# 01 Introduction

# Section 01 Introduction

## 1.1 Overview of Project

The Environmental Impact Statement (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 Kevin's Corner Coal Mine Project (the Project) and how these issues will be managed. The content of the EIS addresses those matters identified in the Terms of Reference (TOR) (Volume 2, Appendix A) issued by the Department of Infrastructure and Planning, now the Significant Projects Coordination for Department of Employment, Economic Development and Innovation (DEEDI).

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, DEEDI will review the Project to identify any uncertainties or omissions. A supplementary report may be necessary to cover any additional matters of concern and address submissions. A final decision on the overall acceptability of the Project will then be made on the basis of the information provided.

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

The objective of the EIS process is to ensure that all potential impacts, direct and indirect, particularly environmental, social and economic impacts, are fully examined and addressed.

## 1.2 Project Proponent

Hancock Galilee Pty Ltd (HGPL) (the Proponent) proposes to develop the Project, a 30 million tonnes per annum (Mtpa) capacity thermal coal open-cut and underground coal mine in the Galilee Basin, Central Queensland. HGPL is a wholly owned subsidiary of GVK Coal Developers (Singapore) Pte Limited (GVKCDPL). HGPL until September 2011 was owned by Hancock Prospecting Pty Ltd (HPPL), who had held the relevant mineral development rights since the 1970's.

The Project area is within existing MDL 333 and EPC 1210. The relevant portions of those tenements are contained within Mining Lease Application 70425 which HGPL submitted for approval in December 2009. The grant of the Mining Lease is pending HGPL obtaining the relevant statutory approvals.

Additionally, the Proponent's parent company, GVKCDPL is developing the adjacent Alpha Coal Mine Project and through joint ownership of that project with HPPL is continuing its association with HPPL. The Proponent has demonstrated a strong commitment to the growth of Australia's mineral wealth, and continues to seek and develop additional resource deposits across the country.

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.

## 1.3 Project Description

In July 2009, the Proponent publically advertised the Project's initial advice statement (IAS) for a 30 Mtpa combined open-cut and underground thermal coal mine in the Galilee Basin. The IAS identified the key components of the proposed Project and the linkage to the proposed Alpha Coal Rail and Abbot Point export facilities (both described separately in the Alpha Coal Project EIS).

The Project is situated in central Queensland approximately 110 kilometres south-west of Clermont, 340 kilometres south-west of Mackay and 65 kilometres north of the township of Alpha, the nearest residential area to the Project site. Refer to Figure 0-1 in Volume 1, Section 0 (Executive Summary).

### 1.3.1 Coal Mine

The combined open-cut and underground coal mine is proposed to produce up to 30 Mtpa of thermal coal for the export market. The scheduled life of mine (LOM) is 30 years, with sufficient resources to potentially extend the Project life beyond 30 years.

The Project consists of two open-cut pits (Central and Northern open-cut pits) extending over an initial strike length of 6.5 km and in time reducing to a steady strike length of 4 km, plus three underground longwall operations (Southern, Central and Northern underground) proposed in three independent mining areas.

Mining of the open-cut pits will commence at the seam sub-crop and progress down dip towards the west. The overburden will be removed by truck and shovel, excavators and dragline operations. For the first five to seven years it will be stockpiled in out-of-pit spoil emplacements, after which it will be used to progressively backfill the open-cut pits as the mine working areas advance to the west.

For the underground component, each longwall panel will be allocated an independent set of "mains" roadways for access, coal clearance and ventilation. The underground workings will require a separate belt drift and man-and-materials drift dedicated to each longwall operation.

The coal from the open-cut operations will be mined by excavator and transported by truck. Raw coal from the open cut 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 Preperation Plant (CHPP). For the underground longwall operations, all ROM coal will be transported directly to the Coal Processing Plant (CPP) via an overland conveyor.

### 1.3.2 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 washed. The coal resource mined and placed through the ROMs will be processed to produce a competitive export thermal product, with a proportion of the coal reserves having potential to be marketed without processing. A tailings storage facility is required for the high moisture fine coal/clay fraction rejects (tailings). The coarse rejects (siltstone, mudstone, sandstone etc) from the CHPP will be placed in designated locations within the open-cut overburden emplacement areas.

The mine supporting infrastructure will include:

- Workshops, warehouses, administration buildings, training and emergency services building, tyre bays, and heavy welding shops with provision for other supporting services;
- Fuel and oil, explosives storage facilities;

- Train Load-out (TLO) facility and rail loop;
- Raw water dams and environment dams;
- Construction and Permanent accommodation village facilities;
- Mine access road;
- Airport;
- Heavy Equipment Access Track;
- General landfill;
- Borrow pits;
- Creek diversions, drainage channels and levee bunds;
- Water and wastewater systems;
- Water treatment plant and sewerage treatment plant;
- Electrical systems; and
- Communications systems.

Figure 0-2 in Volume 1, Section 0 (Executive Summary) illustrates the locations of all the above key components of the Project, including the two open-cut pits, and the locations of the three underground mines.

## 1.4 Project Rationale

Thermal coal is an important fuel for electricity generation and has a major role to play in both social and economic development worldwide. The Project is proposed to provide high quality coal to assist in filling the widening gap between existing global coal production and worldwide demand, especially to the growth markets in Asia.

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

- Obtain optimal production and sales from the available resources;
- Design, construct, and operate a combined open-cut and underground thermal coal mine, comprising health, safety, environment and community (HSEC) standards and indicators, and comply with legislation and industry best practice; and
- Use existing proven strategies and industry best practice to minimise impacts on the environment and the communities associated with the Project.

The Galilee Basin and its coal resources are currently undeveloped, and the overseas demand for good quality thermal coal from Australia presents an opportunity to develop this area. The Project meets the Queensland Government's objectives in realising the timely development of the Galilee Basin, in conjunction with the Alpha Coal Project, whilst ensuring the community benefits and environmental objectives are supported. Queensland will benefit from the development of the mine through long-term contributions of royalties to the state economy, employment, and small business opportunities in areas surrounding the Project.

The Project aims to become a reliable provider of quality coal within the world thermal coal market. To achieve this aim, the Proponent proposes to develop a combined open-cut and underground mine to extract and competitively produce an export-grade thermal coal product for the growth markets in Asia. On a local scale, the Project will further support the long-term socioeconomic 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 (Volume 1, Section 25).

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.

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 that the Project's coal quality specification is attractive for end users. The studies also confirmed the Project's technical 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, deemed necessary for a sustainable project.

From a commercial perspective, rising world economic growth leads to continued world energy demand, and notwithstanding other energy sources and the growth of renewable energy sources, demand for coal as an energy source will remain a part of the energy mix, particularly for high quality coal. These factors, plus the ability to produce a competitive product at acceptable levels of return, underpin the long-term commercial viability of the Project.

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 Projects benefits include:

- Employment for construction, operation, and other indirect employment benefits;
- Significant export income;
- Local and state economic benefits;
- Improved infrastructure into the region, including upgrades to roads, and introduction of additional power and water supplies to the region; and
- Significant State and Commonwealth Government taxes and royalties.

The establishment costs associated with the mine are detailed in Volume 1, Section 23.

The Proponent's Environmental Policy is provided in Volume 2, Appendix F.

### 1.4.1 Timing

At the time of the EIS assessment, the anticipated project timing indicated the construction phase, taking approximately 48 months, would commence in late 2012 and the operational phase would commence in 2014. While all of the EIS assessments are based on these projections, they are to be considered indicative only and subject to change as a result of any unforeseen delays.

## 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 is a proposed 30 Mtpa open-cut thermal coal mine. The proposed coal from the mine will be transported by train to the port facility at Abbot Point for export.

The privately owned and operated single track rail infrastructure proposed stretches 495 km solely for the purpose of transporting product coal to the export facilities at Abbot Point.

It is proposed that the Project will connect to the proposed Alpha rail line for the transportation of its coal for export via the Abbot Point Coal Terminal. A Kevin's Corner rail spur has been included in the proposed Alpha rail line, extending to the Project site, and includes a rail loop and train load out facility constructed to facilitate the export of the coal.

### 1.5.2 Projects in the Region

There are a number of proposed projects in the Galilee Basin and a wide range of existing coal mining projects in the neighbouring Bowen Basin region. A summary of proposed projects is provided in Table 1-1, and a summary of existing projects in the region is provided in Table 1-2. The projects with a direct geographical relationship to the Project are:

- Alpha Coal Project, Hancock Coal Pty Ltd (HCPL);
- Waratah Galilee Coal Mine, Waratah Coal Inc;
- Galilee Basin Transmission Project, Powerlink; and
- Water for Bowen Project, SunWater.

Table 1-1: Proposed projects in the region

| Project name and Proponent | Location (Distance from the Project) | Description | Project status |
|---|---|---|---|
| Galilee Basin Power Station, Galilee Power Pty Ltd (fully owned subsidiary of Waratah Coal Pty Ltd) | Alpha (35 km) | Coal-fired power station producing 900 MW (net). | IAS completed |
| Alpha Coal Project, Hancock Coal Pty Ltd | Alpha (15 km) | Open cut coal mine producing 30 Mtpa. | SEIS completed |
| Waratah Galilee Coal Mine, Waratah Coal Inc. (China First) | Alpha (40 km) | Open cut mine with export capacity of 25 Mtpa and capability to expand to more than 50 Mtpa. | EIS advertised |
| The South Galilee Coal Project (SGCP), joint venture of AMCI (Alpha) Pty Ltd and Alpha Coal Pty Ltd. | Alpha (80 km) | 15-20 Mtpa open-cut and underground mining operation and associated infrastructure. | IAS completed |
| Carmichael Coal Mine and Rail Project (Adani Mining Pty Ltd) | Clermont (160 km) | Open cut and underground mine and rail infrastructure, up to 60 Mtpa. | IAS completed |
| Water for Bowen Project, SunWater. | - | Water pipeline from Connors River Dam to raw water dam within MLA (during construction phase of the Project). | - |
| Galilee Basin Transmission Project, Powerlink. | - | Transmission lines from Lilyvale substation to a new Galilee Hub substation (during construction phase of the Project). | EIS advertised |

Table 1-2: Existing projects in the region

| Project name and Proponent | Location (Distance from the Project) | Description | Project status |
|---|---|---|---|
| Blackwater, BMA | Blackwater (300 km) | Open cut coal mining operation producing 11 million tonnes per annum (Mtpa) and employing 1570 personal | 30 year mine life remaining |
| Blair Athol, Rio Tinto Coal Australia Ltd | Clermont (110 km) | Open cut coal mine operation producing 11 Mtpa with 290 employees. | 5 year mine life remaining. |
| Clermont, Rio Tinto Coal Australia Ltd | Clermont (110 km) | Open cut coal mine operation producing 12 Mtpa with 360 employees. | 7 year mine life remaining. |
| Cook, Caledon Resources PLC | Blackwater (300 km) | Underground coal mine operation producing 12 Mtpa with 360 employees. | At least 10 year mine life remaining. |
| Crinum, BMA | Tieri (250 km) | Underground coal mine operation producing 4 Mtpa with 420 employees. | Only two years of mining remaining. |
| Curragh, Wesfarmers Ltd | Blackwater (300 km) | Open cut coal mine producing 7 Mtpa. Curragh operations employ 1,530 staff, in total. | At least 10 year mine life remaining. |
| Curragh North, Wesfarmers Ltd | Blackwater (300 km) | Open cut coal mine producing 3 Mtpa. | At least 20 year mine life remaining. |
| Ensham, Ensham Resources Ltd | Emerald (40 km) | Open cut coal mine producing 7 Mtpa with 600 employees. | At least 20 year mine life remaining. |
| Gregory, BMA | Tieri (250 km) | Open cut coal mine producing 2 Mtpa with 225 employees. | Only two years of mining remaining. |
| Jellinbah East, Jellinbah Resources Ltd | Blackwater (300 km) | Open cut coal mine producing 4 Mtpa with 380 employees. | At least 10 years of mine life remaining. |
| Kestrel, Rio Tinto Coal Australia Ltd | Tieri (250 km) | Underground coal mine producing 4 Mtpa with 515 employees. | At least 20 year mine life remaining. |
| Yarrabee, Yancoal Australia Ltd | Blackwater (300 km) | Open cut coal mine producing 2 Mtpa with 220 employees. | 15 year mine life remaining. |

The proposed Alpha Coal mine is directly south of the proposed Project with adjoining MLAs.

## 1.6 Socioeconomic Cost and Benefits of the Project

The Project will result in significant socioeconomic 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 socioeconomic impacts of the Project include:

- Short-term creation of approximately 2,500 construction jobs;
- Long-term creation of approximately 1,500 operational job opportunities (including contractors);

- Flow-on peak employment effects throughout the Queensland economy of up to 4,131 full time equivalent (FTE) positions annually (including up to 2,126 indirect FTE positions);
- Peak value added effects of approximately $559 million (including approximately $284 million in indirect value added effects); and
- The Project will produce approximately 856 million tonnes (Mt) of coal for export from Queensland throughout the scheduled life of the mine. The value of these exports to the Queensland economy will be approximately $67.8 billion. Once fully operational the coal mine will produce up to 30 Mtpa of coal exports, indicatively valued at $2.7 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 2,500 mine construction jobs and up to 1,500 mine operational job opportunities, along with the flow-on (indirect) employment opportunities would not be created; (refer to Volume 1 Section 23)
- Significant export income would not be realised;
- 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) with not enough volumes to support development for individual operations.

Sustainable development in relation to the Project is discussed in Volume 1, Section 25.

### 1.7.2 Alternative Locations

As the coal resource is located within MLA 70425, 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.

Infrastructure and transport corridors are available from the east of the Project, so any alternative placement would result in additional environmental impact.

### 1.7.3 Mining Methods

The depth of cover of the deposit and seam thickness lends itself to simple open-cut operations in the east and underground longwall panel layouts towards the west. If economics improve, there is a possibility to expand open-cut operations. In order to meet marketable coal requirements the Project has chosen to utilise proven techniques and technologies of concurrent open-cut and underground

operations focussing on coal that can be recovered and processed economically, which enables maximum input into the local economy and community.

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

- The scale of production (30 Mtpa capacity), demands large equipment in both overburden removal, and coal mining in both the underground and open-cut operations;
- The physical geometry of the deposit is suitable for the application of concurrent open-cut dragline and longwall underground operations;
- The nature of most of the overburden, depth of open-cut and coal quality limits the extent of open-cut operations. Underground operations have been considered where open-cut operations are not viable.
- The scale of the operation (strike length and width) – the mining footprint will be approximately 6.5 km, in two pits of 4 km and 2.5 km, which enables the use of high productivity draglines in the larger of the pits, and truck excavator options in the smaller pit.
- The near horizontal seam dip, limited structural faulting and coalescing of the lower seams to a suitable working section in areas with high depth of cover, enables the recovery of the coal by high productivity underground longwall methods. The adjacency, continuity and working thickness, makes the recovery of other seams uneconomical by existing mining methods; and
- With three independent longwall mines operating, progress towards the west covers much of the deposit in the scheduled life of the Project; however, substantial reserves remain viable for extraction after the scheduled life.

### 1.7.4 Coal Handling and Processing

Consideration was given to a range of CHPP locations and coal transport systems. The proposed CHPP system provides a simple high volume coal transport system to modular CPP with conveyor distances minimised.

Conveyors offer the most energy efficient means of transporting materials, so where possible, conveyors have been used in priority over trucks, while rail has been used in priority over conveyors.

Suitably sized coal stockpiles enable the size of conveyors and the frequency of trains to be moderated.

### 1.7.5 Mine Waste Management

#### 1.7.5.1 Coarse Reject

The coarse rejects generated by the Project will initially be hauled into reject emplacement areas within the mining area by rear-dump truck. Once the overburden emplacement areas are established the viability of conveying coarse rejects will be examined. This option has not been assessed as part of this EIS but represents a potential lower impact outcome in the future.

#### 1.7.5.2 Tailings Storage Facility (TSF)

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.

Out-of-pit tailings storage for Life-of-Mine was initially examined for the Project. However, available land, proximity to riparian areas, terrain and subsidence reduced the available footprints. The Proponent has assessed options for out of pit storage to the East of Sandy Creek, where more land is available away from the operating mine. This area, however, is considered to be important due to the proximity of the Colinlea Sandstone groundwater recharge area. The best result is deemed to be a Cradle-to-Grave approach, where tailings are stored from where they are extracted.

An initial Out-of-pit tailings storage in a purpose-built TSF will proceed for the first five years of the Project. Mine scheduling has been modified to accelerate the Northern Pit completion enabling an open pit void to be established, whereupon storage will continue in-pit in the Northern open-cut mine.

Further assessments will be undertaken to examine the reuse of tailings and potential tailings paste operations that may also allow the utilisation of underground goaf areas for storage of tailings.

### 1.7.6 Creek Diversions and Levees

The Project is characterised by the ephemeral creek systems of Sandy, Well, Middle, Little Sandy and Rocky Creeks. Initially, the Project examined the diversion and relocation of most of these creeks; however, the engineering controls were not justified by the coal recovered in these areas. The preferred solution has been to retain original watercourses as far as possible, thereby minimising the engineering controls required to inhibit surface water inflow which may affect the mine operations and infrastructure.

One creek diversion system is required to redirect waters from the Little Sandy and Rocky Creeks around the open-cut operations. With the statutory limitation for not allowing the onsite waters to flow across the MLA 70425 boundary and enter the neighbouring Greentree/Sandy Creek diversion (part of the Alpha Coal Project), the Project diversion aims to return waters to natural water courses in as short a distance as possible, resulting in a requirements for a channel to be constructed to link the Little Sandy Creek and Rocky Creeks with Middle Creek.

### 1.7.7 Infrastructure

#### 1.7.7.1 Energy

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 preceding development timeframes for the Alpha Coal and Galilee Transmission Projects; however, it is likely that construction power will be via Diesel generators until the permanent connection is established. Diesel generators will initially supply power for

- Bore pumps;
- Potable and wastewater treatment plants;
- Accommodation village;
- Project Infrastructure including:
  - The Mine Infrastructure Areas (MIA) for Open-cut and underground;
  - The Light Industrial Area (LIA) including the dragline construction pads
  - The CPP construction; as well as
- Construction offices, lighting and construction equipment.

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 is not an experienced power generator, the option of a mine site power station was not deemed suitable to establish the Project. 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 HGPL will not be the Proponent of the development. Proposed power infrastructure for the mine is to be provided by Powerlink and will be delivered in accordance with the provisions of the *Electricity Act 1994* with development granted in accordance with the *Sustainable Planning Act 2009*.

The operational power supply will be required prior to the commissioning of the high voltage plant and equipment such as underground equipment, CHPP and any electrically powered earth moving equipment. On-site infrastructure will include:

- 132/22 kV mine area substations, which will be located near the CHPP, LIA and each satellite MIA. The LIA substation will supply power to the accommodation village, airport and other general site infrastructure.
- Emergency operational power, capable of supplying approximately 1,000 kilovolt-ampere (kVA) for the accommodation village and 1,500 kVA for the mine infrastructure, will be supplied by diesel generators.

#### 1.7.7.2 Airport

Alpha has an existing airport which provides for local services to this rural township. This existing facility is planned to be upgraded and utilised by at least one of the proposed local coal mine projects. Consideration has been given by the Proponent to utilising the existing Alpha Airport, and contributing to future upgrades. However, a number of other issues were also assessed in this process:

- Road distance from Alpha Airport to the Project facilities, and associated travel time (estimated to be over an hour);
- Additional road transport (buses, cars etc.) which would be required to shuttle staff from the site to the airport;
- Pressure of additional passengers on the airport and township.

As a result of the distance, travel time fatigue issues, and uncertainty of the impacts of other projects on the capacity of Alpha Airport to service the Project, the Proponent has elected to develop its own airport on the Project site. However, during the construction period, prior to an airport being developed, use of existing airports is being proposed.

#### 1.7.7.3 Road and Rail Haulage

The distance of the mine from existing port facilities on the eastern coast of Queensland and the limited nature of the existing road infrastructure in the Galilee Basin have precluded further consideration of road transportation for the haulage of coal from the Project site to a suitable port. The location of the proposed Alpha Project rail line (extending 495 km to the Port of Abbott Point), which is planned for construction in advance of the Project, makes this the most appropriate transportation system for Project coal haulage. The Project's coal transport requirements have been included in the design considerations for the Alpha Rail project

The selection of rail corridor has been assessed as a part of the Alpha Coal EIS.

#### 1.7.7.4 External Roads and Transport

A number of access routes have been considered, with all options accessing the MLA 70425 from the Clermont-Alpha Road between 55 and 60 km from Alpha. With the modified Northern accesses proposed for the Alpha Coal Project on MLA 70426, the Project considered that the best option was to utilise the common road sections as far as possible and minimise additional intersections to the Clermont-Alpha Road.

Access to the mine site will be from the existing Degulla Road, approximately 4 km from its intersection with the Clermont-Alpha Road. A 25 km section of Clermont-Alpha road between the intersections with Hobartville Road and Degulla Roads will be upgraded to a two-lane sealed standard, in conjunction with the Alpha Coal Project. From the Degulla Road, the Minesite Access Road will be established to link key infrastructure for the Project.

The Jericho-Degulla Road closure by the Alpha project (MLA 70426) will be extended north beyond the Northern boundary of MLA 70425. It is currently proposed to access the northern parts of Jericho-Degulla Road via the mine access road. However, BRC has indicated that alternative options to the north of the Project should also be considered (see Volume 1, Section 21). These options will be assessed with BRC and Land owners prior to construction.

#### 1.7.7.5 Raw Water

Raw water for construction purposes that is of sufficient quality and quantity will likely to be sourced from groundwater bores designed for dewatering the mining areas, as there is need to prepare the mining areas and limit early water demand until the Connor's River Dam Project and Pipeline are

ready. 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 bulk 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 coal seam gas 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.

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 preferred for the Project, it is not considered further.

Groundwater has been considered in terms of an allocated supply from dewatering the underground mining areas and as supply from in-pit dewatering. Pending further groundwater exploration and studies associated with the quantity and quality associated with the Project area, it is likely that groundwater from dewatering the mine workings would supplement the 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.

#### 1.7.7.6 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 (PWTP). It is to be reticulated throughout the site in the services corridors proposed to be created throughout the Project area.

#### 1.7.7.7 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 C 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 for site industrial purposes or discharged to land through subsurface irrigation.

Sewage from the remote site infrastructure will be collected in septic tank systems and the effluent transported to the SWP for treatment or septic tank treated and 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.

#### 1.7.7.8 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:

- Establish a self-managed on-site facility;
- Establish 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.

#### 1.7.7.9 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.

The Project has a number of MIA facilities i.e. for the CHPP, the open-cut MIA and each of the underground MIAs. In order to consolidate mine site services, a Light Industrial Area (LIA) is to be constructed close to the site operations. The LIA will centralise security administration and training services, and support services to the Project including logistics and Operational Environmental Management OEM support services; Potable Water Treatment Plant (PWTP), STP and recycling centres. It will have public vehicle access and enable third party service providers to support the Project.

The MIAs will therefore be focussed on services directly required to support operations. The design of the MIAs has considered separation of vehicles, critical operations support and emergency services.

#### 1.7.7.10 Light Industrial Area

For most mines, where a single operational mine (open or underground) is the norm, a single MIA usually provides all relevant services, other than those available in nearby off-site. As noted above, the Project will have a number of MIAs for the various mines. As a result, the Proponent has proposed a Light Industrial Area (LIA) to provide support for the three MIAs, and to enable activities which could normally be provided by off-site operators, to be located in close proximity to the operating mine without directly interacting with it.

### 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 Mobilization

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 and Emerald airports would then be bussed to the Project site prior to the construction of the Project airport.

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.

## 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.

## 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 Project EIS.

### 1.9.1 Objectives of the Environmental Impact Assessment

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 2, Appendix A) issued by DIP (now DEEDI).

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, Significant Projects Coordination of DEEDI 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. Significant Projects Coordination of DEEDI 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;
- DEEDI 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 Significant Project Process

#### 1.9.2.1 Significant Project Status

The Project has been granted Significant Project status under the provisions of the SDPWO Act. A flowchart showing this process under the SDPWO Act is shown on Figure 1-1. As a result of the

Project declaration, its assessment process is subject to the SDPWO Act and the process described below.

#### 1.9.2.2 EIS Preparation

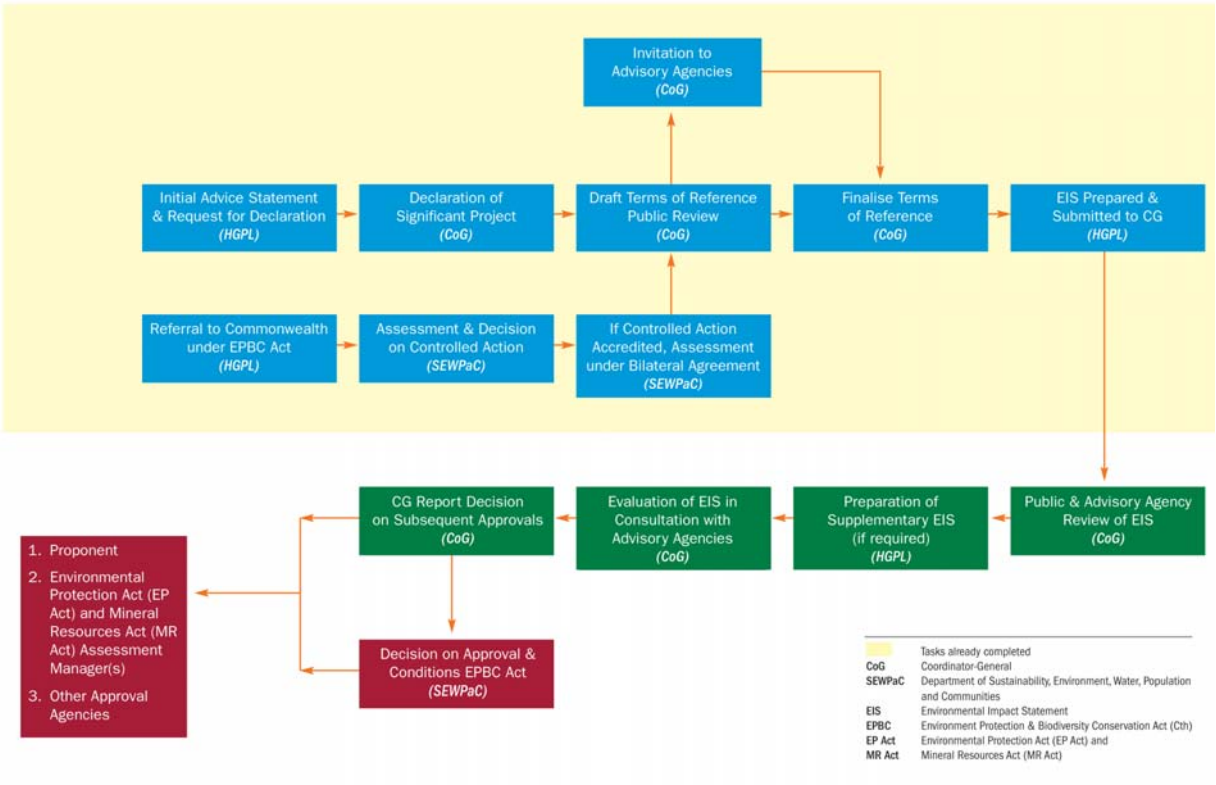
To initiate the EIS process under the SDPWO Act, an Initial Advice Statement (IAS) for the Project was lodged with the CoG on 10 August 2009. On 11 September 2009 the CoG declared the Project a significant project for which an EIS is required, in accordance with Part 4 of the SDPWO Act. The EIS process for the Project is administered by the Significant Projects Coordination of DEEDI for the CG.

The draft TOR for the EIS was prepared and released for comment between 31 October 2009 and 30 November 2009. A total of 14 submissions on the draft TOR (13 from advisory agencies and one from a public organisation) were received. All matters raised were evaluated and where appropriate incorporated into the final TOR. The final TOR was released by the CoG in February 2010. A copy of the final TOR is provided in Volume 2, Appendix A. A cross-reference to where each aspect is discussed in the EIS is provided in Volume 2, Appendix B.

An EIS was then prepared in accordance with the finalised TOR in late 2010 and early 2011 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 EIS process allows for community consultation and ensures environmental protection by comprehensive consideration of potential impacts and management strategies.

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 and shown on Figure 1-1 below.

**Figure 1-1: EIS process flowchart**




### 1.9.2.3 Public and Advisory Agency Review

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 CG; 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.

These steps are detailed on the Figure 1-1 overleaf and in Sections 1.9.4 and 1.9.5.

The preparation of this EIS and the public notification and consultation activities to follow provides partial completion of the assessment process as set out at Sections 26-35 of the Act.

#### 1.9.2.4 Coordinator General's Assessment

After the EIS has been made publicly available for comment, and submissions have been received from individuals and organisations (refer to Section 1.9.5), DEEDI, on behalf of the CG, will review the Project to identify any uncertainties or omissions. The results of the assessment will be contained in a Report prepared by the CoG that will set out the CoG's decision and detail any recommended conditions.

The review process may require that HGPL prepare a Supplementary EIS prior to the preparation of the CoG's report. The Supplementary EIS would address and takes into account the issues raised during the public and advisory agency review of the EIS.

After the preparation of the Supplementary EIS, the CoG then evaluates the EIS, any submissions received from the public and other advisory agencies and the Supplementary EIS. A final decision on the overall acceptability of the Project will then be made on the basis of the information provided.

The matters that are the subject of the controlled action will need to be determined by the Commonwealth along with any associated conditions of approval.

#### 1.9.2.5 Commonwealth Interests

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 Government Minister for the Environment, Heritage and the Arts in accordance with the provisions of the EPBC Act. On 8 September 2009, the delegate of the Australian Minister for Environment, Heritage and the Arts determined the Project to be a controlled action under the EPBC Act for potential impacts on the following matters of national environmental significance:

- Sections 18 and 18A (listed threatened species and ecological communities); and
- Sections 20 and 20A (listed migratory species).

The EPBC Act lists migratory species listed under the following international agreements to which Australia is a signatory nation:

- Japan - Australia Migratory Bird Agreement (JAMBA);
  - — Agreement between the Commonwealth Government of Australia and the Government of Japan for the Protection of Migratory Birds in danger of extinction and their environment;

- China - Australia Migratory Bird Agreement (CAMBA);
  - — Agreement between the Commonwealth Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their environment;
- Republic of Korea - Australia Migratory Bird Agreement (ROKAMBA);
  - — Agreement between the Commonwealth Government of Australia and the Government of the Republic of Korea for the Protection of Migratory Birds and their environment; and
- Convention on the Conservation of Migratory Species of Wild Animals - (Bonn Convention).

The EPBC Act recognises wetlands of International Importance that have been designated beneath the Ramsar Convention (Ramsar Wetlands), as matters of national environmental significance. No areas within or immediately adjacent to the Project area have been identified as Ramsar Wetlands.

Under the bilateral agreement between the Commonwealth and Queensland Governments, the Queensland EIS process under the SDPWO Act is recognised by the Commonwealth as an appropriate process pursuant to Section 87 of the EPBC Act. As a result, the outcomes of the investigations set out in this EIS will inform the Commonwealth and allow a determination on the matter of interest beneath the EPBC Act.

The Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) (which replaced the Department of Environment, Heritage and the Arts, DEWHA in 2010) is an advisory agency to the Queensland Government for the Project's EIS process. As part of the EIS process, the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (which replaced 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 DEEDI. The DSEWPC will ensure that input from other relevant Commonwealth agencies is provided.

#### 1.9.2.6 Project Approvals

The approvals that are being sought through the Significant Project process declaration are detailed within Table 1-3 below.

Table 1-3: Key Approvals Resultant of Co-ordinator General's Report

| Item | Legislation | Relevant Approval | Status |
|---|---|---|---|
| Mine | *Mineral Resources Act 1989* | Mine Lease for MLA 70425 | Awaiting assessment of EIS |
| Mine | *Environmental Protection Act 1994* | Environmental Authority for mining lease | Awaiting assessment of EIS |

In addition to the requirements under the SDPWO Act and EPBC Act, the Project will require additional approvals in accordance with local and state legislation, as detailed within Section 1.10.

### 1.9.3 Studies

Numerous studies and surveys have been undertaken in developing the Project (during pre-feasibility) and preparing this EIS, 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;
  - 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 storage design studies.

Table 1-4 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 1-4: EIS Structure

| Volume 1 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.<br>It discusses the need for the Project and presents the Project's technical feasibility and commercial viability. Alternatives to the Project as well as socioeconomic 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. |

| Volume 1 EIS Section | Title | Studies Undertaken |
|---|---|---|
| 5 | Soils, Topography and Geomorphology | Describes the topographic and geomorphological features of the Project site.<br>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 | Describes current land use, land tenure (including details of infrastructure, sensitive receivers and Native Title claims in the area) and determines the potential land use impacts, mitigation methods and compliance with the statutory planning framework. |
| 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. |
| 8 | Land Contamination | 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 are described in terms of environmental values and potential impacts and mitigation measures. The status of the ecological values is determined through searching of relevant databases, review of other secondary data, and actual ground survey. |
| 11 | Surface Water | The surface water study describes the surface water resources of the Project site and surrounds. It includes 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 and water management measures are identified. |
| 12 | Groundwater | The groundwater study describes 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 are 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. |

| Volume 1 EIS Section | Title | Studies Undertaken |
|---|---|---|
| 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 are identified in the study. |
| 18 | Indigenous Cultural Heritage | Indigenous cultural heritage places and values are 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 are 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. Based on this, predicted social impacts the community may face, or changes that may occur to the existing social environment, by introducing the proposed Project are presented. |
| 21 | 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. |

| Volume 1 EIS Section | Title | Studies Undertaken |
|---|---|---|
| 22 | 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. |
| 23 | Economics | Potential direct and indirect impacts on the local, regional and national economies as a result of the Project are identified and quantified where possible. Strategies are been provided to mitigate potential negative economic impacts and maximise the potential economic benefits that would potentially occur. |
| 24 | Hazard and Risk | The hazards are analysed to identify any significant residual risks to human health, safety or natural ecosystems. |
| 25 | Sustainability | The sustainability principles of the Project are addressed. |
| 26 | Decommissioning and Rehabilitation | Details of the Project's rehabilitation, decommissioning and closure procedures and commitments are provided. |
| 27 | Cumulative Impacts | This section provides a summary of the Project's cumulative impacts and a description of these cumulative impacts both in isolation and in combination with those of existing or proposed project(s) publicly known or advised by DEEDI to be in the region, to the greatest extent practicable. |
| 28 | 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. |
| 29 | 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. |
| 30 | Matters of National Environmental Significance | This section summarises the Matters of National Environmental Significance Report for the Project that describes potential impacts on MNES. |
| Volume 2 | Appendices | Appendices provide supporting technical documentation. |

### 1.9.4 Public Consultation Process

Consultation with Barcaldine Regional Council, 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 1, Section 21. 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; and
- Seek local information and input into the Project by providing a range of opportunities for stakeholders to identify key issues for consideration.

### 1.9.5 Environmental Impact Statement Submissions

Copies of the EIS have been submitted to DEEDI and these are to be distributed 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 DEEDI (http://www.dip.qld.gov.au) and www.hancockcoal.com.au.

Any person, group or organisation can make a written submission about the EIS to the DEEDI. 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 DEEDI 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

Kevin's Corner Project

Significant Projects Coordination

Department Employment, Economic Development and Innovation

PO Box 15009

CITY EAST QLD 4002

Tel: (07) 3224 4736 Fax: (07) 3225 8282

DEEDI and advisory bodies will consider public submissions in making decisions in relation to the Project. DEEDI 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. HGPL 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, DEEDI will prepare an assessment report on the EIS.

## 1.10 Project Approvals

### 1.10.1 Additional Approvals

Approvals sought as a result of the CoG's report are detailed within Table 1-3. This will be followed by a range of approvals that are necessary to construct and operate the proposed Kevin's Corner mine. Listed in Table 1-5 are the key approvals that will be sought at the conclusion of the EIS process. These are the major Project approvals, as a corollary to section 1.9.2, and as more detailed information from the engineering processes becomes available, the approvals to construct and operate the Project will be obtained. Those approvals are listed in Table 1-5.

Table 1-5: Other approvals to be obtained following Key Approvals

| Item | Legislation | Relevant Approval | Status |
|---|---|---|---|
| • **Transport** | | | |
| Open new roads and stock routes | *Sustainable Planning Act 2009* | Reconfiguration of a Lot (ROL) | Off-tenure, location and details to be confirmed |
| Close on-tenure roads and stock routes | *Land Act 1994* and *Land Protection (Pest and Stock Route Management) Act 2002* | Temporary or permanent closure of roads and stock routes where required on-tenure | On-tenure, location and details to be confirmed |
| Approval to make an alteration or improvement to a local government road | *Local Government Act 2009* | Roadworks | Off-tenure, locations and details to be determined |
| Rail Infrastructure | *Sustainable Planning Act 2009* | Material Change of Use (Rail) under former Jericho Shire Planning Scheme within Barcaldine Regional Council. | Rail spur leading off-site. Location confirmed with indicative design provided. |
| Subdivision of Land for Rail infrastructure | *Sustainable Planning Act 2009* | Reconfiguring of a Lot (ROL) under former Jericho Shire Planning Scheme within Barcaldine Regional Council. | Rail spur leading off-site Location and details to be confirmed. |
| Operational Works | *Sustainable Planning Act 2009* | Roadwork, Filling and Excavation under former Jericho Shire Planning Scheme within Barcaldine Regional Council. | Location and details to be confirmed. |
| Aerodrome Certification | *Civil Aviation Safety Regulations 1998* and *Civil Aviation Regulations 1988* | Aerodrome Certificate (Airport Operations (Part 139 of the CASR 1998)) issued by the Civil Aviation Safety Authority | Location and details to be confirmed. |

| Item | Legislation | Relevant Approval | Status |
|---|---|---|---|
| • **Environmentally Relevant Activities** | | | |
| Environmentally Relevant Activity (ERA 8 ) | *Environmental Protection Act 1994* | ERA 8 – Chemical Storage | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 14) | *Environmental Protection Act 1994* | ERA 14 – Electricity generation | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 15) | *Environmental Protection Act 1994* | ERA 15 – Fuel Burning | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 16) | *Environmental Protection Act 1994* | ERA 16 – Extractive and Screening Activities | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 18) | *Environmental Protection Act 1994* | ERA 18 – Boiler making and Engineering | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 31) | *Environmental Protection Act 1994* | ERA 31 – Mineral Processing | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 38) | *Environmental Protection Act 1994* | ERA 38 – Surface Coating | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 43) | *Environmental Protection Act 1994* | ERA 43 – Concrete Batching | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 50) | *Environmental Protection Act 1994* | ERA 50 – Bulk Material Handling | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 56) | *Environmental Protection Act 1994* | ERA 56 – Regulated Waste Storage | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 60) | *Environmental Protection Act 1994* | ERA 60 – Waste Disposal | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 63) | *Environmental Protection Act 1994* | ERA 63 – Sewage Treatment | On-tenure, locations and details to be determined |
| Environmentally Relevant Activity (ERA 65) | *Environmental Protection Act 1994* | ERA 65 – Water Treatment | On-tenure, locations and details to be determined |
| • **ERA Supporting Applications** | | | |
| Approval for on-site sewerage treatment plant | *Plumbing and Drainage Act 2002* | Approval for on-site sewerage treatment plant | On-tenure, locations and details to be determined |

| Item | Legislation | Relevant Approval | Status |
|---|---|---|---|
| Approval for on-site water treatment plant | *Plumbing and Drainage Act 2002* | Approval for on-site water treatment plant | On-tenure, locations and details to be determined |
| Hard Rock Quarry | *Sustainable Planning Act 2009* | Material Change of Use under former Jericho Shire Planning Scheme within Barcaldine Regional Council. | Location and details to be confirmed. |
| Subdivision of Land for Hard Rock Quarry | *Sustainable Planning Act 2009* | Reconfiguring of a Lot (ROL) under former Jericho Shire Planning Scheme within Barcaldine Regional Council. | Location and details to be confirmed. |
| • **Water** | | | |
| Licenses required for Referable Dams | *Water Act 2000* | Referable dam applications | On-tenure, locations and details to be confirmed |
| Licenses required for Hazardous Dams | *Environmental Protection Act 1994* | Hazardous dam applications | On-tenure, locations and details to be confirmed |
| Taking or interfering with water | *Water Act 2000* | Taking or Interfering with Water | On-tenure, locations and details to be confirmed |
| Licensing for bores, taking water for groundwater monitoring, dewatering and compensatory water supply | *Water Act 2000* | Taking and interfering with groundwater (Water Entitlement) | On- and off-tenure as required, locations and details to be confirmed |
| Riverine Protection Permit | *Water Act 2000* | Riverine Protection Permit | On- and off-tenure, locations and details to be determined |
| • **Flora and Fauna** | | | |
| Undermine a protected area (Cudmore Resource Reserve) | *Nature Conservation Act 1992* | Interest in a Protected Area (Cudmore Resource Reserve) beneath section 34 of the NC Act. To be sought from DERM. | A Management Plan for Cudmore Resource Reserve which includes a Plan of Operations for the undermined area is currently being investigated. |
| Clearing Permit of Least Concern Plants | *Nature Conservation Act 1992* | Protected Plant Permit | Location and details to be confirmed. |
| Mapping of Assessable Remnant Vegetation. | *Vegetation Management Act 1999* | Property Map of Assessable Vegetation (PMAV) | Location and details to be confirmed. |
| Clearing Protected Plants | *Nature Conservation (Wildlife Management) Regulation 2006* | Species Management Program (SPM) and/or Damage Mitigation Permit | Location and details to be confirmed. |
| Vegetation Offsets | *Vegetation Management Act 1999* | Vegetation Offset investigations involving Bio-condition surveys | Location and details to be confirmed. |

| Item | Legislation | Relevant Approval | Status |
|---|---|---|---|
| Clearing of Native Plants | *Vegetation Management Act 1999* | Clearing of Native Vegetation and High Value Regrowth | Location and details to be confirmed. |
| Clearing of Native Plants | *Vegetation Management Act 1999* | Clearing of Regional Ecosystems | Location and details to be confirmed. |
| Clearing of Native Plants | *Vegetation Management Act 1999* | Clearing of Essential Habitat Communities | Location and details to be confirmed. |
| Operational Works - Clearing of Native Plants (Rail spur and access road) | *Vegetation Management Act 1999* | Clearing of Native Vegetation and High Value Regrowth<br>Clearing of Regional Ecosystems<br>Clearing of Essential Habitat Communities | Off-tenure location and details to be confirmed. |

#### 1.10.1.1 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 document must be an EM Plan (refer to Section 1.10.2.2). A draft EM Plan for this Project is included in Volume 2, Appendix W.

### 1.10.2 Commonwealth Legislative Framework

#### 1.10.2.1 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 EPPBC Act identifies six matters of national environmental significance. It 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.

Section 1.9.3 presents a summary of the EPBC referral process relating to the Project.

#### 1.10.2.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act) provides for the protection and preservation of places, areas and objects which have significance to Indigenous Australians, when state and territory legislation does not provide sufficient protection to the place, area or object. The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* is

administered by the Commonwealth Department of Sustainability, Environment Water, Population and Communities (DSEWPC).

The Act enables Indigenous Australians to make requests to protect their traditional areas and objects from threats of injury or desecration. The purpose of the Act is the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition (DSEWPC,2010).

The ATSIHP Act can override state and territory legislation where these mechanisms have not provided adequate protection of the place, area or object. The Minister for Sustainability, Environment, Water, Population and Communities can declare to protect the place, area or object, providing legal validity of the application is upheld.

Refer to Volume 1, Section 18 for details.

#### 1.10.2.3 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 HGPL across the lands associated with the Project area. The process to commence a CHMP over MLA 70425 commenced on 16 October 2009 with a submission to enter into a Right to Negotiate (RTN) pursuant to Section 29 of the NT Act and with an Agreement Executed on 23 December 2009. The CHMP registration was granted on 18 January 2010.

Refer to Volume 1, Section 18 for details.

### 1.10.3 Queensland Legislative Framework

#### 1.10.3.1 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 Commonwealth 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.

#### 1.10.3.2 Environmental Protection Act 1994

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 an 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 1, Section 25.

**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 or Development Permit are 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 environmental management 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 1, Section 28 and Volume 2, Appendix W 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).

The anticipated ERAs for this Project are listed in Table 1-3.

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).

#### 1.10.3.3 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 management. Amongst the principal objectives of this act are the need 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 70425 will be carried out pursuant to the MR Act.

#### 1.10.3.4 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (SP Act) replaces the *Integrated Planning Act 1997* as Queensland's principle piece of land use planning legislation. 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. Therefore, all of the Project's activities within the mining lease are exempt from SP Act approvals. If required, the Proponent will submit development applications to the relevant local authority for any off-lease activities requiring a development permit. 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 1, Section 6.

#### 1.10.3.5 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 artesian or sub-artesian aquifers (for other than stock or domestic purposes). A licence is required under the Water Act for works that interfere with the flow of water, such as a stream diversion. The construction of groundwater bores is assessable development beneath the SP Act, where located outside the area of the mining lease

An assessment for the Riverine Protection Permits will be made subject to the Water Act 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 people 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;
- All modifications to existing referrable dams to increase the storage capacity by more than 10%.

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 water management system currently proposed for the Project, there are numerous dams and/or flood levees that may meet the criteria for undertaking a failure impact assessment.

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 contaminant in the *Environmental Protection Act 1994*, the site environmental dams may be deemed hazardous waste dams.

**Water Resource Plans**

The *Water Act 2000* (Section 38) provides the mechanism for Water Resource Plans to be developed for the sustainable management of surface water or groundwater anywhere in the state of Queensland. As such, a Water Resource Plan (Water Resource [Burdekin Basin] Plan 2006) is the current statute for the Project area. The Water Resource (Burdekin Basin) Plan 2006 is supported by the Burdekin Basin Resource Operations Plan, which has been prepared to implement the Water Resource (Burdekin Basin) Plan 2006. The purpose of the Water Resource (Burdekin Basin) Plan 2006 resource plan is to:

- Define the availability of water in the plan area;
- Provide a framework for sustainably managing water and the taking of water; and
- Identify priorities and mechanisms for dealing with future water requirements.

As such, all future applications for water licences and water allocations required for the Project will need to accord with the relevant criteria of the Water Resource (Burdekin Basin) Plan 2006 and the Burdekin Basin Resource Operations Plan.

Further details are provided in Volume 1, Section 11.

#### 1.10.3.6 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 cost-efficient manner;
- 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 1, Section 18.

#### 1.10.3.7 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. 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.

Substantial penalties may apply where damage is allowed to occur to places or items that have been entered on the Register.

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 1, Section 19.

#### 1.10.3.8 Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NC Act) 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 1, Sections 9 and 10.

The NC Act and Nature Conservation (Protected Areas Management) Regulation 2006 also administer Protected Areas.

Gazetted on 23 October 1998, Cudmore Resources Reserve is designated under the NC Act as a Resources Reserve and is to be managed in accordance with Section 21 of the NC Act.

Cudmore Resources Reserve is identified beneath Schedule 2, Part 1 of the Nature Conservation (Protected Areas Management) Regulation 2006, as a Resource Reserve placed under the management of joint trustees. Specifically the:

- Environment Chief Executive (DERM); and
- Mining Chief Executive (DEEDI).

The management principles of the resource reserves are generally managed to:

- Recognise and, if appropriate, protect the area's cultural and natural resources;
- Provide for the controlled use of the area's cultural and natural resources; and
- Ensure that the area is maintained predominantly in its natural condition (OQPC, 1992).

Section 34 of the NC Act prescribes that a lease (pursuant to the *Land Act 1994*), agreement, licence, permit or other authority over, or in relation to, land in a protected area, may only be granted by the chief executive or trustees of the area with the consent of the chief executive. This consent may only be given if the proposed interest is consistent with the management principles of the area and management plan for the area, if a management plan has been approved. As management plan for

Cudmore Resources Reserve has not previously been drafted or approved, the application must generally be in accordance with Section 21 of the NC Act.

#### 1.10.3.9 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 1, Section 17.

#### 1.10.3.10 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.

#### 1.10.3.11 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 DEEDI.

#### 1.10.3.12 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).

#### 1.10.3.13 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 DERM.

#### 1.10.3.14 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*; and
- *Building Act 1975*.

### 1.10.4 Queensland Planning Framework

The Project was assessed against applicable Queensland statutory planning instruments including the local planning scheme, the Central West Regional Plan and identified state planning policies, amongst other things. The Project is considered to be generally consistent with the desired environmental outcomes for the planning area, is supportive of the regional policies and strategies for the Central West Region, adheres to the requirements of the identified state planning policies, and supports other planning instruments that relate to the activity.

Applicable state planning instruments and mechanisms examined during the assessment of the Project are detailed below.

The SP Act establishes the framework for planning and development assessment in Queensland. The SP Act exempts activities authorised under the MR Act, and all aspects of development for a mining activity to which an EA (mining activities) applies under the EP Act from assessment against a local government planning scheme.

Regardless of the exemptions granted beneath Schedule 4 of the *Sustainable Planning Regulation (2009)*, an assessment of the Project has been undertaken against:

- Applicable State Planning Policies (SPPs);
- The Central West Regional Plan; and
- The former Jericho Shire Planning Scheme.

The assessment of the Project against the provisions of these policies, plans and schemes is provided in Volume 1, Section 6. It considered that the Project is generally in accordance with the desired environmental outcomes for the planning area, is supportive of the regional policies and strategies for the Central West Region, adheres to the requirements of the identified State Planning Policies and supports other planning instruments that relate to the activity.

#### 1.10.4.1 State Planning Instruments

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 (Department of Local Government and Planning [DLGP], 2010) are addressed in Table 1-5.

Table 1-5 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.<br>Hazards and risks are addressed in Volume 1, Section 24.<br>Management of surface water is addressed in Volume 1, Section 11. |
| 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.<br>Volume 1, Section 5 of the EIS addresses the potential impact of the Project on the protection of good quality agricultural land. |
| 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.<br>Volume 1, Section 11 of this EIS addresses the potential impact of the Project on water quality. |
| State Coastal Management Plan – Queensland's Coastal Policy 2001 | 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.<br>Volume 2, Section 11 of this EIS addresses the potential impact of the Project on water quality. |

#### 1.10.4.2 Regional Planning Provisions

#### 1.10.4.3 Northern Economic Triangle

The Northern Economic Triangle (NET) was established by the Queensland Government in 2007 as a means of promoting 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;
- Enhancing mining and mineral processing; and
- Enhancing industrial development.

#### 1.10.4.4 Central West Regional Plan

The Central West Regional Plan was a statutory plan developed beneath the *Integrated Planning Act 1997*, 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 1, Section 6.10.2 discusses the compatibility of the Project with the regional plan.

#### 1.10.4.5 Sustainable Future 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 has identified a number of strategies for Barcaldine Regional Council to adopt to satisfy the needs of the local community through the provision of housing and infrastructure developments in the area. The EIS has assessed the Project's impact on the community, community services and accommodation for the construction and permanent workforces (Volume 1, Section 20). Refer to Volume 1, Section 6.6 for details.

#### 1.10.4.6 Local Planning Provisions

The Project 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. For the Project, the Jericho Shire Planning Scheme, which took effect on 23 June 2006, remains the planning scheme against which assessable development would be assessed (DIP, 2006). Volume 1, Section 6.10 discusses the compatibility of the Project with the local planning provisions.

### 1.10.5 Accredited Process for Controlled Actions under Legislation

For information on the accredited process for controlled actions under the EPBC Act, refer to Volume 2, Appendix H.