placement when sufficient space is available to allow mining to continue safely. Coarse rejects material from the coal preparation plant will be encapsulated in the spoil piles. Fine rejects (or tailings) from the coal preparation plant will be placed in a purpose built tailings storage facility that will be located near the coal preparation plant. Tailings will be in a slurry form containing approximately 30% solids and excess water will be recycled to the coal processing plant. Geostatistical modelling, sampling and testing results indicate the tailings may have slightly elevated sulphur content, and although this material is unlikely to be acid forming, the tailings storage facility will be designed to ensure that risks of seepage to the underlying aquifer are eliminated.

Whilst it is recognised that an out-of-pit tailings storage facility is required almost universally at all coal mines during the early period of operations, the viability of moving to an in-pit tailings disposal solution will be investigated in the detailed design stage of the project.

Other site wastes will be managed at a suitably located on-site waste disposal and segregation facility.

0.12.15 Transport

The traffic and transport assessment undertaken as part of the EIS determined that the impact of the mine upon the performance of both the major road links and their intersections that will be used to service the mine are insignificant and do not require specific mitigation.

Increased traffic volumes arising from construction and operations activity will have some direct impacts upon the design life and ongoing maintenance of roads in the immediate vicinity of the mine including Alpha to Clermont Road, Hobartville Road and Degulla Road. Consultations with Barcaldine Regional Council and with the Department of Transport and Main Roads will be conducted to resolve matters related to road upgrades and maintenance programs.

0.12.16 Indigenous Cultural Heritage

The Wangan & Jagalingou are the registered native title claimants over the area covering the mine. The Proponent has established an approved Cultural Heritage Management Plan (CHMP) with the Wangan & Jagalingou People in accordance with the requirements of the *Aboriginal Cultural Heritage Act 2003 (Qld)*. This will ensure indigenous cultural heritage management obligations are satisfied. Measures for the management of potential impacts include site surveys in combination with indigenous representatives and qualified archaeologists, systematic recording, and collection and removal of identified archaeological material from development areas.

Surveys of the mine site are underway, with the initial surveys targeting early works activities such as the geological and geotechnical exploration program. Cultural heritage clearances have been completed for the area that is the subject of the approved bulk sampling and trial mining activities.

0.12.17 Non Indigenous Cultural Heritage

No known sites or places of non-indigenous cultural heritage are listed on a statutory or non-statutory registers, however, there are several heritage places within the site that will be impacted by the mine, including places of archaeological potential, which will require further assessment under the provisions of the *Queensland Heritage Act 1992.*

A number of sites have been indentified from initial site inspections, as follows:

- Five sites directly associated with the late nineteenth century coach route network;
- Two sites indirectly associated with the late nineteenth century coach route network and one likely to be associated with the late 19th and early twentieth century stock route network; and
- Four sites relating to twentieth century pastoral activity and improvements.

The sites generally have a moderate significance rating. Mitigation measures will be implemented to confirm the results of site investigations, record the details of the sites to archival standard, and relocation of artefacts to an appropriate location.

0.12.18 Social

The social impact assessment found that mining impacts can be managed through implementation of an effective Social Impact Management Plan. There were no key impacts identified that indicate the mine should be delayed, postponed or re-structured due to social impact issues.

A local area study of Barcaldine Regional Council, with specific review of the local township of Alpha, indicated the mine will generate mostly positive impacts because mining activities will contribute to the local economy whilst being sufficiently removed to prevent an unmanageable population boom. This was achieved through a number of initiatives including the proposed onsite accommodation village.

A regional study confirmed that Isaac Regional Council and Central Highlands Regional Council will be positively affected due to increased employment and business opportunities. These in turn will lead to potential population stability through increased opportunities.

0.12.19 Economics

The mine will result in substantial economic impacts throughout the region, Queensland, and Australia. The overall level of economic activity resulting from mine construction and operation will induce significant output, household income, employment and value added effects throughout the Queensland economy. The major economic impacts of the Project include:

- Approximately 1,060 mine construction jobs and 2,680 rail construction jobs will be created;
- Long term employment of approximately 2,300 mining, 225 rail and 125 port operations jobs, plus indirect flow on employment opportunities for the region;
- Significant export income and injection of revenue into the regional economy;
- Significant state and federal Government taxes and royalties;
- Peak value added effects of $749 million in construction and capital expenditure and $1.77 billion in value added effects from ongoing operational expenditure;
- Annual exports of 30 million tonnes of coal with an annual value of approximately $2.9 billion; and
- A total export of some 856 million tonnes of coal with a value of approximately $83.6 billion.

0.12.20 Decommissioning and Rehabilitation

The decommissioning and rehabilitation of the mine will take into consideration the requirements for final landforms, landscape amenity and sustainability. Key aspects relating to rehabilitation include:

- Control and management of mine waste;
- Sustainable rehabilitation methods for the disturbed areas;
- Management of topsoil resources for use in rehabilitation of the site;
- Progressive revegetation of areas across the mine site;
- Integration with on-going and future rehabilitation activities across the wider mining area; and
- Rehabilitation monitoring and maintenance management.

Site rehabilitation will also include decommissioning and closure of infrastructure, plant and structures, buildings, haul roads, dams and other redundant water management infrastructure.

0.12.21 Health and Safety

The Proponent is committed to providing a safe and healthy working environment to its employees, contractors, and visitors and to operating the mine with minimal impacts upon the environment and community. The health, safety, environment, community and heritage matters will be managed through implementation of the Proponent's Integrated Management System through which personnel will be inducted and which will document the ongoing management requirements.

0.13 Environmental Overview - Rail

An overview of the railway's environmental values and mitigations are outlined below.

0.13.1 Climate

The climatic conditions and characteristics change considerably from Alpha to Bowen. Broad transition rather than clearly defined climatic zonation is characteristic within the area. The principal transitions are toward increasing aridity westward and increasing temperature northward. The climate is thus difficult to characterize in a single type but can be described generally as ranging from tropical to subtropical and from sub-humid to semi-arid. Rainfall decreases westward across the region, with high rainfall variability due to the sporadic incidence of rainfall depressions associated with the tropical cyclones and the convective origin of much of the rainfall.

The railway alignment design incorporates consideration of climatic conditions and potential future climate change and no specific mitigation or management measures are required.

0.13.2 Geology

The railway alignment traverses a wide range of geological units and a number of structural features. It passes over a number of geological units prospective for coal, minerals and petroleum and possibly geothermal energy. Extraction of petroleum, coal seam gas and geothermal energy is unlikely to be impacted by linear infrastructure such as this railway because of flexibility in extraction methods. Extraction of coal and minerals, however, might be impaired by overlying infrastructure and the railway traverses some of the coal bearing Bowen Basin units and the Moranbah Coal Measures. Significant effort has been directed to minimising potential sterilisation of coal and other mineral resources.

0.13.3 Soils

The soil types along the railway alignment vary from dispersive to soils suitable for cropping. Each soil type will require varying levels of management to limit the impact on the environment and soil resource. A number of potential impacts on the soil resources and landforms may arise, including secondary salinisation, reduction of cropping land, disturbance of contaminants, topsoil erosion and alteration to the topography and landforms resulting in a change in catchment characteristics.

The alignment design includes strategies to mitigate these issues with emphasis on managing erodible soils, sodic soils, acid sulfate soils and areas of high salinity risk. An assessment of Good Quality Agricultural Land (GQAL) concluded the railway generally traversed Class C2 grazing land under the DERM Land Classification System (DERM 2010).

0.13.4 Land Use and Tenure

On a regional scale, the majority of the railway lies within the Whitsunday Hinterland and Mackay (WHAM) region, with a small area lying within the Central West Region. These regions are dominated by rural land use, primarily agricultural and horticultural industries. The beef cattle industry is one of the largest industries, with prime livestock producing areas lying within the Belyando, Broadsound and Bowen Shires which are part of the overall WHAM Region. Agriculture and horticulture are the key operations along the coastal plain of the region, while sugarcane processing, dry land farming of grains and sunflowers dominates the Bowen Shire.

The railway alignment has been developed having regard for environmental, social and economic considerations, the requirements of engineering parameters, and landholder consultation and input.

0.13.5 Landscape Character

The landscape and visual impact of the railway alignment is very moderate, with only two visual receptors located within the proposed rail corridor. Notwithstanding the generally low vertical profile of the proposed railway there will be some permanent impact on the visual landscape and amenity of the area. However, considering that the trains will be passing infrequently (about 14 times each day) and the nearest sensitive receptors may not be fully occupied residences, the visual impact is low. Implementation of appropriate mitigation measures will ensure the visual impacts are minimised.

0.13.6 Land Contamination

The linear nature of the proposed railway means that a large number of properties are traversed or are within close proximity. Searches of the Queensland Department of Environment and Resource Management Environmental Management Register and Contaminated Land Register were carried out for the site. There are 57 properties that are likely to be traversed, and 11 of those properties are registered for activities with potential to contaminate land.

During the detailed design stage a detailed land assessment will be undertaken to determine where contaminated land exists or may exist, and appropriate management plans will be implemented to minimise impacts, including the use of the regulated development permit system.

0.13.7 Terrestrial Ecology

Research and surveys over the railway corridor have identified the following mattes:

- The railway passes through a range of ecological communities, including 68 regional ecosystems and approximately 1,530 hectares of mapped remnant vegetation. It is primarily located within the Brigalow Belt bioregion, entering the Desert Uplands at its most southern extent. Four major Central Queensland river systems are crossed – the Bogie River, the Bowen River, the Suttor River and the Belyando River, all of which are located in the greater Burdekin River catchment;
- Several species of conservation significance were identified during field surveys. These species were the *Bonamia dietrichiana*; Black ironbox (*Eucalyptus raveretiana*); Squatter pigeon (*Geophaps scripta scripta)*; Ornamental snake (*Denisonia maculata*); Cotton pygmy goose (*Nettapus coromandelianus*); Little pied bat (*Chalinolobus picatus*) and the Troughton's sheathtail bat (*Taphozous troughtoni*);
- At the community level a total of 15 vegetation alliances were identified in the study area. The area of direct impact encompassed 10 endangered regional ecosystems and 19 of concern regional ecosystems. A further 39 regional ecosystems are listed as being least concern. Of these, 18 regional ecosystems are listed as components of four threatened ecological communities that are protected under the *Environment Protection and Biodiversity Conservation Act 1999;*and
- A number of potential impacts were identified including loss of vegetation, habitat and resources, fauna mortality, wildlife disruption due to light, noise, vibration and dust, introduction and spread of exotic weed and pest species, alteration to fire regimes, and indirect habitat degradation.

Strategies for managing these impacts include avoiding ecologically sensitive areas, offsetting to address loss of habitat and vegetation, substituting plain wire for barbed wire where possible, regular

weed audits and implementation of Weed Management Plans, using wash-down bays in areas of heavy parthenium infestation, and the design of fauna-friendly crossings so that animal cross-country movements can be facilitated. With appropriate mitigation measures and offsets, the overall impacts of the railway Project will be significantly reduced or mitigated.

0.13.8 Aquatic Ecology

The existing aquatic environment along the railway corridor supports a range of low value aquatic habitats and generalist flora and fauna species. Habitats considered locally important are restricted to those such as the Suttor River, Mistake Creek and the Star of Hope Wetland, which support permanent riverine and palustrine water bodies. Nationally important aquatic habitats within the study area include the Caley Valley Wetland near Abbot Point and Bowen River: Birralee - Pelican Creek Aggregation. The Caley Valley Wetland provides a range of habitats for aquatic flora and fauna species and provide high value habitat for commercially and recreationally important fish species.

Locally important fauna species include the endemic soft-spined catfish *(Neosilurus mollespiculum);* small-headed grunter *(Scortum parviceps)* and Irwin's turtle *(Elseya irwini).* Conservation significant fauna species protected include the estuarine crocodile *(Crocodylus porosus)* and freshwater crocodile *(Crocodylus johnstoni).* A small number of these individuals potentially occur in the tidal creeks of Caley Valley Wetland *(estuarine crocodile only)* and the large permanent pool habitats in the Bowen and Bogie Rivers.

No conservation significant aquatic flora species are known to occur within the railway corridor. Nine species have been identified as priority species in the Aquatic Conservation Assessment for the riverine wetlands of the Great Barrier Reef Catchment. The saltcouch and weeping paperbark that occur in the estuarine habitats are protected as marine plants.

The potential impacts of the railway corridor include loss of aquatic habitat, fauna mortality, alteration to in-stream and floodplain hydrology, increased sedimentation, run-off and dust, light, noise and vibration disturbance; and increased abundance, diversity and distribution of introduced species.

These impacts will be mitigated by strict controls over construction activities during the wet season, providing passages under the railway alignment for aquatic habitats, maintaining water quality and managing introduced species.

0.13.9 Surface Water

The majority of the rail corridor is located within the Burdekin Basin catchment. The Burdekin Basin catchment is divided in six sub-catchments or sub-basins, of which the alignment crosses the following three sub-basins: Belyando Suttor sub-basin, Bowen Broken sub-basin, and Lower Burdekin sub-basin. The northern part of the rail corridor is located within the much smaller Don River catchment.

Potential impacts include hydraulic impacts, increased sediment runoff load, stormwater discharge and flow redirection, and construction water usage. The presence of the railway may impact natural stream levels and therefore appropriate design gof waterways crossings will ensure watercourse hydraulic integrity. Small local drainage lines will be included in the detailed design stage. Sediment runoff will be managed by minimising disturbance areas, placing stockpiles away from water courses, using sediment barriers and ensuring prompt rehabilitation.

0.13.10 Ground Water

Groundwater conditions vary considerably along the rail corridor. Research indicates that groundwater is abstracted from both the alluvial deposits and bedrock. Groundwater yield and quality are variable and dependant on the aquifer type. Given the complex rock units and structures, groundwater levels and quality are highly variable. Groundwater resources are likely to be most vulnerable to impact in the vicinity of creeks and rivers, particularly if there is well developed alluvial material underlying and adjacent to the water courses as they present a contamination pathway from the surface.

The most well developed groundwater resources are found within the Bowen Shire alluvial aquifers. Many of the bores in this area are for groundwater abstractions and agricultural use. Due to connectivity of identified aquifers, groundwater resources can be vulnerable to surface contamination.

Construction of new infrastructure such as culverts, cuttings, embankments and bridges have potential for short term localised impacts on shallow groundwater such as increase or decrease in groundwater levels. No significant long term impacts on groundwater resources are expected.

0.13.11 Air Quality

Construction of the railway line will cause dust emissions along the transport corridor, which will have some minor impact upon some receptors along the alignment. These are expected to come from dust emissions due to mechanical disturbance, equipment and vehicles, wind erosion of crustal material and exposed disturbed soil surfaces. Particulate emissions during the operations phase will be low.

Analysis of the local wind climate indicates a higher occurrence of wind from the east, including both northeast and southeast. Thus sensitive receptors located west of the railway corridor could incur higher frequencies of exposure than those located east of the corridor. Engineering control measures such as dust suppression and prompt exposed surface rehabilitation will be implemented. Appropriate compensation arrangements will be established with affected adjacent landholders.

0.13.12 Green House Emissions

A breakdown of the railway estimated emissions indicates total emissions of approximately 2,180 kilo tonnes of carbon dioxide equivalent (CO2-e) will be emitted over the 30 year life of the railway. This is a very small portion of the total Alpha Coal Project combined mine and rail emissions.

Consistent with national and state objectives the Proponent will implement strategies to maximise energy conservation and minimise emissions arising from rail activities. These will be developed during the detailed design stage of the Project and will include selection of energy efficient systems and equipment, automation, and procedures to maximise operating efficiencies.

0.13.13 Noise and Vibration

Noise assessments indicate that rail noise levels from the proposed corridor are expected to meet the acceptable noise targets at all identified sensitive receivers. Given the nearest sensitive receive is over 100 metres from the rail corridor, it is highly unlikely there would be adverse comments regarding construction or operations noise level impacts.

The majority of construction activities along the rail corridor are not expected to produce perceptible levels of vibration due to the distance from the receivers. Vibration levels produced by rail corridor construction activities will be well below the most stringent structural damage criteria for receivers.

0.13.14 Waste

As part of the railway construction and operation works an approved waste management plan will govern requirements for storage, transport, recycling and disposal facilitates and arrangements. The plan will address waste avoidance, reduction, and procedures for meeting legislative requirements for offsite management of waste. The management of wastes will be in accordance with relevant legislation and the principles of the waste management hierarchy. Preference would be given to waste avoidance and reduction, then reuse and recycling, recovery and then treatment and disposal.

0.13.15 Transport

The railway corridor stretches through the Whitsunday, Isaac and the Barcaldine Regional Councils, crossing over 4 state controlled roads and 21 local roads. Grade separated intersections at the state controlled roads, with the exception of Collinsville to Elphinstone Road, which will have a grade level crossing with flashing lights. At the intersections with local roads, grade railway crossings will be installed together with flashing lights.

The traffic and transport assessment undertaken as part of the EIS determined that the impact of the railway upon the performance of both the major road links and their intersections can be managed without major impacts to local road users. Increased traffic volumes arising from construction and operations activity will have some direct impacts upon the design life and ongoing maintenance of some local roads. Consultations with the Department of Transport and Main Roads and affected Councils will be conducted to resolve matters related to road upgrades and maintenance programs.

0.13.16 Indigenous Cultural Heritage

The lands associated with the railway corridor are located across three registered native title claim areas. These are the Wangan & Jagalingou People, the Jangga People and the Birri People. The railway also passes through an area of land where no current registered native title claim exists, near Abbot Point, although the Juru People have indicated they have traditional owner interests.

The Proponent has established an approved Cultural Heritage Management Plan (CHMP) with each of the four indigenous groups in accordance with the requirements of the *Aboriginal Cultural Heritage Act 2003 (Qld).* This will ensure indigenous cultural heritage management obligations are satisfied. Measures for the management of potential impacts include site surveys in combination with indigenous representatives and qualified archaeologists, systematic recording, and collection and removal of identified archaeological material from development areas.

Surveys of the railway corridor are underway with the initial surveys targeting early works activities. Initial inspections indicate that some artefacts will be discovered. These will include isolated stone artefacts, scarred trees and carved trees, camp sites and natural features in the landscape that hold cultural significance, stone resource areas and ceremonial areas.

0.13.17 Non Indigenous Cultural Heritage

The railway alignment will cross two distinct regions, these being Belyando and the Bowen districts. The historical context indicates a number of key historical themes that describe the area including early exploration and European settlement, mining, farming, and community development. Initial research and surveys have found the following places of registered cultural heritage:

- Strathmore Homestead; and

- Old Bowen Downs Road (in part) and Bowen Downs Road between Strathmore and Mt Douglas.

The sites generally have a moderate significance rating. Mitigation measures will be implemented to confirm the results of site investigations, record the details of the sites to archival standard, and relocation of artefacts to an appropriate location.

0.13.18 Social

The social and cultural area of influence for the railway corridor consists of a local and regional area. The local study area is based on the Australian Bureau of Statistics (ABS) Census Collection Districts that are intersected by the rail corridor. The regional study area includes the Local Government Areas of Barcaldine Regional Council (closest town to the rail corridor is Alpha), Isaac Regional Council (closest town to the rail corridor is Clermont), and Whitsunday Regional Council (closest towns to the rail corridor are Collinsville and Bowen).

The local area study indicated the railway will generate mostly positive impacts because construction and operations activities will contribute to the local economy. A regional study confirmed that the Regional Councils will be positively affected due to increased employment and business opportunities. These in turn will lead to potential population stability through increased opportunities.

As part of the Proponent's community consultation program, discussions are continuing with landowners and occupiers in the vicinity of the railway corridor. The discussions will include the provision of information of additional relevant information as the implementation plans for the project are further developed. The discussions will include appropriate compensation arrangements to ensure the land holders' specific requirements are properly satisfied.

0.13.19 Economics

The new railway represents a significant project within the local, state and national context. The construction phase 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 ancillary materials will result in some stimulus to the manufacturing sector. The construction workforce is estimated to reach 2,680 and the long terms operations workforce is estimated at 225.

Significant flow on employment is anticipated throughout the economy through both the construction and operational phases. The capacity of the local economy to meet the employment demand resulting from the project is limited. To mitigate this issue the Proponent will establish several accommodation villages along the railway corridor to accommodate the construction workforce.

0.13.20 Decommissioning and Rehabilitation

Consideration of matters affecting final decommissioning and rehabilitation of the railway line will take into account third party usage of the rail infrastructure. The effective life of the rail line is expected to extend well beyond the 30 year period contemplated in this EIS and it is envisaged the infrastructure would not be decommissioned within that time frame.

Eventual decommissioning and rehabilitation would take into consideration the requirements for removal of redundant infrastructure, final landforms, landscape amenity and sustainability.

0.13.21 Health and Safety

The Proponent is committed to providing a safe and healthy working environment to its employees, contractors, and visitors and to operating the mine with minimal impacts upon the environment and

community. The health, safety, environment, community and heritage matters will be managed through implementation of the Proponent's Integrated Management System through which personnel will be inducted and which will document the ongoing management requirements.

0.14 Management Strategies and Commitments

As part of the Proponent's management strategies and commitments an Environmental Management Plan and Social Impact Management Plan have been prepared as part of the EIS documentation.

0.14.1 Environmental Management Plan

An Environmental Management Plan will be developed and implemented in accordance Section 201 of the *Environmental Protection Act 1994*. The content of the plan must address legislative guidelines. The commitments expressed are measurable and auditable and the plan defines strategies to achieve the stated requirements.

0.14.2 Social Impact Management Plan

The Social Impact Management Plan (SIMP) is intended to support ongoing management of the potential social impacts of the project. In recognition of the changing nature of impacts over the life of the project, the SIMP will be adaptive and reassessed at regular intervals. Benchmarks will be established and monitored continuously throughout implementation. Detailed review of the SIMP will occur following each release of new census data and monitored using annual census updates to proactively identify any sudden or unexpected changes in the social environment or impacts.

The Social Impact Management Plan is based on a three stage approach:

- Stage 1 - Develop the draft SIMP based on social impact analysis and conclusions;
- Stage 2 - Consult key stakeholders and discuss roles and responsibilities, benchmarks, reporting, monitoring and program evaluation within the SIMP; and
- Stage 3 - Social Impact Management Plan implementation.

The Proponent acknowledges that local council roles and inputs into the SIMP are currently limited. The three stage process has been designed so that affected stakeholders, particularly local councils, have the opportunity for active participation in the social impact management process.

0.14.3 Proposed Commitments

As part of the EIS approvals process the Proponent has committed to develop and operate the Project in accordance with the appropriate regulatory requirements and approved management plans. The Proponent's commitments are stated in the EIS, and will ensure the Project will be designed and implemented to mitigate potential negative impacts to the stated social, economic and environmental values while aiming to enhance identified positive impacts at every opportunity.

0.15 Relevant Legislation and Policy requirements

In addition to the EIS approval process, the Project will need to obtain other approvals and comply with other relevant legislation and policies (Commonwealth, State and local government) before construction can begin and operations can commence. The following Table 0-1 details key legislative and policy requirements, the relevant authority, approvals and timing applicable to the Project.

Table 0-1 Key Approvals Required for the Project

Legislation	Relevant Authority	Action/ Approval	Timing
Environment Protection and Biodiversity Conservation Act 1999	Department of Sustainability, Environment, Water, Population and Communities (DSEWPC)	Approval of the declared 'controlled action' and EIS (under bilateral agreement between the Commonwealth and Queensland Governments recognises the Queensland EIS process under the SDPWO Act as an appropriate process pursuant to Section 87 of the EPBC Act.). Controlled action determined based on: Sections 12 and 15A (world heritage properties) Sections 15B and 15C (national heritage places) Sections 18 and 18A (listed threatened species and ecological communities) Sections 20 and 20A (listed migratory species) Sections 23 and 24A (Commonwealth marine areas)	2011
State Development and Public Works Organisation Act 1971	Department of Infrastructure and Planning	Approval of the EIS. Application with the Queensland CoG for the Rail component, as to whether it can be considered a "Infrastructure Facility of Significance" under the Community Infrastructure Designation (CID) post the EIS.	2011
Environment Protection Act 1994	Department of Environment and Resource Management including the former Environmental Protection Agency and Department of Natural Resources and Water (DERM)	Approval of EM Plan and issue of an environmental authority to operate the mine	2011
Environment Protection Act 1994	DERM	ERA 8 – Chemical Storage ERA 14 – Electricity generation ERA 31 - Mineral Processing ERA 56 - Regulated Waste Storage ERA 63 - Sewage Treatment ERA 65 – water treatment ERA 60 – waste disposal	2011
Mineral Resources Act 1989	Department of Employment Economic Development and Innovation including the former Department of Mines and Energy (DEEDI)	Grant of ML for MLA 70426	2011
Sustainable Planning Act 2009	Assessment Managers	Grant of any development permits (if required)	2011
Vegetation Management Act 1999	DERM	Vegetation clearing	2011
Nature	DERM	Interference with species listed under the	2011

Legislation	Relevant Authority	Action/ Approval	Timing
Conservation Act 1992		Nature Conservation (Wildlife) Regulation 1994	
Water Act 2000	DERM	Licensing of water course diversions and crossings Licensing for bores constructed as part of the groundwater monitoring network Hazardous dam approval	2011
Aboriginal Cultural Heritage Act 2003	DERM	Approval of Cultural Heritage Management Plan	2011

Other Project considerations may include a range of state and regional policies, frameworks, designations and plans such as:

- State Planning Policies and regulations;
- The Northern Economic Triangle (NET);
- The Jericho Shire Planning Scheme;
- The Abbot Point State Development Area Plan; and
- The Sustainable Futures Framework for Queensland Mining Towns.

Other approvals that may be required, prior to development of the project:

- Material Change of Use for an environmentally relevant activity under the *Environmental Protection Act 1994* and *Sustainable Planning Act, 2009*;
- Registration Certificate for relevant activities under the *Environmental Protection Act 1994*;
- Cultural Heritage Management Plan, under the *Aboriginal Cultural Heritage Act 2003;*
- Vegetation Clearing - *Vegetation Management Act 1999* and *Sustainable Planning Act, 2009*;
- Protection of Wildlife and Vegetation under the *Nature Conservation Act, 1992*; and
- Riverine Protection Permit under the *Water Act 2000*.

0.16 Commonwealth Environmental Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* prescribes the Commonwealth Government's role in assessment and management of protected areas. The act identifies six matters of national environmental significance. The act requires assessment and approval for any activity that has, or may have, significant impact on a matter of national environmental significance. The Proponent referred the Alpha Coal Project to the Commonwealth recommending the Project was a controlled action due to potential impacts on matters of national environmental significance. It was confirmed on 13 January 2009 that the Project is a controlled action; 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 ecological communities)
- Sections 20 and 20A (listed migratory species)

As a consequence of this decision, the Commonwealth Minister for the Environment, Water, Heritage and the Arts will review the EIS to ensure that it adequately addresses the requirements of the *Environment Protection and Biodiversity Conservation Act 1999*. The Minister's assessment will follow preparation of the assessment report by Department of Infrastructure and Planning.