Section 01 Introduction

1.1 Overview of Project

Hancock Prospecting Pty Ltd (HPPL) (the Proponent), through its wholly owned subsidiary company, Hancock Coal Pty Ltd (HCPL), is proposing to develop the Alpha Coal Project (the Project), a 30 million tonnes per annum (Mtpa) open cut coal mine to target the C and D Seams in the Upper Permian coal measures of the Galilee Basin, Queensland, Australia. The coal mine will be supported by privately owned and operated rail and port infrastructure facilities. At the Project site the coal will be mined, washed and conveyed to a train load-out facility where it will be transported approximately 495 kilometres (km) to the east coast of Australia to the port facility at Abbot Point for export.

1.2 Project Proponent

HPPL is a diversified Australian energy and resources company, with a strong record of pioneering the economic development of regional Australia. Since it was established in the mid 1950s, HPPL has demonstrated a strong commitment to the growth of Australia's mineral wealth, and has continued to seek and develop additional resource deposits across the country.

HCPL has a long-standing interest in the development of the Galilee Basin, having held coal exploration permits and investigated the Alpha region since the 1970s.

In the 1970s, coal resource exploration commenced in the Galilee Basin, which was at the time considered to be uneconomic due to the lack of associated infrastructure on Australia's east coast. Now, with more developed rail and port infrastructure coupled with the global demand for thermal coal, there is a development opportunity for this area of regional Queensland.

In addition to the proposed Project, HPPL is currently involved in the following projects:

- Hope Downs Joint Venture (JV) in Western Australia Two distinct mining operations currently producing 30 Mtpa of iron ore, awaiting approvals for proposed expansions to the current operation;
- Roy Hill 1 project in Western Australia Bankable Feasibility Study (BFS) work has commenced and this study is expected to be concluded at the end of 2010. The Roy Hill project comprises a large scale Marra Mamba iron ore deposit located in the Chichester Ranges of the Pilbara region. The deposit has more than 2.4 billion tonnes of low phosphorous iron ore resources;
- Kevin's Corner The Kevin's Corner Project is a recognised thermal coal deposit within the Galilee Basin, just north of the proposed Alpha Coal Project (Mine). The project is currently undergoing the BFS process; and
- Nicholas Downs The Nicholas Downs Project is located approximately 130 km north west of Newman in the East Pilbara, Western Australia. Nicholas Downs is a ferruginous manganese deposit comprising three Mining Leases, which were granted in 1982.

Refer to Volume 4, Appendix E for a copy of the Proponent's environmental policy.

Refer to Volume 2, Section 21 for details of the Proponent's Health and Safety system.

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1.3 **Project Description**

1.3.1.1 Coal Mine

The proposed coal mine is located within Mining Lease Application (MLA) 70426 (refer to Figure 1-1). The open cut coal mine is proposed to produce 30 Mtpa of thermal coal for the export market. The expected life of mine (LOM) is 30 years, with sufficient resources to potentially extend the project life beyond 30 years.

The timing of the Project is detailed in Volume 2, Section 2.1.2.

The Project consists of four open cut pits (with a total strike length of approximately 24 km) in a north to south direction through the centre of MLA 70426. The overburden will be removed by truck and shovel, excavators and dragline operations. The overburden will be initially stockpiled in out-of-pit spoil emplacements and then used to backfill the open cut pits. The coal will be mined and transported by truck and shovel operations. Raw coal will be processed at two Run of Mine (ROM) facilities where it will be reduced in size for further processing at the Coal Handling and Preparation Plant (CHPP).

1.3.1.2 Coal Handling Preparation Plant and Mine Infrastructure

Sized raw coal will be transferred from the ROM facilities via conveyors to the multi-module CHPP, where it will be processed to produce low ash export thermal product. A tailings storage facility (TSF) is required for the fine rejects (also known as tailings) for up to the first five years of operation. The coarse rejects from the CHPP will initially be placed in designated locations within the open cut pit spoil dumps opposite the CHPP. In pit disposal will occur once sufficient mine void space is available.

The mine infrastructure will include:

- Main workshop; warehouse; administration buildings; training and emergency services building; tyre bay; light vehicle workshop; and dragline bucket repair shop;
- Train Load-out (TLO) facility and rail loop;
- Raw water dams and environment dams;
- Construction and operation accommodation village facilities;
- Mine access road;
- General landfill;
- Borrow pits;
- Fuel and oil, explosives storage facilities;
- Creek diversions, drainage channels and levee bunds;
- Water and wastewater systems;
- Water treatment plant and sewerage treatment plant;
- Electrical systems; and
- Communications systems.

Figure 1-2 illustrates the location of all the above key components of the project, including the four open cut pits.



Mining Lease Allpication (MLA70426) Boundary

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1.4 **Project Rationale**

The Project aims to become a provider within the world thermal coal market. To achieve this aim, the Proponent proposes to develop an open cut mine to extract and produce a thermal coal product for the growth markets in Asia. On a local scale, the Project aims to further the long-term socio-economic development of Queensland, the Galilee Basin and the local region.

The Proponent is dedicated to the principles of sustainable development, which encompass commitments and policies relating to health, safety, the environment and the community/heritage (HSECH) that are consistent with legislation and best practice.

To achieve the above aim, the scope and objectives of the Project are to:

- Design, construct, and operate a mine, comprising HSECH standards and indicators, and comply with legislation and industry best practice;
- Obtain optimal production and sales from the available resources; and
- Use existing proven strategies and industry best practice to minimise impacts associated with the Project.

As detailed below in Section 1.9.2 the Project was declared a State Significant project under the *State Development and Public Works Organisation Act 1971* (QLD) (SDPWO Act) by the Coordinator-General of the State of Queensland (CoG). The SDPWO Act allows the CoG to declare a project to be a significant project, based on one or more of the following criteria (Department of Infrastructure and Planning [DIP], 2010):

- Complex approval requirements, including local, state and Commonwealth government involvement;
- A high level of investment in the state;
- Potential effects on infrastructure and/or the environment;
- Provision of substantial employment opportunities; or
- Strategic significance to a locality, region or the state.

The socio-economic cost and benefits of the Project, and Project need and alternatives are detailed in Sections 1.6 and 1.7, respectively.

Volume 1, Section 1 details the overall Project rationale and discusses the infrastructure needs of the state and the central Queensland economies. Volume 1, Section 1 also discusses the Project's role in supporting state development.

1.4.1 Project Technical Feasibility and Commercial Viability

Prior to the preparation of this Environmental Impact Statement (EIS), a comprehensive pre-feasibility study was conducted by the Proponent and all key technical aspects of the Project were assessed. They included the location and quantity of the in situ coal resource, coal quality and yield, on-site extraction and processing requirements, and the requirements for transporting and exporting product coal to customers. Key social factors were also assessed, such as existing environmental conditions, local and regional communities, native title and cultural heritage requirements, and the regulatory regime in which the Project would operate. The outcomes of that study confirmed the Project's coal quality specification is attractive for end users. The studies also confirmed the Project's technical

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feasibility by demonstrating that the Project could be developed and operated at acceptable levels of technical risk and at the same time satisfy all 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, demand for coal as an energy source will remain strong. Additionally, while the coal industry in Australia has substantial asset consolidation; customers will support other operators by virtue of their independence. This is because independent suppliers provide customers with procurement diversity. These factors, plus the ability to produce a competitive product at acceptable levels of return, underpin the commercial viability of the Project.

1.5 Relationship to other Projects

1.5.1 Alpha Coal Project

The Alpha Coal Project has three components; the coal mine, rail corridor, and port facilities. These and their inter-relationships are detailed below.

The Alpha coal mine (the subject of Volume 2 and Volume 5 of this EIS) is a proposed 30 Mtpa open cut thermal coal mine. At the Project site the coal will be processed (CHPP) and then conveyed to a train load-out facility where it will be transported to the port facility at Abbot Point for export.

The privately owned and operated rail infrastructure (the subject of Volume 3 and Volume 6 of this EIS) is a proposed single gauge, single track, non-electrified, 495 km long rail line for the purpose of transporting product coal to the export facilities at Abbot Point.

It is proposed to use the existing Abbot Point Coal Terminal for the export of product coal. The North Queensland Bulk Ports Corporation (NQBP) is the owner and port authority for the Port of Abbot Point. The port facility has a current capacity of 21 Mtpa. In 2007, approvals were granted to expand to 50 Mtpa. The NQBP has just completed a Voluntary Environmental Assessment (VEA) for a proposed expansion to 110 Mtpa (the Abbot Point X110 Infrastructure Development Project). The key infrastructure for the X110 Infrastructure Development Project includes:

- Installation of new stockyard capacity involving up to 10 stockpile rows;
- Installation of up to 15 new stockyard machines;
- Installation of a second offshore jetty structure with two out-loading conveyors;
- Two new offshore wharf/berth structures with two new ship-loaders; and
- Rail receival pits and associated in-loading conveyors.

1.5.2 **Projects in the Region**

There are a number of other projects either existing or progressing in the region that are at various stages of the Environmental Impact Statement (EIS) process and/or development. These include mining and non-mining projects, details of which are provided in Table 1-1.

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Table 1-1 Other Mining and Infrastructure Projects in the Region

Project Name and Proponent	Location	Description	Project Status	
Existing Projects				
Blackwater, BMA	Blackwater	Open cut coal mining operation producing 11 Million tonnes per annum (Mtpa) and employing 1,570 personnel.	30 years mine life remaining.	
Blair Athol, Rio Tinto Coal Australia Ltd	Clermont	Open cut coal mine operation producing 11 Mtpa with 290 employees.	5 years mine life remaining.	
Clermont, Rio Tinto Coal Australia Ltd	Clermont	Open cut coal mine operation producing 12 Mtpa with 360 employees.	7 years mine life remaining.	
Cook, Caledon Resources PLC	Blackwater	Underground coal mine operation producing 12 Mtpa with 360 employees.	At least 10 years mine life remaining.	
Crinum, BMA	Tieri	Underground coal mine operation producing 4 Mtpa with 420 employees (live in Emerald).	15 years mine life remaining.	
Curragh, Wesfarmers Ltd	Blackwater	Open cut coal mine producing 7 Mtpa. Curragh operations employ 1,530 staff, in total.	At least 10 years mine life remaining.	
Curragh North, Wesfarmers Ltd	Blackwater	Open cut coal mine producing 3 Mtpa.	At least 20 years mine life remaining.	
Ensham, Ensham Resources Ltd	Emerald	Open cut coal mine producing 7 Mtpa with 600 employees.	At least 20 years mine life remaining.	
Gregory, BMA	Tieri	Open cut coal mine producing 2 Mtpa with 225 employees (live in Emerald).	Only two years of mining remaining.	
Jellinbah East, Jellinbah Resources Ltd	Blackwater	Open cut coal mine producing 4 Mtpa with 380 employees.	At least 10 years mine life remaining.	
Kestrel, Rio Tinto Coal Australia Ltd	Tieri	Underground coal mine producing 4 Mtpa with 515 employees (live in Emerald).	At least 20 years mine life remaining.	
Yarrabee, Yancoal Australia Ltd	Blackwater	Open cut coal mine producing 2 Mtpa with 220 employees.	15 years mine life remaining.	
Proposed Projects				
Galilee Basin Power Station, Galilee Power Pty Ltd (fully owned subsidiary of Waratah Coal Pty Ltd)	Coal-fired power station producing 900 megawatts (MW) (net).	Alpha, 30 km north-west, immediately to the east of Waratah Galilee Coal Mine.	Initial Advice Statement (IAS) completed	
Alpha Coal Project, Hancock Prospecting Ptv Ltd	Open cut coal mine producing 30 Mtpa.	Alpha, approximately 50 km north-west.	EIS in progress	

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Project Name and Proponent	Location	Description	Project Status
Waratah Galilee Coal Mine, Waratah Coal Inc.	Open cut mine with export capacity of 25 Mtpa and capability to expand to more than 50 Mtpa.	Alpha, 13 km west and 35 km north.	EIS in progress
Kevin's Corner, Hancock Galilee Pty Ltd (HGPL)	Open cut and underground mining operation with final capacity of 30 Mtpa.	Alpha, 56 km to north.	EIS in progress
The South Galilee Coal Project (SGCP), joint venture of AMCI (Alpha) Pty Ltd and Alpha Coal Pty Ltd.	15-20 Mtpa open cut and underground mining operation and associated infrastructure.	Alpha, immediately south-west.	IAS completed
Powerlink power transmission line	Transmission lines from Lilyvale substation to a new Galilee Hub substation (during construction phase of the project).	-	-
SunWater raw water line	Water pipeline from Connors River Dam to raw water dam within MLA 70426 (during construction phase of the project).	-	-
Ensham Underground 1, Ensham Resources	-	Emerald	Supplement EIS submitted
Ensham Underground 2, Ensham Resources	-	Emerald	Supplement EIS submitted



The projects with a direct geographic relationship to the Project are:

- Kevin's Corner, Hancock Galilee Pty Ltd (HGPL);
- Powerlink power transmission line; and
- SunWater raw water line.

The proposed Kevin's Corner coal mine is directly north of the proposed Project, with adjoining MLA boundaries, and is being developed by the same Proponent. Both projects are proposed to use the railway line to Abbot Point.

The proposed Powerlink power transmission line and SunWater raw water line are to be used to provide energy and raw water for the Project as detailed in Volume 2, Section 2.5.

The Galilee Basin Power Station, Waratah Galilee Coal Mine (China First), and the South Galilee Coal Project are proposed projects within the local area. The Proponent is investigating the potential for any co-location opportunities and future inter-relationships between the proposed Project and others in the local area.

1.6 Socio-economic Cost and Benefits of the Project

The Project will result in significant socio-economic impacts throughout the region, Queensland and Australia. The overall level of economic activity resulting from Project construction and operation phases will result in positive effects throughout the Queensland economy. The major social-economic impacts of the Project include:

- The short-term creation of approximately 1,060 construction jobs;
- The long-term creation of approximately 2,300 operational job opportunities (including contractors);
- Flow-on (indirect) peak employment effects throughout the Queensland economy of approximately 7,230 full time equivalent (FTE) positions (including 2,850 indirect FTE positions) during construction and 8,338 FTE positions (including 2,859 indirect FTE positions) in operation;
- Peak value added effects of approximately \$750 million (including \$262 million in indirect value added effects) resulting from construction and capital expenditure, and \$1,770 million in value added effects (including \$655 million in indirect value added effects) resulting from ongoing and operational expenditure; and
- The Project will produce approximately 856 million tonnes (Mt) of coal for export from Queensland throughout the life of the mine. The value of these exports to the Queensland economy will be approximately \$83.6 billion. Once fully operational the coal mine will produce approximately 30 Mtpa of coal exports, equating to a value of \$2.9 billion per annum.

1.7 Alternatives of the Project

1.7.1 No Project Option

In the event that the Project was not to proceed:

- A total of 1,060 mine construction jobs and 2,300 mine operational job opportunities (including contractors), along with the flow-on (indirect) employment opportunities would not be created;
- Significant export income would not be realised;

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- Injection of revenue into the regional economy would not occur;
- Significant Queensland and Commonwealth Government taxes and royalties would not be generated;
- The economic opportunity of developing a state-owned coal resource that is viable and in demand would not be realised; and
- The introduction of major infrastructure improvements and opportunities to the region would not be realised (specifically power, rail, and water).

Sustainable development in relation to the Project is discussed in Volume 2, Section 23.

1.7.2 Alternative Locations

As the coal resource is located within MLA 70426, it is not feasible to locate the mining operations at an alternate location. Coal seams that are the target of mining operations do not extend to the east of Lagoon Creek. The coal seams situated further west of the proposed Alpha mine described in this EIS could potentially be mined in the future as part of a separate approvals process.

1.7.3 Mining Methods

The relatively shallow surface depth to coal and near horizontal seam gradient (< 1°) of the deposit at the Project are ideal for open cut mining extraction techniques.

Underground mining was considered as a resource extraction methodology; however, the seam geometry and stripping ratio are not conducive to maximum resource recovery relative to the open cut mining method. Thus the option with the greatest resource recovery utilising proven techniques and technologies was chosen as the best long-term option for the proposed Project, enabling maximum input into the local economy and community.

In determining the most appropriate method for open cut extraction of the resource the following were considered:

- The scale of production (30 Mtpa) demands large equipment in both overburden removal and coal mining;
- The physical geometry of the deposit is ideal for the application of draglines;
- The nature of most of the Tertiary overburden the overburden has geotechnical uncertainties
 regarding the distribution of harder (iron stone) materials and clayey materials. A major proportion
 of the overburden may be amenable to excavation by bucket wheel excavation (BWE); however,
 due to the presence of the iron stone and clayey materials they were discounted;
- The scale of the operation (strike length and width) the mining footprint will be large (24 km by 7 km) and activities will be widely spread;
- Long haulage distances for coal mining requires two ROMs to limit diesel consumption and tyre wear;
- The near horizontal seam dip means the reduction in haulage distances for overburden once steady-state operations are reached. This favours the application of draglines and truck-shovel (pre-strip) operations; and
- The relatively thin coal seams suggest that the progress of the coal faces at a ROM coal production rate of 41 Mtpa will be rapid. This will require a large number of individual faces, which mitigate against the use of crusher-conveyors for ROM coal transport from the mining face.

1.7.4 Coal Handling and Processing

Consideration was given to using cable belt conveyors for coal delivery from the ROM pads to the CHPP. However, a conventional conveying system was chosen over cable belt conveyors for the following reasons:

- The raw coal handling system needs only to transport coal within single flight conventional conveying distance so will not require mid drives and extra transfer stations, hence limiting the potential for a decrease in air quality in the area;
- Conventional conveyor belt systems are better suited to high tonnage conveying such as those proposed; and
- The conveyor terrain is relatively flat and route selection is not complex, which is ideal for a conventional conveying system.

1.7.5 Mine Waste Management

1.7.5.1 Coarse Reject

The coarse rejects generated by the Project will be hauled into reject emplacement areas within the mining area by rear-dump truck. Currently an investigation is being undertaken into the use of a permanent conveyor and spreader system to be installed for the handling of coarse rejects after the mine has reached its full operational capacity. This option has not been assessed as part of this EIS.

An alternative reject disposal concept was also investigated, which enabled the coarse reject material from the CHPP to bypass the reject bin and flow directly to an automated reject handling conveyor system. The evaluation indicated that the additional costs and problems associated with diverting rejects with significant clay content deemed this option not viable (see Section 1.7.5.2.2 below).

1.7.5.2 Tailings Storage Facility

Due to the absence of appropriate mining voids at the start of mining, the tailings material generated by the Project will be stored in an out-of-pit Tailings Storage Facility (TSF). Due to the limited mining related knowledge in the Galilee Basin, and adopting the precautionary approach to protecting the environment, the EIS presents the industry-proven option of an out-of-pit TSF. Additional information on the tailings management strategy and options is presented in Volume 2, Section 16.

In determining the most appropriate tailings management strategy the following options were considered:

- Conventional thickener/tailings dam;
- Co-disposal;
- Thickened tailings disposal, including super flocculation and paste disposal;
- Dry tailings; and
- In-pit disposal.

The use of a conventional tailings dam was arrived at after consideration of several alternative options, which are discussed briefly below and in detail in Volume 5, Appendix J.

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1.7.5.2.1 Conventional Thickener/Tailings Dam

It is proposed to pump the tailings slurry to the TSF at approximately 30% solids. Solids will settle and the tailings water will be decanted into a downstream toe dam for reuse at the CHPP. It is planned that on average 30% of the water pumped from the CHPP will be recycled. TSF construction will be staged with corresponding staged rehabilitation using vegetated coarse rejects, mine spoil and original topsoil. Advantages and disadvantages of this methodology are given below.

- Advantages:
 - Proven outcome methodology;
 - Ease of operation;
 - Recycling of decant water; and
 - Comparatively lower capital and operating costs.
- Disadvantages:
 - Lower recycle water potential when compared to other options;
 - Potential for dam seepage is greater than other options with higher percentage solids disposal; and
 - Potential for delayed rehabilitation due to extended dewatering time. However, this is to be managed through the use of underdrainage and efficient beaching and decanting, to promote early rehabilitation.

1.7.5.2.2 Co-disposal

This method involves pumping a mixture of tailings and coarse reject to a co-disposal dam at about 40 to 45% solids. The discard is spigotted into the dam at variable locations, with water being decanted into a downstream clean water dam for subsequent recycling at the CHPP. The potential for clean water recycling is approximately 30%. The main disadvantages are:

- Larger dam size to cater for both coarse reject and tailings;
- Co-disposal emplacements need to be close to the CHPP due to pumping limitations;
- Dust issues on the large impoundment areas; and
- High electrical power consumption.

The co-disposal option was discounted due to the large electrical power consumption, increase in dust, and the lack of available space near the CHPP. The option of co-disposal is less sustainable when compared to the proven strategies of a conventional TSF.

1.7.5.2.3 Thickened Tailings Disposal

This process involves the further thickening of tailings to up to about 45% to 60% solids. This can potentially be achieved by thickening cones and/or super flocculation. The main disadvantages are:

- Paste thickening
 - The paste is verging on thixotropic, requiring positive displacement pumps working at pressure;



- Rehabilitation is more difficult as the paste is difficult to further dewater; this poses problems for the final rehabilitation of the proposed mine and decreases the sustainable nature of the Project; and
- Paste thickening of coal tailings is difficult because of the comparatively low specific gravity of the tailings material. Applications are normally utilising higher specific gravity tailings, e.g. bauxite or iron ore. Paste thickening of coal tailings is therefore uncommon.
- Super flocculation
 - Rehabilitation is more difficult as the thickened tailings is difficult to further dewater;
 - Effectiveness is tailings specific and dependent on material type, therefore unproven without significant testing of the tailings in the future; and
 - A very high flocculent consumption that requires transporting to site by road, increasing the impact on the regional road network.

1.7.5.2.4 Dry tailings

This method involves the drying of the tailings (approximately 35% moisture) using filters (belt press, plate and frame or similar). The dry tailings are then mixed (on a conveyor) with coarse reject and the resultant mixture is conveyed to a pad outside the CHPP. The reject is then conveyed or trucked to a disposal site. The main disadvantages are:

- Loading and trucking of the combined dry reject is often operationally difficult (with significant spillage) due to poor (high moisture) performance of the filters;
- Higher than planned moisture contents have the potential to cause handling problems (including slumping) at the disposal site; implementing the precautionary principle negates this as a viable option; and
- Dams have to be constructed to handle runoff/seepage at the disposal site, and increasing the Project disturbance area is not deemed a viable environmental option.

1.7.6 Creek Diversions and Levees

A number of creeks run through or are immediately adjacent to the proposed mine area. Engineering controls are required to minimise surface water inflow into the pits in order to maintain the workability and safety of the Project.

Given the topography of the Project area, dip of the coal, footprint of mine pits and mining schedule, and available area within MLA 70426, the Project includes three creek diversions. The main diversion channel is required along the eastern side of the mine pit area to realign Lagoon Creek away from the open pits for approximately 7 km.

Two permanent diversion channels will be located on the western edge of the mine pits to redirect creek and overland flow from entering the pit areas. One channel will direct Spring Creek along the southern side of the pits, discharging into Lagoon Creek.

The larger diversion channel will redirect Sandy (also known as Green tree) Creek and overland flow along the western and northern sides of the pits, with discharge into Sandy Creek near its confluence with Lagoon Creek.

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As the majority of the mine area is below the Average Recurrence Interval (ARI) 100 year flood level, the Lagoon Creek levee is required on the western side of Lagoon Creek, for the full length of the mine, to keep floodwaters from entering the mine pits.

1.7.7 Infrastructure

1.7.7.1 Energy

1.7.7.1.1 Construction

Options for power supply for the construction phase of the Project include:

- Connection to the existing 132 kilovolt (kV) power line near the Project site; and/or
- Portable diesel driven electrical generation units.

The final selection of construction power supply will be subject to and dependent on availability of the existing system capacity and Ergon's ability to supply power in the required time frames. Confirmation of the preferred construction power supply will occur after publication of the EIS. However, until a connection to the existing supply is installed and sufficient for the final site power reticulation to feed the mine, diesel engine powered generator sets are assumed to be needed.

Infrastructure that will be powered during construction will include:

- Bore pumps;
- Potable and wastewater treatment plants;
- Accommodation village;
- Mining Infrastructure Area (MIA);
- Construction lighting and construction equipment;
- Construction offices; and
- Dragline construction pad.

1.7.7.1.2 Operation

Power supply options considered for the operational phase of the Project include:

- Third party supply from external electricity network; and
- Mine site power station.

As the Proponent has no experience in the power generation industry, the option of a mine site power station was not deemed suitable. The preferred operational power supply will be via a multi-user bulk connection transmission line provided by the power supply authority in the area (Powerlink). As a multi-user power supply source, the transmission line does not form part of the EIS for this Project, as HPPL will not be the Proponent of the development. Approvals for the transmission line will likely be sourced under the *Electricity Act 1994*.

The operational power supply will be required prior to the commissioning of the CHPP and any draglines. On-site infrastructure will include:

- 132/22 kV mine area substation, which will be located near the CHPP and MIA, which will supply power to the CHPP, MIA, accommodation village and other general site infrastructure.
- Two 132/66 kV mine area substations, located immediately to the west of the mine pits, which will supply power to draglines and electric shovels.



Emergency operational power, capable of supplying approximately 1,000 kilovolt-ampere (kVA) for the accommodation village and 1,500 kVA for the MIA, will be supplied by diesel generators.

1.7.7.2 External Roads

Access to the mine site will be from the existing Hobartville Road, approximately 4 km from its intersection with the Clermont-Alpha Road. A 30 km section of Clermont-Alpha road from the township of Alpha to its intersection with Hobartville Road will be upgraded to a two-lane sealed standard, as will Hobartville Road from that intersection, also to be upgraded, to the MLA 70426 boundary. That section of Hobartville Road within the MLA 70426 area will be closed to the public.

It was originally proposed to access the site from the Clermont-Alpha Road along Degulla Road, which would have been closed to the public. Instead, Degulla Road will be relocated, partly within an existing road reserve, to the north of the MLA 70426 to facilitate continued public access to areas west of the site. The section of Degulla Road within the MLA 70426 area will be closed to public access.

1.7.7.3 Raw Water

Raw water for construction purposes that is of sufficient quality and quantity will potentially be sourced from groundwater bores and/or existing site storages such as existing farm dams. Subject to further assessment as part of the detailed design of the reliability of these sources, both options for construction raw water will be considered.

For operational raw water supply, the options considered have included:

- Burdekin Falls Dam/Gorge Weir;
- Connors River Dam;
- Nathan River Dam;
- Eungella Dam;
- Fairbairn Dam;
- Gattonvale off-stream storage;
- Groundwater/mine dewatering (supplement only);
- Bowen Basin coal seam gas (CSG) associated water;
- Surat Basin CSG associated water;
- On-site storages; and
- Desalination of saline water.

Neither Eungella Dam, Fairbairn Dam nor the Gattonvale off-stream storage has sufficient unallocated water to warrant further consideration as viable reliable supply sources for the Project.

Based on the present high levels of uncertainty associated with the quality, reliability and availability of CSG associated water to the mine site, CSG associated water is not currently proposed to be used for the Project. This does not exclude the possibility that CSG associated water could be used as a portion of raw water supply at some stage in the future.

On-site storages would be topographically constrained; however, this does not preclude the use of environmental dams, pit water dams, or the tailings decant dam, developed as part of the site's water management system, as a supplementary component (subject to suitable water quality) of the overall site raw water supply.

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Desalination of saline water (seawater, brackish groundwater, CSG associated water) is complex, expensive and results in brine (treated water waste); and thus has been determined not viable for the Project, it is not considered further.

Groundwater has been considered in terms of an allocated supply from (dewatering) aquifers and as supply from in-pit dewatering. Pending further groundwater studies associated with the quantity and quality associated with the Project area, it is likely that groundwater from dewatering (initial estimates indicate insufficient to meet mine water requirements) would form a component of water supply (i.e. conjunctive use to supplement surface water supply).

SunWater is currently raising the crest of Burdekin Falls Dam, resulting in additional storage capacity. SunWater is also proposing to develop a new dam on the Connors River. The Proponent has entered into supply arrangements with SunWater in order to secure reticulated water for the Project.

Initial supplies for construction and operation will come from groundwater as part of the mine dewatering (depressurisation of confined aquifers below the D coal seam) process, with the SunWater arrangements contributing supplies as mine production ramps up.

1.7.7.4 Potable Water Supply and Treatment

Due to the scale of the operation and the relatively remote setting, options for supply and treatment of potable water are limited. Potable water in sufficient quantities and quality is to be generated on-site by treating water from the site raw water supply through a package potable water treatment plant (WTP). It is to be reticulated throughout the site in the dedicated services corridors proposed to be created throughout the MIA/CHPP areas and in a dedicated corridor to the accommodation village.

1.7.7.5 Wastewater Treatment

Due to the scale of the operation and the relatively remote setting, options for treatment of wastewater and sewage are limited. All sewage generated during the Project is to be collected and treated to Class A effluent quality on-site. Wastewater from the MIA, CHPP and accommodation village will be collected and transferred to a package sewage treatment plant (STP) and the effluent reused in the process or disposed of on-site to the TSF decant dam.

Sewage from the remote dragline construction site, TLO and ammonia nitrate fuel oil (ANFO) facility will be collected in septic tank systems and the effluent disposed of by trickle irrigation or evapotranspiration trenches. Solids from septic tank systems will be removed by a contractor on a regular basis for STP sludge disposal.

1.7.7.6 Landfill

Three options were considered in respect of landfill facilities to handle the construction and putrescibles waste streams generated from the mining Project. These included:

- Establishment of a self-managed on-site facility;
- Establishment of an off-site facility, under the ownership and management of a third-party waste contractor; and
- Assist Barcaldine Regional Council (BRC) with the potential development of a regional municipal waste and recycling facility, in close proximity to the Project site.

To allow for the appropriate and cost-effective management of Project-generated waste the on-site self-managed facility is the preferred option.

1.7.7.7 Mine Infrastructure Area Buildings

The MIA provides a focal point for a range of mine operations activities. It includes site administration facilities, car parking, vehicle workshops, warehouse facilities, drum storage area, tyre change facilities, fuel/lube storage facilities, vehicle wash facilities, an emergency vehicle storage facility, and a dragline workshop and bucket repair slab.

Layout design is based primarily on separating heavy mine vehicles from light vehicles. Other considerations include:

- Loop access to MIA area to reduce potential for vehicular and personnel clashes; and
- Centrally located fuel and lube facility to avoid road crossings with pipe work.

Initially, consideration was given to utilising prefabricated buildings within the MIA; however, as the design life is 30 years, in situ construction was preferred as the most cost- and resource-efficient option. Where feasible, prefabricated buildings will be chosen.

1.7.8 Workforce

1.7.8.1 Accommodation

Due to the size of the construction and operational phase workforces and the limited amount of accommodation available within a safe and reasonable travel distance of the Project, stand-alone accommodation will be required for both the construction and operational phases of the Project. In order to minimise costs and potential impacts, the construction accommodation village will be designed to enable its conversion to the permanent operational accommodation village.

Where feasible, components will be modular and prefabricated off-site, in order to facilitate rapid establishment of facilities and to minimise waste generation.

1.7.8.2 Airstrip

Due to the remoteness of the site and the large amount of both construction and operational workforce required for the Project, a fly-in fly-out (FIFO) mobilisation strategy is required.

To provide FIFO services for operational phase staff, two options for aircraft facilities were considered:

- Upgrade of the existing Alpha aerodrome, which is owned and operated by BRC; and
- Establishing a new private facility for HPPL within MLA 70426.

The Proponent reviewed the viability of an on-site airstrip; however, after consideration of the capital and operating costs, together with potential constraints upon mining operations (sterilisation of resources), the decision to use the existing Alpha aerodrome was the preferred alternative.

From the perspective of operational performance and experience, aircraft facilities and services will be provided at the existing Alpha aerodrome, rather than establishing air transport facilities on the mine site for the sole use of HPPL. Upgrade of the Alpha aerodrome will be required to enable the required size and volume of aircraft to utilise the airfield.

BRC will be the Proponent of the development, with contributions made by HPPL. As a multi-user facility, upgrades to the Alpha aerodrome do not form part of the Project. Any required approvals will be sought by BRC.

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1.7.8.3 Mobilisation

For both the construction and operational phases of the Project large numbers of workers will be required on the Project site. The remoteness of the site will necessitate the accommodation of the vast majority of the workforce on-site in accommodation villages. There are three main methods available to the workforce to travel to site; these include FIFO, bus-in bus-out (BIBO) or drive-in drive-out (DIDO). These methods are not exclusive, as workers who fly into the Alpha airport would then be bussed to the Project site.

When formulating the mobilisation strategy for the Project the primary concern was for the safety of the workers and others using the transport routes. The greater the number of workers using the FIFO and BIBO services the lower the number of vehicles on the road and the safer the transport environment for the whole community. For this reason the Project will be using FIFO for approximately 80% of the workforce and BIBO for the majority of the remaining worker mobilisations. Additional information is provided in the Transport and Social sections of this EIS, Volume 2, Sections 17 and 20, respectively.

1.8 Co-location Opportunities

At this stage of the Project and because of the remote location of the site, there are no co-location opportunities as yet identified. However, the Proponent is entering confidential discussions with other nearby projects, developments and infrastructure providers to establish if co-location opportunities are possible to mitigate environmental and property impacts.

As discussed above in Section 1.7.7, the energy and raw water are being supplied to the site by a third party. Other projects and the community will have access to this infrastructure. Likewise, there is potential for the rail corridor to be utilised by other projects in the Galilee Basin.

1.9 The Environmental Impact Assessment Process

This section describes objectives of an EIS, and the Queensland and Commonwealth legislative processes that apply to the Alpha Coal Project (Mine) EIS.

1.9.1 Objectives of the Environmental Impact Statement

The EIS has been prepared to inform decision makers, affected parties, interest groups and the public about potential environmental issues relating to the development and operation of the Project, and how these issues will be managed. The content of the EIS addresses the issues identified in the Terms of Reference (TOR) (Volume 4, Appendix A) issued by Department of Infrastructure and Planning (DIP).

This 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 DIP will review the Project to identify any uncertainties or omissions. A supplementary report may be necessary to cover any additional matters of concern, and 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, the supplementary report. The EIS process allows for community consultation and ensures environmental protection by comprehensive consideration of potential impacts and management strategies. The DIP 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 impacts that may occur, and the measures to be taken to mitigate all adverse impacts;
- The DIP 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 (EM Plan) is included in the EIS, describing potential impacts and environmental management strategies designed to meet agreed performance criteria.

The EIS relates to the entire life of the Project, including construction, operation, maintenance, and decommissioning even though this is at least 30 years away. The EIS enables reasonable, cost-effective and technically achievable conditions to be developed to ensure that the social and environmental impacts of the Project are reduced to acceptable levels. The level of analysis and detail in the EIS reflects the environmental risks and level of significance of particular impacts.

1.9.2 Queensland Government Process

This section details the Queensland Government's EIS process under the SDPWO Act. A flowchart showing this process under the SDPWO Act is shown in Figure 1-3.

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To initiate the EIS process under the SDPWO Act, an Initial Advice Statement (IAS) for the Project was lodged with the CoG in September 2008. On 21 October 2008 the CoG declared the Project a *significant project* for which an EIS is required, in accordance with Part 4 of the SDPWO Act. The EIS process for the Project is administered by the DIP for the CoG.

The draft TOR for the EIS was prepared and released for comment between 7 February 2009 and 9 March 2009. A total of 22 submissions on the draft TOR (from advisory agencies, the public and organisations) were received. All matters raised were evaluated and where appropriate incorporated into the final TOR. The final TOR was released by the CoG in June 2009. A copy of the final TOR is provided in Volume 4, Appendix A. A cross-reference to where each aspect is discussed in the EIS is provided in Volume 5, Appendix A.

The impact assessment process under the SDPWO Act is also the subject of a bilateral agreement between the Queensland and Commonwealth Governments in relation to environmental assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Proponent referred the proposal to the Commonwealth Minister for the Environment, Heritage and the Arts in accordance with the provisions of the EPBC Act. This is discussed further in Section 1.9.3.

A public notice has been placed in relevant local and state newspapers advising the public where copies of this EIS are available for inspection or purchase; that submissions may be made to the CoG about the EIS; and the time frame for the submission period. Refer to Section 1.9.5 for details. During this advertising period, members of the public have the opportunity to make submissions about the EIS. Following the submission period, the Proponent may be required to prepare a supplementary report/addendum to the EIS to address specific matters raised in submissions on the EIS.

At the completion of the assessment phase, the CoG will prepare a report evaluating the EIS and other related material, pursuant to Section 35 of the SDPWO Act. The CoG's report will include an evaluation of the environmental effects of the Project and any related matters, and will reach a conclusion about the environmental effects and any associated mitigation measures. The evaluation will take into account all relevant material, including the EIS; all properly made submissions and other submissions accepted by the CoG; any other material the CoG considers is relevant to the Project, such as the supplementary report/addendum to the EIS; comments and advice from advisory agencies; and technical reports on specific components of the Project.

In addition to the requirements under the SDPWO Act and EPBC Act, the Project will require approvals in accordance with local and state legislation, for example an Environmental Authority (EA) (refer to Section 1.10 for details on other approvals).

1.9.2.1 Environmentally Relevant Activities and Environmental Authorities

An ERA (Environmentally Relevant Activity) is defined in the *Environmental Protection Regulations 1998* (EP Regulations) as those activities that have the potential to impact negatively on the environment. An EA is required for mining activities as defined under Section 147 of the EP Act. Under the EP Act, a non-standard mining activity is a Level 1 ERA, which requires an Environmental Authority (EA). As the Project is a non-standard mining activity, the Proponent must submit an application to the Department of Environment and Resource Management (DERM) for an EA (mining activities). This application must be accompanied by the completed EIS and the EIS assessment report. An applicant for a non-standard mining activity is also required to submit an environmental management document. If the application is for a mining lease, the environmental management

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document must be an EM Plan (refer to Section 1.10.2.2). A draft EM Plan for this Project is included in Volume 5, Appendix P.

1.9.3 Commonwealth Government Process

Under the EPBC Act, a project will require approval by the Commonwealth Minister for the Environment if it has been declared a controlled action that will have, or is likely to have, a significant impact on a matter of national environmental significance. Matters of national environmental significance include:

- World Heritage properties;
- Ramsar wetlands of international importance;
- Listed threatened species or communities;
- Migratory species protected under international agreements;
- Nuclear actions; and
- Commonwealth marine environment.

The Proponent referred the Project to the Commonwealth Minister for the Department of Sustainabiliy, Environment, Water, population and Communities (DSEWPC) in accordance with the provisions of the EPBC Act. On 13 January 2009, the delegate of the DSEWPC determined the Project to be a *controlled action* under the EPBC Act for potential impacts on the following matters of national environmental significance:

- 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)

The 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.

The DSEWPC is an advisory agency to the Queensland Government for the Project's EIS process. As part of the EIS process, the Commonwealth Minister for the Environment, Heritage and the Arts will review the EIS to ensure that it adequately addresses the requirements of the EPBC Act. The Minister's assessment will follow preparation of the assessment report by DIP. The DSEWPC will ensure that input from other relevant Commonwealth agencies is provided.

1.9.4 Studies

Numerous studies and surveys have been undertaken in developing the Project (pre-feasibility) and preparing this EIS (biophysical and social technical studies), including the following:

- Concept and Pre-Feasibility Studies.
- Bankable Feasibility Study (ongoing) continues the work of the previous studies to define the Project in greater detail.
- Technical studies including, but not limited to:
 - Transportation studies for personnel to site including air travel;
 - Air Quality/Dust;

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- Noise and Vibration;
- Cultural Heritage (Indigenous and Non-Indigenous/Historical);
- Greenhouse Gas (GHG) Emissions;
- Groundwater;
- Surface water;
- Social and Economic Impacts on the region and state;
- Aquatic and Terrestrial Ecology;
- Geochemical testing; and
- Tailings design studies.

The following table (**Table 1-2**) briefly outlines the EIS structure and the technical studies undertaken as part of or prior to the EIS process. The study/survey methodology and results for each of these studies are described in more detail and referenced in the relevant sections of this EIS (including the appendices).

Table 1-2 EIS Structure	and Technical Studies
-------------------------	-----------------------

Volume 2 EIS Section	Title	Studies Undertaken
1	Introduction	Provides a general description of the Project, the Proponent and relationship of the proposed Project to other mine developments within the Galilee Basin region. It also summarises applicable legislation, approvals and objectives for the Project.
		Discusses the need for the Project and presents the Project's technical feasibility and commercial viability. Alternatives to the Project as well as socio-economic issues and benefits of the Project are discussed.
2	Project Description	Provides a detailed description of the Project, including information on location, Project components, mining tenures, mine design, mine facilities and infrastructure, coal handling and preparation, water management, power supply and other infrastructure.
3	Climate	Describes rainfall patterns, humidity, air temperature, wind (speed and direction), stability class, mixing height and temperature inversions within the region of the Project.
4	Geology	Describes the regional and site geology and the economic coal seams of the Project site.
5	Soils, Topography and Geomorphology	Describes the topographic and geomorphological features of the Project site. A soil survey and land resource assessment was undertaken to classify soil profile types, assess suitable topsoil material and identify the potentially hostile soil material within the Project site.
6	Land Use and Tenure	Assesses the historical and current land uses, and describes the tenure of the Project.
7	Land Character	Describes in general terms the existing landscape character of the Project site and surrounding areas. The study also provides description of existing landscape features and views that are considered most likely to be valued by sectors of the local and broader community.

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Volume 2 EIS Section	Title	Studies Undertaken
8	Contaminated Land	A contaminated land preliminary site investigation was carried out at the Project site to determine if any previous or current land uses have resulted in possible contamination issues.
9	Terrestrial Ecology	The study describes the terrestrial ecology of the Project site in terms of environmental values and potential impacts and mitigation measures. Methodologies to describe the status of terrestrial flora and fauna were done though searching of relevant databases, review of other secondary data, and actual ground survey.
10	Aquatic Ecology and Stygofauna	The aquatic ecology and stygofauna of the Project site were described in terms of environmental values and potential impacts and mitigation measures. The status of the ecological values was determined through searching of relevant databases, review of other secondary data, and actual ground survey.
11	Surface Water	The surface water study described the surface water resources of the Project site and surrounds. It included descriptions of regional stream flows, existing drainage conditions, existing water quality, and flooding study, among others. Impacts of the Project on the surface water resources were also studied and water management measures identified.
12	Groundwater	The groundwater study described the groundwater resources in the area in terms of geology – host aquifers, groundwater levels and flows, groundwater use, and quality, among others. Impacts of the Project on groundwater quality and regional groundwater levels were assessed.
13	Air Quality	The air quality assessment for the Project has considered the potential generation of dust from the site due to earth moving and mining activities associated with the construction and operation of the Project. This assessment evaluates the emission sources together with the proposed mitigation measures, to determine the potential impacts on the environment and at local residential communities.
14	Greenhouse Gas Emissions and Climate Change	Provides detail on and assesses the Project's greenhouse gas impacts and management strategies.
15	Noise and Vibration	The noise and vibration study describes the existing background noise of the Project site and surrounds, and identifies the potential construction and operational noise and vibration (including blasting and transport noise) impacts associated with the proposed development on the community and environment.
16	Waste – General	The study provides technical details of waste generation, treatment, minimisation and management, including details of the proposed on-site landfill facility.
	Waste – Mine	Geochemical assessment of mineral wastes was undertaken to determine the potential for acid mine drainage, the concentrations of trace metals in the spoil, and potential for contamination, and the feasibility of using the spoil material for site rehabilitation.
17	Transport	A traffic assessment was completed to account for the different traffic demand characteristics of both the construction and operation phases. Traffic impacts, pavement impacts, and required upgrades were identified in the study.

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Volume 2 EIS Section	Title	Studies Undertaken
18	Indigenous Cultural Heritage	Indigenous cultural heritage places and values were recorded as part of cultural heritage investigations. The study presents a description of the process for identification and management of Indigenous cultural heritage associated with the Project.
19	Non-Indigenous Cultural Heritage	Non-Indigenous cultural heritage places and values were recorded as part of cultural heritage investigations. The study presents a description of the process for identification and management of non- indigenous cultural heritage associated with the Project.
20	Social	A social impact assessment was conducted to help understand the potential impacts that the proposed Project may have on the community. A baseline study of the community's existing social environment was developed by analysing demographic characteristics, social infrastructure, social values and lifestyles. This was then used to help predict any social impacts the community may face, or changes that may occur to the existing social environment, by introducing the proposed Project.
	Community	A program of community consultation and stakeholder engagement was carried out to identify community issues and concerns, ensure that the Proponent is responsive in mitigating against issues, to proactively work with stakeholders and to continue a long-term relationship between the Proponent and the local community.
21	Health and Safety	The study assessed the health and safety issues associated with the Project's construction, operational and decommissioning phases. Mitigation strategies are outlined where appropriate.
22	Economics	Potential direct and indirect impacts on the local, regional and national economies as a result of the Project have been identified and quantified where possible. Strategies have been provided to mitigate potential negative economic impacts and maximise the potential economic benefits that would potentially occur.
23	Sustainability	The sustainability principles of the Project are addressed.
24	Hazard and Risk	The hazards are analysed to identify any significant residual risks to human health, safety or natural ecosystems.
25	Decommissioning and Rehabilitation	Details of the Project's rehabilitation, decommissioning and closure procedures and commitments are provided.
26	Environmental Management Plan (EM Plan)	This section presents the draft EM Plan for the Project that describes management strategies to achieve acceptable environmental conditions and makes commitments about how impacts will be managed.
27	Social Impact Management Plan (SIMP)	This section presents the SIMP for the Project, which describes management strategies to achieve acceptable social outcomes and makes commitments about how impacts will be managed.
		Appendices provide supporting technical documentation.

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1.9.5 Environmental Impact Statement Submissions

Copies of the EIS have been submitted to the DIP. The DIP is to distribute the EIS for public and Advisory Body review and comment. The EIS has been placed on public display at the offices of the Barcaldine Regional Council and copies made available to interested persons. An electronic copy of the EIS is available for download from the DIP (<u>http://www.dip.qld.gov.au</u>) and <u>www.hancockcoal.com.au</u>.

Any person, group or organisation can make a written submission about the EIS to the DIP. Such submissions do not have to relate to the whole of the EIS and may relate to any aspect. Persons making a submission do not have to be an expert in any of the issues assessed in the EIS.

EIS comments and submissions must be made in writing and sent to the DIP within the comment period, as advertised in the public notice about the EIS.

All submissions, comments and enquiries regarding this EIS should be addressed to:

EIS Project Manager Alpha Coal Project Significant Projects Coordination Department of Infrastructure and Planning PO Box 15009 CITY EAST QLD 4002 Tel: (07) 3238 3131 Fax: (07) 3225 8282

The DIP and Advisory Bodies will consider public submissions in making decisions in relation to the Project. The DIP will coordinate the consultation process between the Proponent and the Advisory Bodies and the public, and collate and review all comments received on the EIS. HPPL may then be required to prepare a supplementary report addressing the comments submitted by the Advisory Bodies and the public. At the conclusion of this process, the DIP will prepare an assessment report on the EIS.

1.9.6 Public Consultation Process

Consultation with advisory agencies, members of the public, community groups, and other stakeholders has formed an integral part of the EIS preparation phase and will continue during Project development and operations. The community consultation process aims to ensure clear, transparent, two-way communication between the Proponent and the interested and affected stakeholders through listening, recording and responding to issues relating to the Project. The process provides an opportunity for the Proponent to impart information to stakeholders regarding the Project, to obtain valuable local knowledge from these groups, and to respond to concerns through appropriate action. It provides stakeholders with an opportunity to express their views and concerns, provide feedback, and partake in the EIS process.

A variety of communication tools and activities were used to inform and receive feedback, including meetings, newsletters, presentations, and a free-call number. Details of the consultation activities are described in Volume 2, Section 20 and Volume 5, Appendix O. Responses from all parties have been collated and considered in the design of environmental and social plans and strategies.



The key objectives of the consultation program were to:

- Initiate and maintain open communication between stakeholders and the Proponent on all aspects of the Project and the environmental impact assessment work;
- Inform the different interest groups about the proposal and encourage their involvement in the process;
- Seek an understanding of interest groups' concerns about the proposal;
- Explain the impact assessment methodology and how public input might influence the study outcomes;
- Provide an understanding of the regulatory approval process;
- Seek local information and input into the Project by providing a range of opportunities for stakeholders to identify key issues for consideration; and
- Proactively work with the community to propose strategies to minimise adverse impacts.

1.10 Project Approvals

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. This section details the main legislative and policy requirements applicable to the Project. Local government laws and policies are discussed in detail in Section 1.10.3. Key approvals required for the Project are summarised in Table 1-3.

Legislation	Relevant Authority	Action/ Approval	Timing
Environment Protection and Biodiversity Conservation Act 1999	DSEWPC	Approval of the controlled action and EIS (under bilateral agreement)	2011
State Development and Public Works Organisation Act 1971	DIP	Approval of the EIS	2011
Environment Protection Act 1994	DERM	Approval of EM Plan and issue of an environmental authority to operate the mine including a hazardous dam.	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	Pre Construction
Mineral Resources Act 1989	DEEDI	Grant of ML for MLA 70426	2011
Sustainable Planning Act 2009	Assessment Managers	Grant of any development permits (if required)	Pre Construction
Vegetation Management Act 1999	DERM	Vegetation clearing	Pre Construction
Nature Conservation Act 1992	DERM	Interference with species listed under the	Pre

Table 1-3 Key approvals required for the Project

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Legislation	Relevant Authority	Action/ Approval	Timing
		Nature Conservation (Wildlife) Regulation 1994	Construction
Water Act 2000	DERM	Licensing of water course diversions and crossings Licensing for bores constructed as part of the groundwater monitoring network Regulated dam approval	Pre Construction
Aboriginal Cultural Heritage Act 2003	DERM	Approval of Cultural Heritage Management Plan	2011
Native Title Act 1993	DERM	Right to Negotiate.	2010

Note:

1. DSEWPC - Department of Sustainability, Environment, Water, Population and Communities

2. DIP - Department of Infrastructure and Planning

3. DERM – Department of Environment and Resource Management, including the former Environmental Protection Agency and Department of Natural Resources and Water

4. DEEDI – Department of Employment, Economic Development and Innovation, including the former Department of Mines and Energy

1.10.1 Commonwealth Government

1.10.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The EPBC Act prescribes the Commonwealth Government's role in environmental assessment, biodiversity conservation and the 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 is likely to have, a significant impact on a matter of national environmental significance. Such an activity is deemed to be a controlled action. It is an offence to undertake a controlled action without the approval of the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (DSEWPC).

The Proponent referred the Project to DSEWPC with a recommendation that the Project was a controlled action, because of its potential impact on a matter of national environmental significance. On 13 January 2009 the DSEWPC determined that the Project was 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)
- Sections 23 and 24A (Commonwealth marine areas)

As a consequence of this decision, the Project triggered the impact assessment provisions of the EPBC Act.

The DSEWPC is an advisory agency to the Queensland Government for the Project's EIS process. As part of the EIS process, the Commonwealth Minister for the Environment, Heritage and the Arts will review the EIS to ensure that it adequately addresses the requirements of the EPBC Act. The Minister's assessment will follow preparation of the assessment report by DIP. The DSEWPC will ensure that input from other relevant Commonwealth agencies is provided.

1.10.1.2 Native Title Act 1993

The Commonwealth *Native Title Act 1993* (NT Act) formalises the common law recognition of native title (i.e. rights and interests over land and water possessed by Indigenous people in Australia under their traditional laws and customs). The NT Act provides for the existence of native title rights and interests over land that is or has been subject to a pastoral lease, and possibly some other forms of leasehold tenure.

The NT Act provides a framework for managing native title. The main objectives of the NT Act are to:

- Provide for the recognition and protection of native title;
- Establish ways in which future dealings affecting native title may proceed and to set standards for those dealings;
- Establish a mechanism for determining claims to native title; and
- Provide for, or permit, the validation of past acts, and intermediate period acts, invalidated because of the existence of native title.

The lands associated with the Project area are within the registered native title claim area of the Wangan & Jagalingou People (QUD85/04). Given these circumstances, the Wangan & Jagalingou People as the recognised Aboriginal Party have negotiated a Cultural Heritage Management Plan (CHMP) with HPPL across the lands associated with the Project area. Refer to Volume 2, Section 18 for details.

The process to commence a Native Title agreement over the MLA 70426 commenced on 23 December 2009 with a submission to enter into a Right to Negotiate (RTN) pursuant to Section 29 of the NT Act. The Proponent was notified per the NT Act on 31 March 2010. Negotiations are in progress.

1.10.2 Queensland Government

1.10.2.1 State Development and Public Works Organisation Act 1971

The SDPWO Act provides for state planning and development through a coordinated system of public works organisation, for environmental coordination, and for related purposes. The SDPWO Act provides the head of power for the Co-ordinator General, who is responsible for deciding if the most important and complex private and public projects require whole-of-government management as significant projects. A project may be declared to be a *significant project*, based on one or more of the following criteria:

- Complex approval requirements, including local, state and federal Government involvement;
- A high level of investment in the state;
- Potential effects on infrastructure and/or the environment;
- Provision of substantial employment opportunities; and
- Strategic significance to a locality, region or the state.

Once a project is declared significant, an EIS is generally required under Section 26(1)(a) to ensure the project's environmental, social and economic impacts are appropriately considered. As discussed in Section 1.9.2 above, the Project is a significant project for which an EIS is required in accordance with Part 4 of the SDPWO Act.

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1.10.2.2 Environmental Protection Act 1994

1.10.2.2.1 Overview

The *Environmental Protection Act 1994* (EP Act), administered by the Queensland Department of Environment and Resource Management (DERM), was established "to protect Queensland's environment, while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends".

The EP Act utilises a number of mechanisms to achieve its objectives. These include:

- Granting of development permits for material change of use in relation to environmentally relevant activities (ERAs);
- Licensing or approving all ERAs;
- Allowing for improvement through environmental programs and management plans;
- Issuing Environmental Protection Policies (EPPs);
- Regulations; and
- Creating a general environmental duty.

When deciding whether to grant or refuse an application for an Environmental Authority (EA) or deciding on the conditions of the EA, the Administering Authority must consider certain matters set out in the EP Act. One of those matters is the Standard Criteria as set out under the EP Act. The Standard Criteria include addressing regulatory requirements, and the principles of Ecologically Sustainable Development as outlined in the National Strategy for Ecologically Sustainable Development (Council of Australian Governments, 1992). These issues are addressed in Volume 2, Section 23.

1.10.2.2.2 Environmentally Relevant Activities

Environmentally relevant activities (ERAs) are defined in the *Environmental Protection Regulation* 2008 (EP Regulation) as those activities that have the potential to impact negatively on the environment. An EA is required to carry out certain ERAs.

The Project requires an EA (mining activities). The term "mining activities" is defined in Section 147 of the EP Act. This Project will involve the following types of mining activities defined in that section:

- Mining under the *Mineral Resources Act 1989*;
- Processing mined materials (i.e. coal);
- A number of activities directly associated with, or facilitating or supporting, the mining and processing activities (which, if they were not mining activities, would have been ERAs listed in the EP Regulation);
- Rehabilitation / remediation; and
- Actions taken to prevent environmental harm.

An EM Plan is required under Section 201 of the EP Act as part of the application for an EA (mining activities) process. Section 202 of the EP Act states that the purpose of an EM Plan is to propose environmental protection commitments to assist the administering authority prepare the draft EA.

The content of the EM Plan addresses the DERM Guideline No. 8, *Preparing an Environmental Management Overview Strategy (EMOS) for non-standard Mining Projects*. The commitments expressed are measurable and auditable; they set objectives and outline control strategies to achieve the objectives. The EM Plan has been written in accordance with Section 203 of the EP Act (refer to Volume 2, Section 26 and Volume 5, Appendix P for details).



In deciding whether to grant or refuse an application for an EA, the Administering Authority must consider (amongst other things) the Standard Criteria (as defined in Schedule 3 of the EP Act).

ERAs for this Project include:

- ERA 8 Chemical Storage;
- ERA 31 Mineral Processing;
- ERA 56 Regulated Waste Storage;
- ERA 63 Sewage Treatment;
- ERA 65 Water Treatment; and
- ERA 60 Waste Disposal for landfill.

1.10.2.2.3 Environmental Protection Policies

Environmental protection policies (EPPs) are the means by which the Queensland Government declares and implements its objectives in relation to environmental protection – Section 25(1) of the EP Act. EPPs may include:

- Background environmental quality standards;
- Emissions standards; and/or
- Monitoring procedures and requirements.

The EPPs provide a policy framework for the determination of appropriate conditions for development permits for material change of use and/or EAs. EPPs are legally enforceable (EP Act Section 25(3)). Where relevant to particular environmental impacts, the matters required to be considered or procedures to be followed under the EPPs have been addressed in this EIS.

The following EPPs have been released to date:

- Environmental Protection (Water) Policy (2009);
- Environmental Protection (Noise) Policy (2008);
- Environmental Protection (Air) Policy (2008); and
- Environmental Protection (Waste Management) Policy (2000).

Environmental Protection (Water) Policy (2009)

The purpose of this policy and the amendment is to achieve ecological sustainable development in relation to Queensland waters. It sets a framework for managing environmental impacts on water, the identification of environmental values and the guidelines needed to protect the water environment. The Australian and New Zealand Water Quality Guidelines (ANZECC) (2000) are an example of guidelines which may be used to assess water quality in the existing environment and assist in the setting of environmental values and water quality objectives.

The Project will implement a water management system (refer to Volume 2, Section 11) that will reuse water extensively on the site for dust suppression and processing in the CHPP. The Project will discharge water only rarely during the Project's life. The waste management hierarchy will be used to decide the preferred methods for dealing with waste waters – with preference for reuse, recycling, treatment and appropriate releases to land or surface waters only as a last resort.

Environmental Protection (Noise) Policy (2008)

The purpose of this policy is to achieve the object of the EP Act in relation to the acoustic environment. The EPP achieves this by:

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- Identifying environmental values to be enhanced or protected;
- Stating acoustic quality objectives for enhancing or protecting the environmental values; and
- Providing a framework for making consistent, equitable and informed decisions about the acoustic environment.

The policy contains a table of Acoustic Quality Objectives in Schedule 1.

Modelling reported in the EIS indicates that limited exceedances of noise will occur at nearby sensitive receptors. Mitigation measures are outlined in the EIS to minimise the impacts on these sensitive receptors (refer to Volume 2, Section 15).

Nearby residents will be warned when any planned atypical noise e.g. blasting is likely to occur. A complaints register will be established and any complaints will be logged and necessary mitigation measures will be developed and implemented.

Environmental Protection (Air) Policy (2008)

The purpose of this policy is to achieve the objectives of the EP Act in relation to Queensland's air environment by:

- Identifying environmental values that need to be enhanced or protected;
- Specifying air quality indicators and air quality objectives for enhancing or protecting environmental values; and
- Providing a framework for making consistent, equitable and fair decisions about the air environment.

A monitoring program is proposed to monitor the impact of mining operations on the air quality in the area. Mitigation measures will be implemented to reduce the potential for air quality impacts at the nearest sensitive receptors. A complaints register for dust contamination will be maintained. Should any complaints be registered, detailed investigation and management strategies will be developed in accordance with the EPP (Air). Further details are provided in Volume 2, Section 13.

Environmental Protection (Waste Management) Policy (2000)

The policy provides a strategic framework for managing waste in Queensland and provides the requirements for handling specific waste streams. The policy outlines the preferred waste management hierarchy and principles for achieving good waste management. The Waste EPP is based on principles of:

- Polluter pays: all costs associated with waste management will be borne by the waste generator;
- User pays: all costs associated with the use of a resource will be included in the price of goods and services developed from that resource; and/or
- Product stewardship: the producer or importer of a product will take all reasonable steps to minimise environmental harm from the production, use and disposal of the product.

The mitigation and management measures presented in the EIS conform to the principles of the policy. Further details are provided in Volume 2, Section 16.

Environmental Protection (Waste Management) Regulation (2000)

The Waste Management Regulation includes:



- Offences for littering, waste dumping, unlawful disposal of hypodermic needles and unlawful activities at waste facilities;
- A waste tracking system that tracks the movement of specific waste to ensure correct disposal;
- Clinical and related waste management planning including segregation, storage and disposal;
- Requirements for managing polychlorinated biphenyls (PCBs); and
- Design rules for waste equipment.

Further details are provided in Volume 2, Section 16.

Dams Containing Hazardous Waste

Hazardous waste is defined in the Queensland EPA (now DERM) Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste as "any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health". A dam contains hazardous waste if the contents exceed any of the criteria specified in a DERM Information Sheet entitled Determining Dams Containing Hazardous Waste.

Dams containing hazardous waste must be determined as either a low hazard dam or a high hazard dam. The differentiation is based on a range of factors, including proximity to water supplies and dam surface area.

The holder of an EA (mining activities) will be required to comply with specific conditions and the requirements of the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste if the operation includes a hazardous dam containing high hazard waste.

The tailings dam (tailings storage facility) and environmental dams receiving water contaminated by mine operations have the potential to be classified as a hazard dam. The storages that comprise the Project's water management system will not likely constitute high hazard dams. However, it is likely that some have the potential to be classified as low hazard dams based on the quality of runoff water from disturbed areas and the size of the dams. All designs and management of the tailings dam and all sediment dams will comply with specific conditions that may be set out in the EA governing hazardous dams. Further details are provided in Volume 2, Section 11.

General Environmental Duty

Section 319 of the EP Act establishes a duty for a person to take all reasonable and practicable measures to prevent or minimise environmental harm when carrying out an activity. The general environmental duty places a clear onus on operators of industrial sites to develop and implement measures for preventing or minimising environmental harm in relation to all activities, not just those classified as ERAs.

The EIS process seeks to ensure all environmental matters relating to the Project are adequately addressed to minimise environmental harm.

1.10.2.3 Mineral Resources Act 1989

The *Mineral Resources Act 1989* (MR Act) provides for the assessment, development and utilisation of mineral resources to the maximum extent practicable consistent with sound economic and land use

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management. Amongst the principal objectives of this act are to encourage and facilitate mining of minerals in an environmentally responsible manner.

The MR Act provides that the Governor in Council may grant a mining lease for all or any of the following purposes:

- To mine the mineral or minerals specified in the lease and for all purposes necessary to effectually carry on that mining; and/or
- Such purposes, other than mining, as are specified in the mining lease and that are associated with, arising from or promoting the activity of mining.

The MR Act provides for the advertisement of an application for the grant of a mining lease, with a call for objections to the grant. At least 28 days are provided for the lodgement of objections. Valid objections may be heard in the Land Court. The MR Act also provides for the surrender of mining leases, and for the amendment of conditions of a mining lease.

The assessment of MLA 70426 will be carried out pursuant to the MR Act.

1.10.2.4 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (SP Act) replaces the *Integrated Planning Act 1997*. The aim of the SP Act is to achieve sustainable planning outcomes through (DIP, 2010):

- Managing the process by which development takes place;
- Managing the effects of development on the environment; and
- Continuing the coordination and integration of local, regional and state planning.

All aspects of development of a mining activity for which an EA (mining activity) applies are exempt from the SP Act. Hence all of the Project's activities within the mining lease will not be subject to SP Act approvals. If required, the Proponent will submit development applications to the relevant local authority for any off-lease activities requiring their approval. The development applications will be supported by this EIS and other information required to be provided with each application. Further details are provided in Volume 2, Section 6.

1.10.2.5 Water Act 2000 and Water Regulation 2002

The *Water Act 2000* and *Water Regulation 2002* require that a licence to take water be obtained if water is to be taken from sub-artesian aquifers (for other than stock or domestic purposes). The construction of groundwater bores is assessable development under the SP Act. A licence is required under the *Water Act 2000* for works that interfere with the flow of water, such as a stream diversion.

An assessment for the Riverine Protection Permits will be made subject to the *Water Act 2000* and the DERM Policy No. WAM/2008 3435, Guideline – Activities in a Watercourse Lake or Spring Associated with Mining Activities.

A referrable dam is one that would, in the event of failure, put population at risk. This is determined by conducting a failure impact assessment to assess if it has a Category 1 or Category 2 failure impact rating, and is considered *referrable* under the provisions of the *Water Supply (Safety and Reliability) Act 2008* and the *Water Act 2000*.

If there is no population at risk, a dam is not referrable and is not subject to the referrable dam provisions of the *Water Supply (Safety and Reliability) Act 2008*.



Development permits are required for all new referrable dams and for all modifications to existing referrable dams to increase the storage capacity by more than 10%.

Dams containing hazardous waste are not considered referrable dams under the *Water Act 2000* and are instead regulated under the *Environmental Protection Act 1994*. Under the definition of hazardous waste in the *Environmental Protection Act 1994*, it is possible that the site environmental dams may be deemed hazardous waste dams.

The final configuration of the site dams will be established during later design stages, and will depend on the availability of construction materials and the relative costs of excavation and embankment construction. Under the currently proposed water management system for the Project, there are numerous dams and/or flood levees that may meet the criteria for undertaking a failure impact assessment.

Further details are provided in Volume 2, Section 11.

1.10.2.6 Aboriginal Cultural Heritage Act 2003

The Aboriginal Cultural Heritage Act 2003 (ACH Act) aims to provide recognition and protection of Aboriginal and Torres Strait Islander cultural heritage.

Under the Act, Aboriginal and Torres Strait Islander cultural heritage is protected through a duty of care for all persons to take reasonable and practical measures to avoid harming cultural heritage.

The ACH Act gives respect and empowerment to traditional owners to be directly involved in the assessment and management of their own cultural heritage. Traditional owners are able to register significant cultural heritage places, such as sacred sites, on a cultural heritage register administered by the Cultural Heritage Coordination Unit within the DERM.

Major aspects of the ACH Act include:

- Blanket protection of areas and objects of traditional and customary significance, as well as areas of archaeological significance;
- Recognition of the key role of traditional owners in cultural heritage matters;
- Establishment of practical and flexible processes to address cultural heritage in a timely and costefficient manner;
- The replacement of cultural heritage permitting arrangements with the duty of care, the cultural heritage management planning process and other agreement-based mechanisms; and
- Increased penalties for harming Aboriginal and Torres Strait Islander cultural heritage.

A number of cultural heritage sites, items and significant natural features of Indigenous origin were identified during recent surveys. The traditional owners will work with the Proponent to monitor major land disturbance activities during construction. This forms part of the Cultural Heritage Management Plan (CHMP) that has been developed for the Project area.

Further details are provided in Volume 2, Section 18.

1.10.2.7 Queensland Heritage Act 1992

The *Queensland Heritage Act 1992* provides for the conservation and protection of places and items of historical and/or non-Indigenous cultural heritage, i.e. all places that derive from the post-settlement history of Queensland. Under this Act, places and items must be entered into a Queensland Heritage Register in order to be protected. Substantial penalties may apply for damage to a place or items that

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have been entered on the Register. At least one of the following criteria must be satisfied for entry onto the Register (Section 23 [1]):

- The place is important in demonstrating the evolution or pattern of Queensland's history;
- The place demonstrates rare, uncommon or endangered aspects of Queensland's heritage;
- The place has potential to yield information that will contribute to an understanding of Queensland's history;
- The place is important in demonstrating the principal characteristics of a particular class of cultural places;
- The place is important in exhibiting particular aesthetic characteristics valued by the community or a particular cultural group;
- The place is important in demonstrating a high degree of creative or technical achievement at a particular period;
- The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; or
- The place has a special association with the life or work of a particular person, group or community of importance in Queensland's history.

Sites of non-Indigenous historical significance were identified as part of the EIS. Mitigation measures have been provided in the event that any significant sites are identified during the construction and operation of the Project. Further details are provided in Volume 2, Section 19.

1.10.2.8 Nature Conservation Act 1992

The Nature Conservation Act 1992 and the Nature Conservation (Wildlife) Regulation 1994 prohibit the taking or destruction, without authorisation, of certain listed flora and fauna species. Species identified during the EIS relevant to this Act are discussed in Volume 2, Sections 9 and 10.

1.10.2.9 Transport Infrastructure Act 1994

The *Transport Infrastructure Act 1994* (TI Act) provides for the management of the national and state road network. A permit under the TI Act is required to work in, or interfere with, a state-controlled road. Further details are provided in Volume 2, Section 17.

1.10.2.10 Forestry Act 1959

The *Forestry Act 1959* is administered by DERM; the department manages the production and sale of native forest timber and quarry materials from State forests, timber reserves and other State-controlled lands across Queensland. A permit to extract quarry material will be required under the *Forestry Act 1959* if such material is to be used during construction. A permit is not required, however, if material is extracted from a mining lease and used to construct infrastructure on a mining lease.

1.10.2.11 Fisheries Act 1994

The main purpose of the *Fisheries Act 1994* is to provide for the use, conservation and enhancement of the community's fisheries resources and fish habitats. This includes both terrestrial and marine environments, fresh and salt water. The Act covers fish, fisheries and marine plants. The Act is administered by the Department of Employment, Economic Development and Innovation (DEEDI).

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1.10.2.12 Dangerous Goods Safety Management Act 2001

The *Dangerous Goods Safety Management Act 2001* applies to the storage and handling of hazardous materials, particularly dangerous goods and combustible liquids, and the operation of major hazard facilities. The Act also provides for advice and help for emergencies involving hazardous materials. The Act is administered by the Department of Community Safety (DCS).

1.10.2.13 Vegetation Management Act 1999

The purposes of the Vegetation Management Act 1999 (VM Act) are to:

- Preserve remnant and endangered regional ecosystems; vegetation in areas of high nature conservation value, and areas vulnerable to land degradation;
- Ensure that clearing does not cause land degradation;
- Maintain or increase biodiversity;
- Maintain ecological processes; and
- Allow for ecologically sustainable land use.

In particular, the VM Act regulates the clearing of vegetation by providing codes for the assessment of vegetation clearing applications, the enforcement of vegetation clearing provisions, declaring areas for protection, and phasing out broad-scale clearing of remnant vegetation. Approval is required for clearing remnant vegetation. The VM Act is administered by the DERM.

1.10.2.14 Other Legislation

The following pieces of legislation are discussed as required within the EIS. If approvals are required under the following Acts, then approvals will be lodged with the relevant administering authority:

- Land Act 1994;
- Land Protection (Pest and Stock Route Management) Act 2002;
- Building Act 1975; and
- Wild Rivers Act 2005.

1.10.3 Planning Processes and Standards

The SP Act establishes the framework for planning and development assessment in Queensland. The SP Act exempts activities authorised under the *Mineral Resources Act 1989*, and all aspects of development for a mining activity to which an EA (mining activities) applies under the *Environmental Protection Act 1994* from assessment against a planning scheme.

Regardless of the exemptions of the mining activities, an assessment of the Project has been undertaken against the State Planning Policies (SPPs). An assessment of the Project against the provisions of these policies, plans and schemes is provided in Volume 2, Section 6.

1.10.3.1 State Planning Policies

SPPs are statutory planning instruments that relate to matters of state interest. These policies must be considered in the assessment of relevant development applications lodged under the SP Act. The applicable SPPs (DIP, 2010) are addressed in Table 1-4.

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Table 1-4 State Planning Policies

State Planning Policy	Relevance
SPP 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This SPP aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment. Hazards and risks are addressed in Volume 2, Section 24.
	Management of surface water is addressed in Volume 2, Section 11.
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 considered essential for the state's transport infrastructure or the national defence system. This SPP does not apply to Alpha Airstrip.
SPP 2/02 Planning and Management Involving Acid Sulphate Soils	This SPP applies to coastal areas of Queensland. As the land involved in the Project is not coastal land this SPP does not apply.
SPP 1/92 Development and the Conservation of Good Quality Agricultural Land	This SPP seeks to protect good quality agricultural land from subdivision into uneconomic units and to minimise the potential for land use conflicts between agricultural and non-agricultural land uses. A provision for "over-riding need in terms of public benefit" exists within the policy and is applicable for the proposed development. The Project will generate employment (up to about 2,300 jobs). The coal produced from the mine will also increase Queensland's export earnings. Volume 2, Section 5 of the EIS addresses the potential impact of the Project on the protection of good quality agricultural land.
State Coastal Management Plan – Queensland's Coastal Policy 2001 (Has effect of a SPP)	The State Coastal Management Plan seeks to protect and manage Queensland's coastal resources and processes, and applies within the coastal zone. While the Project site does not include coastal resources, the water quality of waterways flowing to the coast is relevant to coastal resources and coastal processes. Volume 2, Section 11 of this EIS addresses the potential impact of the Project on water quality.
SPP 1/07 Housing and Residential Development	This SPP seeks to ensure that large, higher growth local governments identify their community's housing needs. This SPP is not directly relevant to the Project.
SPP 2/07 Protection of Extractive Resources	This SPP identifies extractive resources of state or regional significance to ensure their protection from development. This SPP is not relevant to the Project.
SPP 1/10 Protecting wetland of high ecological significance in Great Barrier Reef catchments.	This SPP aims to protect wetlands of high ecological significance in the Great Barrier Reef catchments. While the Project site does not include wetlands, the water quality of waterways flowing to the wetlands and coast is relevant. Volume 2, Section 11 of this EIS addresses the potential impact of the Project on water quality.

1.10.3.2 Regional Planning Provisions

1.10.3.2.1 Northern Economic Triangle

The Northern Economic Triangle (NET) was established by the Queensland Government in 2007 as a plan to promote sustainable economic, social and community growth through the development of mining, mineral processing and industrial development between Mount Isa, Townsville and Bowen.

Even though the Project is outside of the taskforce area the Project does support the plans and strategies of the NET:

• Supporting stronger regional linkages;



- Enhance mining and mineral processing; and
- Enhancing industrial development.

1.10.3.2.2 Central West Regional Plan

The Central West Regional Plan was developed under the *Integrated Planning Act 1997;* however, it is still a statutory plan under the *Sustainable Planning Act 2009.*

The Plan is a statutory plan to be adhered to by state agencies and local governments in planning and assessment of developments. The Plan recognises that the resources sector operates within specific legislation and supports the development of mining projects within the region. The Plan has identified the mineral development license and the coal resources applicable to the Project within the Central West Regional Plan (Hinchcliffe, 2009). The Plan has a number of plans and policies addressing the following areas: natural environment and resources, strong communities, urban and economic development, and infrastructure. Volume 2, Section 6.3 discusses the compatibility of the Project with the regional plan.

1.10.3.2.3 Sustainable Futures Framework for Queensland Mining Towns

The Sustainable Futures Framework for Queensland Mining Towns was initiated by the Queensland Government to provide an overview of the existing situation within mining towns in the Bowen and Surat Basins (Department of Local Government, Planning, Sport and Recreation, 2007). The aim of the framework is to develop strategies to resolve issues associated with growth in the region. The Proponent is working closely with the Barcaldine Regional Council to ensure the needs of the local community are met through the provision of housing and infrastructure developments in the region. The EIS has assessed the Project's impact on the community, community services and accommodation for the construction and permanent workforces (Volume 2, Section 20). Refer to Volume 2, Section 6.3 for details.

1.10.3.3 Local Planning Provisions

The Alpha Coal Project (Mine) site is wholly located within Barcaldine Regional Council (BRC) area. The BRC was formed on 15 March 2008 following the amalgamation of the Shires of Aramac, Barcaldine and Jericho. The mine site is located within the former Jericho Shire Council area. Under the transitional arrangements for the amalgamated councils, the planning schemes for the former shires remain applicable in assessing development until a new regional council planning scheme comes into effect. In the case of the Alpha Coal Project (Mine), the Jericho Shire Planning Scheme, which took effect 23 June 2006, remains the planning scheme against which assessable development would be assessed (DIP, 2006). Volume 2, Section 6.3 discusses the compatibility of the Project with the local planning provisions.

1.10.4 Accredited Process for Controlled Actions under Legislation

For information on the accredited process for controlled actions under the EPBC Act, refer to Volume 4, Appendix C.