





# 1 Introduction

## 1.1 The Project

BHP Billiton Mitsubishi Alliance Coal Operations Pty Ltd (BMA) proposes to develop a multi-seam open cut coal mine at Caval Ridge, south-west of Moranbah and approximately 160 km south-west of Mackay, Queensland. The northern most boundary of the mine will be approximately 6 km Moranbah, while the mine industrial area (MIA) and coal handling and preparation plant (CHPP) will be about 16 km from Moranbah.

The Caval Ridge Project (the project) includes a new coal mine and coal handling and processing infrastructure to produce 8 Million tonnes per annum (Mtpa) of hard coking coal for the export market over a life of approximately 30 years.

The Caval Ridge deposit is north of the Peak Downs coal mine (managed by BMA) and is intersected by the Peak Downs Highway. The location of the project is shown in Figure 1.1. The project site is shown in Figure 3.1.

The project will use a combination of draglines and a truck-shovel fleet. Mining activities will include clearing vegetation, topsoil stripping, removing overburden to in pit and out-of-pit spoil dumps, coal mining and progressive rehabilitation. Construction is expected to commence in 2010, with first coal being produced in 2013.

## 1.2 The Proponent

The project proponent is BHP Billiton Mitsubishi Alliance Coal Operations Pty Ltd as manager and agent on behalf of the Central Queensland Coal Associates Joint Venture (CQCA). CQCA is an unincorporated joint venture between BHP Billiton (50%) and Mitsubishi Corp. (50%). Joint venture arrangements are regulated in accordance with the C.Q.C.A. Joint Venture Agreement as amended most recently by Deed dated 28 June 2001 and a Strategic Alliance Agreement dated 28 June 2001 which created BMA.

Operations are managed by BMA on behalf of the CQCA Joint Venturers under a Management Agreement dated 28 June 2001. BMA has equal ownership and management of seven Central Queensland coal mines: Peak Downs, Goonyella Riverside, Broadmeadow, Saraji, Norwich Park, Gregory Crinum and Blackwater, and also manages the Hay Point Coal Terminal near Mackay, Queensland.

In addition, BMA manages the operations of BHP Mitsui Coal, which is owned by BHP Billiton (80%) and Mitsui and Co (20%). These operations include the South Walker Creek Mine and Poitrel Mine. BMA's operations provide significant benefits to the local communities, the broader Central Queensland region and to the Queensland economy as a whole. BMA is the largest employer in the region and plays a key role in the economic development of Central Queensland.

BMA's contribution during the 2008 financial year included:

- \$1,341 million spent on equipment, goods and services from Central Queensland regional business.
- \$1,131 million spent on equipment, goods and services from other Queensland business.



- \$1,007 million spent on equipment, goods and services from other Australian business.
- \$396 million paid in coal royalties to the Queensland Government.
- \$651 million in wages and salaries to employees.
- \$290 million paid to Queensland Rail in freight charges.
- Over \$22 million spent in local townships and communities.

In addition, BMA employed:

- 9,800 people directly (including contractors)
- 186 apprentices and trainees.

The BHP Billiton Sustainable Development Policy sets out BMA's approach to managing health, safety, the environment and the community. BMA is committed to the principles of sustainable development, including the wellbeing of its employees and communities. BMA is also committed to developing, implementing and maintaining management systems for health, safety, environment and community that are consistent with best practices. This is embodied in BMA's Charter which states that BMA has "an overriding commitment to health, safety, environmental responsibility and sustainable development".

The commitment is given practical effect by BHP Billiton's Health, Safety, Environment and Community (HSEC) Management Standards, and the systems, procedures and operational protocols through which these standards are applied at a site level. Through these standards BMA seeks to achieve their stated company goal of "zero harm to people and the environment". All BMA sites are certified to ISO14001. The project will also seek to achieve certification to this standard in the early years of operation.

The BMA Coal Sustainability Report (BMA, 2007) outlines environmental management and community activities. This includes reporting on targets and environmental monitoring activities for land, water, air and community indicators.

Copies of the BHP Sustainable Development Policy, BMA's Charter and BHP Billiton's HSEC Management Standards are provided in Appendix R.

### **1.3 Project Description**

The key elements of the project (Figure 1.3 and Figure 1.4) are outlined below.

- An open cut coal mine will be constructed on the northern section of the Peak Downs Mining Lease (ML 1775) generating up to 5.5 Mtpa of product coal. An additional 2.5 Mtpa will be sourced from Peak Downs mine and processed at Caval Ridge to produce approximately 8 Mtpa of product coal for the export market.
- The product coal will be railed to the Hay Point and Dalrymple Bay coal terminals for export to international markets.

- Out-of-pit spoil dumps will be created to the west of ML 1775 on the Caval Ridge West Mining Lease Application (MLA 70403) area. Once there is sufficient space for in pit dumping, pits will be progressively backfilled with spoil (in pit spoil dumps).
- A mine water management system will be constructed that diverts clean water, captures and manages mine area runoff and pit water for reuse.
- Mine haul roads will connect open cut pits to a new coal handling and preparation plant (CHPP) on MLA 70403.
- The Peak Downs Highway will be elevated to cross over the haul road and infrastructure corridor.
- An overland conveyor will be constructed to transfer run of mine (ROM) coal from the Southern ROM to the CHPP.
- A conveyor will be constructed to transfer product coal from the CHPP to the train loadout located on MLA 70403.
- Power will be supplied via an overhead 66 kilovolt (kV) transmission line from the Moranbah 66 kV line.
- Process waste comprising both coal rejects and dewatered tailings from the CHPP will be returned by truck and disposed of in the project's spoil dumps.
- Process water will be supplied using a combination of reuse from sediment dams on the project site, and additional water supply from the Process Water Dam, which is supplied from the existing Eungella-Bingegang pipeline.
- The project will be accessed via the Peak Downs Highway.
- The rail spur and loop will be constructed from the main Blair Athol Line.
- The mine industrial area (MIA) including: site offices, workshops, stores, magazine, communications, car parking and some other minor facilities will be constructed on MLA 70403.

BMA will contract the construction of the CHPP to a construction contractor, while BMA will operate the CHPP. The project will employ about 1,200 construction employees and about 495 operational employees.

## **1.4 Relationship to Other Projects**

### **1.4.1 Bowen Basin Coal Growth Project**

BMA believes that there will be continued, strong demand for its products from India, China and other markets. In response to this demand, BMA is strengthening its growth options. BMA has identified quality coal reserves associated with the various projects that make up the BMA Bowen Basin Coal Growth Project (BMA BBCGP). The BMA BBCGP involves the growth of BMA's coal mining operations in the northern section of the Bowen Basin, near Moranbah, Queensland. The BMA BBCGP Initial Advice Statement outlined that the production of an additional 21.5 Mtpa of coal products through the development of two new coal mining operations, and expansion of an existing operation. The Caval Ridge Mine (the subject of this



Environmental Impact Statement (EIS)) and the Daunia Mine will be new operations whilst the expansion will be of the operating Goonyella Riverside Mine and the development of associated mine infrastructure for each of these operations. BMA is also investigating the development of a new, larger capacity airport in the vicinity of Moranbah to accommodate increased travel to and from the area.

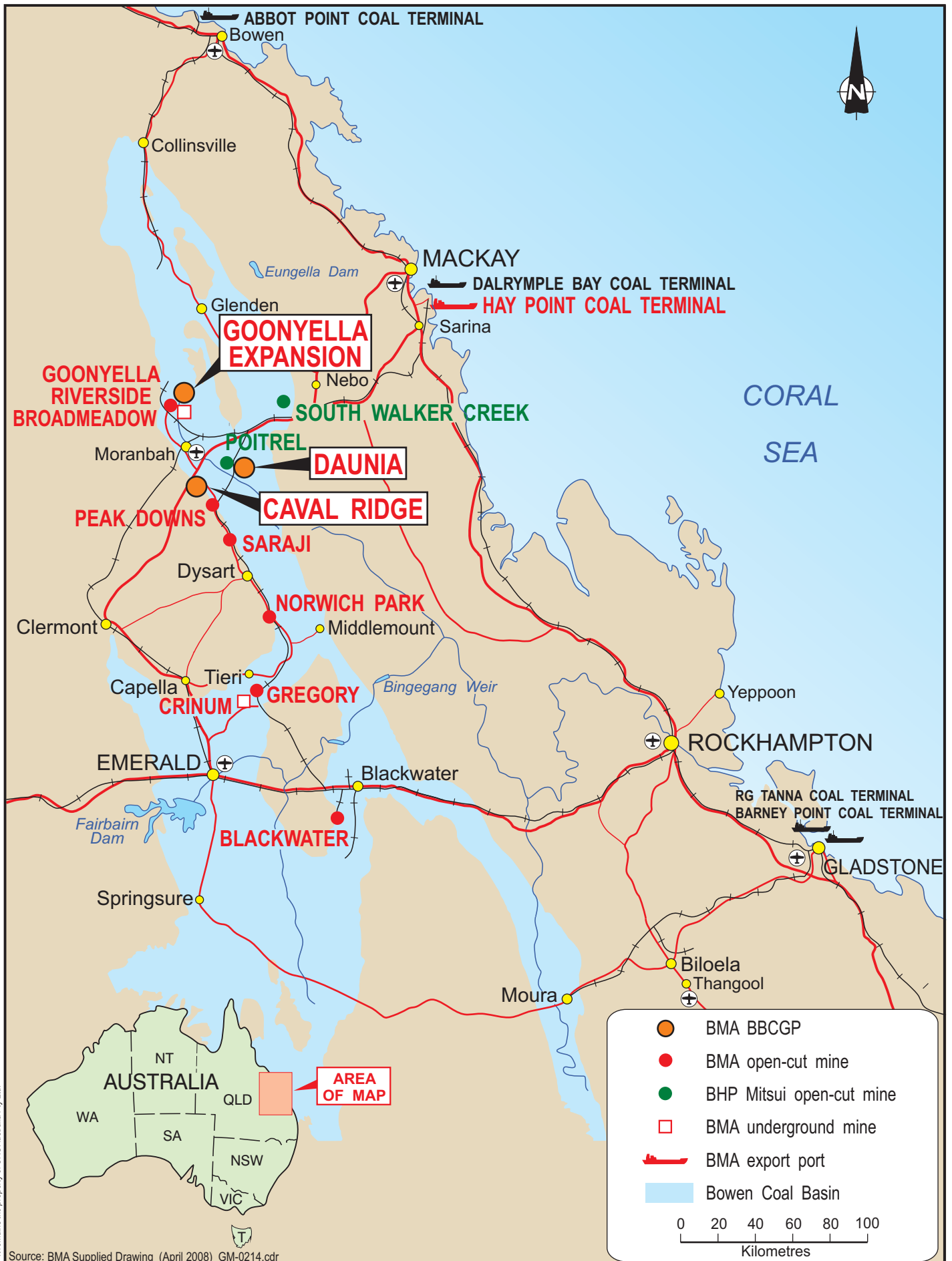
The BMA BBCGP is expected to contribute significantly to the State's economy and contribute directly to the employment of approximately 2,550 people during construction and approximately 1,495 during operation across all project elements. The BMA BBCGP will also contribute significantly to local and regional economies through direct and indirect employment and investment expenditure.

The key elements of the BMA BBCGP are summarised in Table 1.1. The locations of these BMA projects are shown in Figure 1.1.

**Table 1.1 Key Elements of the BMA BBCGP**

Project Element	Tonnage Contribution (Mtpa)	Construction Commencement	First Coal Produced	Workforce	
				Construction	Operation
Daunia Mine	4	2009	2010	450	300
Caval Ridge Mine	8	2010	2013	1,200	495
Goonyella Riverside Mine Expansion	9.5*	2010/2011	2013	900	700
Airport	N/A	2010	N/A	TBC	Minimal
<b>Total</b>	<b>21.5*</b>			<b>2,550</b>	<b>1,495</b>

\*The Initial Advice Statement identified a tonnage increase of 8 Mtpa for the Goonyella Riverside Mine Expansion, this has been revised up to approximately 9.5 Mtpa, increasing the total incremental tonnes from BBCGP to 21.5 Mtpa.



Source: BMA Supplied Drawing (April 2008) GM-0214.cdr

Client



**BMA**  
BHP Billiton Mitsubishi Alliance



**URS**

Project

CAVAL RIDGE PROJECT  
ENVIRONMENTAL IMPACT STATEMENT

Drawn: VH	Approved: RS	Date: 08-05-2009
Job No.: 4262 6158	File No. 42626158-g-510b.cdr	

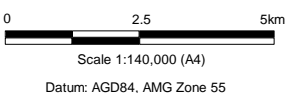
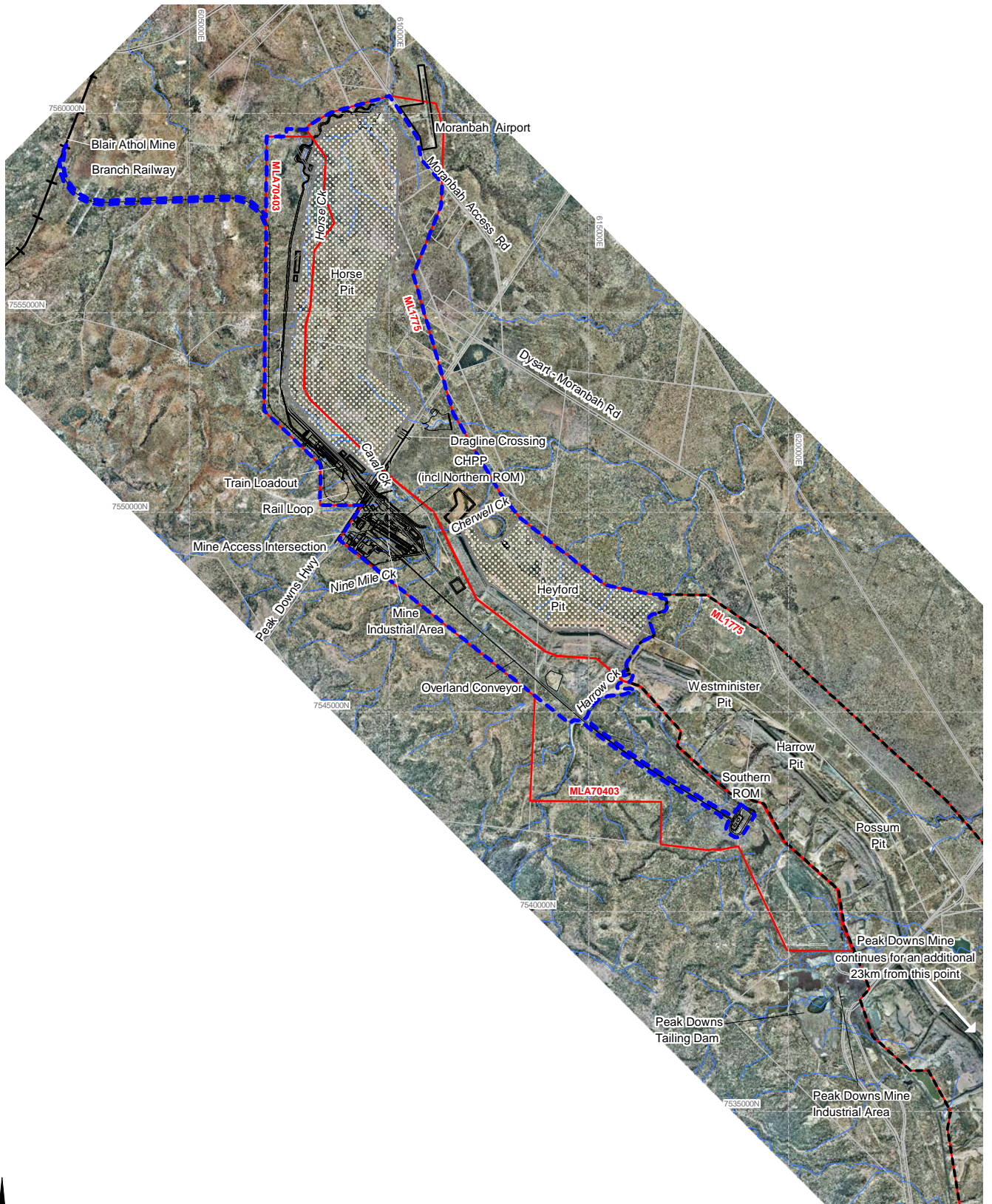
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**PROJECT LOCATION**

Figure: 1.1

Rev. B
A4

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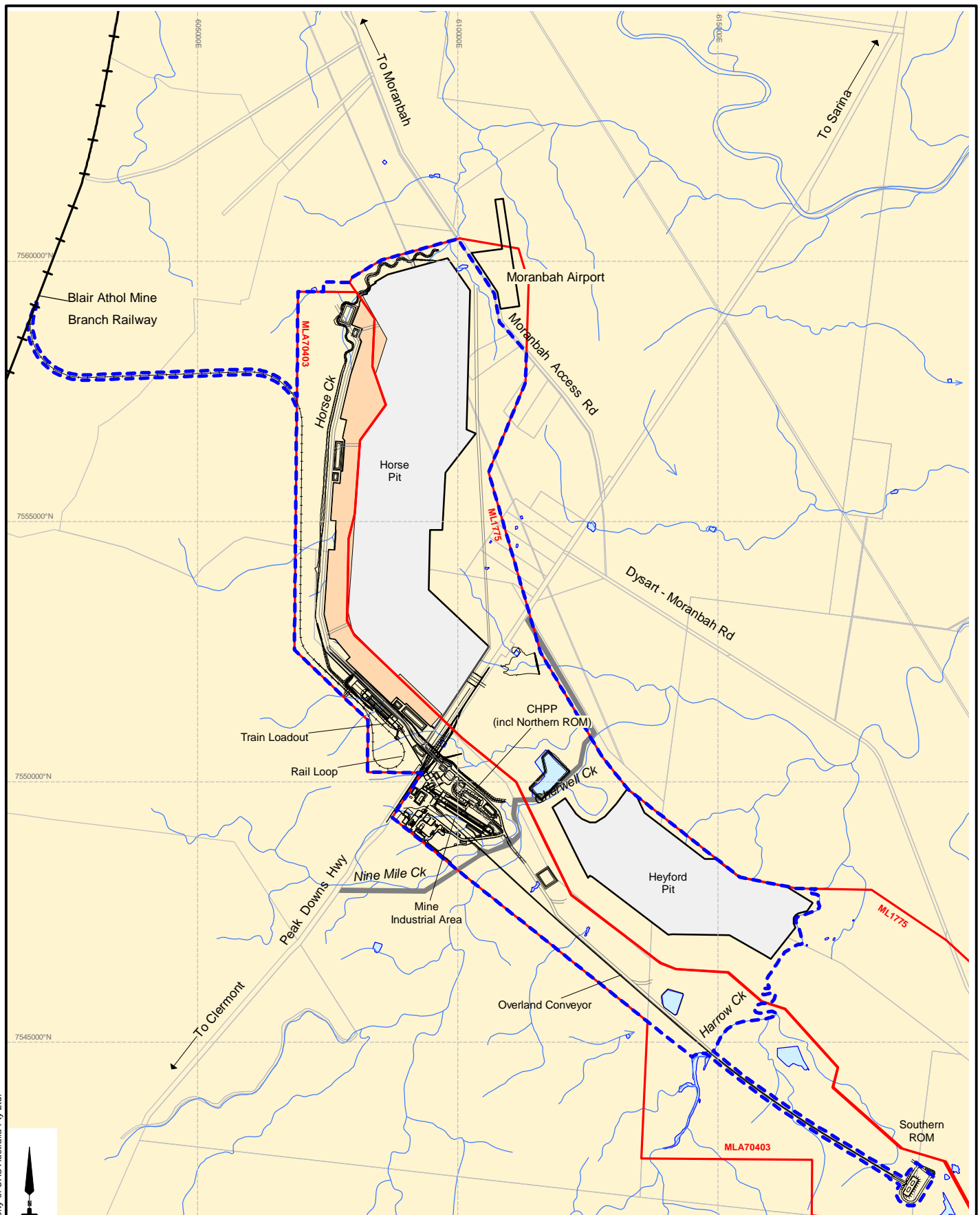


- Caval Ridge Project
- Peak Downs Mine
- Mine Lease
- Proposed Pit
- Proposed Infrastructure

Source: Client Supplied Data

<p>Client</p>	<p>Project</p> <p style="text-align: center;"><b>CAVAL RIDGE PROJECT ENVIRONMENTAL IMPACT STATEMENT</b></p>	<p>Title</p> <p style="text-align: center;"><b>CAVAL RIDGE MINE AND PEAK DOWNS MINE LOCATION</b></p>
<p>Drawn: RG    Approved: RS    Date: 08-05-2009</p> <p>Job No: <b>4262 6158</b>    File No: 42626158-g-614.wor</p>		<p>Figure: <b>1.2</b></p>
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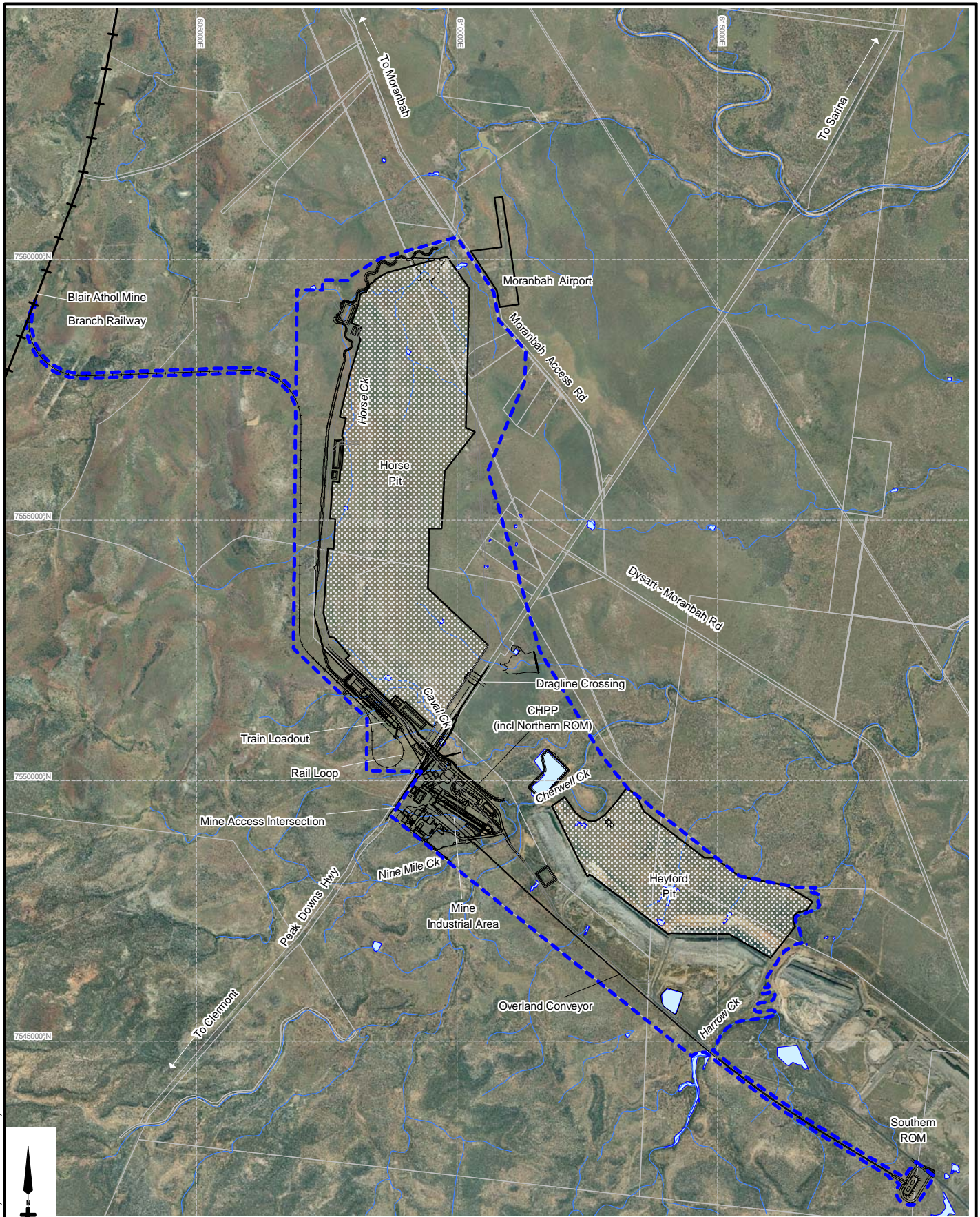
- Project Site
- Mining Lease
- Proposed Pit
- Proposed Infrastructure
- Proposed Spoil
- Proposed Stock Route

Source: Client Supplied Data

Client  	Project <b>CAVAL RIDGE PROJECT          ENVIRONMENTAL IMPACT STATEMENT</b>	Title <b>PROJECT SITE</b>
Drawn: RG    Approved: RS    Date: 08-05-2009		Figure: <b>1.3</b>
Job No: <b>4262 6158</b> File No: 42626158-g-541b.wor		
		Rev: B <b>A4</b>

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0 1.25 2.5km  
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 Datum: AGD84, AMG Zone 55

- Project Site
- Proposed Pit
- Proposed Infrastructure

Source: Client Supplied Data

Client 	Project <p style="text-align: center;"><b>CAVAL RIDGE PROJECT          ENVIRONMENTAL IMPACT STATEMENT</b></p>	Title <p style="text-align: center;"><b>PROJECT SITE          (INCLUDING AERIAL PHOTO)</b></p>										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Drawn: RG</td> <td style="width: 33%;">Approved: RS</td> <td style="width: 33%;">Date: 08-05-2009</td> </tr> <tr> <td>Job No: <b>4262 6158</b></td> <td colspan="2">File No: 42626158-g-540b.wor</td> </tr> </table>	Drawn: RG	Approved: RS	Date: 08-05-2009	Job No: <b>4262 6158</b>	File No: 42626158-g-540b.wor		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Figure: <b>1.4</b></td> <td style="width: 20%;">Rev: <b>B</b></td> </tr> <tr> <td colspan="2" style="text-align: right;">A4</td> </tr> </table>	Figure: <b>1.4</b>	Rev: <b>B</b>	A4	
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The BMA BBCGP will mostly occur on existing mining leases, but new mining leases are required for both the Caval Ridge Mine and the Goonyella Riverside Mine Expansion. New and amended environmental authorities will be required for the BMA BBCGP elements. Coal will be exported via the existing Hay Point and/or Dalrymple Bay coal terminals, with potential to export via Abbot Point coal terminal following construction of the Northern Missing Link rail line.

An EIS will be completed for each element of the BMA BBCGP to address key environmental issues including: rehabilitation and land management, social impacts, water and groundwater, flora and fauna, air quality, greenhouse gas emissions, and noise. BMA is also aware that addressing the needs of community stakeholders is critical to this project. This EIS addresses the impacts and benefits associated with the Caval Ridge Project. The Caval Ridge Project is the second EIS to be prepared for the BMA BBCGP, the first EIS was for the Daunia Mine. Details of other BMA BBCGP components are still being finalised as part of design and impact assessment processes. An overview of the make up of the different project components is provided below.

#### **1.4.1.1 Daunia Mine**

The Daunia Mine (Figure 1.1) is located immediately to the east of the Norwich Park Branch railway line, south of the Peak Downs Highway and directly to the east of the existing Poitrel coal mine, which is also managed by BMA. The Daunia Mine includes:

- An open cut coal mine on the Daunia Mining Lease (ML 1781) generating up to 5.6 Mtpa of run-of-mine (ROM) coal to produce approximately 4 Mtpa of product coal.
- Infrastructure to produce semi hard coking coal and pulverized coal injection coal for the export market over a life of approximately 21 years.
- The product coal will be railed to the Hay Point and Dalrymple Bay coal terminals for export to international markets.
- The project will share some services with the Poitrel Mine, including: site offices, workshops, stores, magazine, communications, car parking and some other minor facilities.
- A CHPP to be constructed by contractor.
- Contractors will operate the mining operation and the CHPP.
- The project will employ about 450 construction employees and about 300 operational employees.
- BMA will maintain a small management team to manage the contractors.

#### **1.4.1.2 Goonyella Riverside Mine Expansion**

Goonyella Riverside Mine Expansion (Figure 1.1) is located within the existing Goonyella open cut and Broadmeadows underground mines, approximately 30 km north of Moranbah. The mine expansion includes the following proposed key components:

- The existing open cut mine will progress eastwards into Mineral Development Licence (MDL) 307 and to the south-west into Exploration Permit Coal (EPC) 953.
- A new ML will be required to cover some of the areas proposed to be mined
- The existing Broadmeadow Mine, which extracts the Goonyella Middle Seam, will be expanded eastwards into MDL 307 using either the conventional longwall mining practices currently being used for its operations within ML 1763 or see the introduction of longwall top coal caving technology once its feasibility is proven as a means to improve the levels of resource recovery compared to conventional longwall mining methods.
- Production to increase from 16 Mtpa up to 25.5 Mtpa of coal products.
- A construction workforce of approximately 900 people, with an estimated operating workforce of 700 people.
- Development of associated infrastructure including a new CHPP and a capacity upgrade to an existing CHPP to provide up to an additional 9.5 Mtpa of product, a new connection to the power grid, and a new water pipeline.

#### **1.4.1.3 Moranbah Airport**

BMA is investigating the development of a new airport in the Moranbah region which will be suitable for larger capacity aircraft. Options relating to the scale, location and timing of the new airport will be addressed in the EIS for the airport, which is yet to be prepared.

Prior to January 2009, direct commercial flights servicing Moranbah occurred 5 days per week through the airline Macair. These services were categorised as Code B (generally less than 36 seats) aircraft under the current Civil Aviation Safety Authority guidelines. With Macair's services ceasing in January 2009, negotiations are currently underway between the State Government and an existing commercial operator to provide a continuation of commercial flights in and out of Moranbah.

The existing Moranbah airport is partially located on ML 1775.

The cumulative impacts that result from the BMA BBCGP and the Caval Ridge Mine are discussed further in Section 20.

#### **1.4.1.4 Phased EIS Process**

Table 1.1 shows the current planned timing of the BMA BBCGP elements for construction and first coal. In each case the EIS for the BMA BBCGP elements will be provided in advance of construction, allowing



sufficient time for all regulatory processes to be completed and all required approvals to be in place. It is expected that this will result in EIS's for the BMA BBCGP elements being provided as follows:

- Daunia Mine: December 2008
- Caval Ridge Mine: Early 2009
- Goonyella Riverside Mine Expansion: Mid 2009
- Moranbah Airport: Early 2010

#### **1.4.2 Expanding ports**

BMA is currently seeking to expand its export capacity through the expansion of the Hay Point Coal Terminal. Investigations are currently underway into the feasibility of expanding the terminal from 43 Mtpa to 75 Mtpa. An EPBC Referral relating to the expansion of the Hay Point Coal Terminal was submitted to the Department of Environment, Water, Heritage and the Arts (DEWHA) on 24 February 2009 for a Controlled Action decision. Environmental approval documentation relating to both State and Commonwealth approvals relating to the expansion of the Hay Point Terminal is currently being prepared, with all necessary approvals anticipated to be in place by the end of calendar year 2009.

Ports Corporation Queensland (PCQ) is currently expanding the Abbot Point Coal Terminal from 21 Mtpa to 25 Mtpa. This expansion is expected to be completed by the end of June 2009. PCQ are proposing a second stage of expansion from 25 Mtpa to 50Mtpa which is expected to be completed by approximately 2011. PCQ recently commenced an EIS process for a further future expansion of Abbot Point from 50 Mtpa to 110 Mtpa. BMA's ability to export coal through Abbot Point is reliant upon the complete of the Northern Missing Rail Link project which will connect rail access to BMA's mining operations in the Bowen Basin.

#### **1.4.3 Northern Missing Link**

A 69 km rail link between the North Goonyella and Newlands rail systems in the northern Bowen Basin coalfields is proposed by Queensland Rail. The rail link, commonly referred to as the Northern Missing Link, will connect the existing mines of North Goonyella and Newlands and allow coal trains originating in Central Queensland to be directed to the port of Abbot Point, near Bowen (DIP Website, 2009). An EIS was submitted for this project in 2006. As at early 2009, due to the change in economic climate the project, in its current form, is under review.

Establishment of the Northern Missing Link presents BMA with a future opportunity to export coal through the Abbot Point Coal Terminal, in addition to the coal exported through BMA's Hay Point Coal Terminal, the Dalrymple Bay Coal Terminal and the Port of Gladstone.

#### **1.4.4 Electricity Infrastructure**

The availability of power, supplied from the Moranbah substation, is reaching its supply limit in the area. To satisfy the power demands of BMA's longer term growth plans, including the Caval Ridge Mine and Goonyella Riverside Mine expansion projects, a new 132/66 kV transformation supply point will be



developed near the current Peak Downs mine at the crossing of the Moranbah Dysart Road and Peak Downs Railway line.

By installing this new 132/66 kV transformation capacity to supply the existing Peak Downs Mine south of the project site, capacity relief will be introduced into the existing 66 kV network infrastructure from the Moranbah substation.

#### **1.4.5 Denham Village**

Denham Village is to be constructed by BMA to service the operation requirements of existing operations, and the construction and operational requirements of BMA's BBCGP. Approval exists to undertake the staged development of an accommodation village on the north-eastern side of the Peak Downs Mining Lease (ML 1775). The purpose of the Peak Downs Mining Lease was amended on 27 January 2009 to allow for the construction and operation of an accommodation facility. The village will front onto Moranbah Access Road. Vehicular access and egress will be enabled by a proximity card and records of movements maintained electronically. The project has all necessary approvals to be operated and construction is expected to commence 2009.

#### **1.4.6 Other Coal Mines in the Area**

##### **1.4.6.1 Grosvenor Coal Mine**

The Grosvenor Coal Mine, an Anglo operation, will be a greenfield underground coal mine producing up to 6 Mtpa of coking coal for export. The project site is north of Moranbah adjoins the Moranbah North Mine site. Coal will be processed at the existing Moranbah North Mine CHPP and exported through Dalrymple Bay Coal Terminal, Mackay. The longwall method will be used to mine the coal. The mine is expected to operate for more than 25 years. The proposed project is currently going through the DERM approvals process, with an EIS to be displayed to be public in early 2009 (DERM 2009).

##### **1.4.6.2 Northern Goonyella and Eaglefield Expansion**

North Goonyella underground and Eaglefield open-cut mines are located at the northern end of the Bowen Basin, approximately 160 km west of Moranbah. North Goonyella Coal Mines proposes to extend the open-cut mining operation within the existing Mining Lease and increase the existing production rate from up to 3.5 Mtpa of product coal up to a maximum of 12 Mtpa of product coal. This estimated increase will extend the mine life for a further 11 years after underground mining is complete. The proposed open-cut expansion is known as the Eaglefield Expansion Project (EEP). The EEP will process the ROM coal from the Denham Pit onsite at the existing CHPP which may require upgrades to improve its production rate and recovery capacity. With the pending installation of the northern missing link railway line which will join the North Goonyella—Eaglefield rail line to the Newlands rail line, flexibility and capacity will be gained to ship the product coal from either the Dalrymple Bay Coal Terminal and/or the Abbot Point Coal Terminal (Matrixplus 2009).

### 1.4.6.3 Integrated Isaac Plains

The Isaac Plains North Coal Mine, an Aquila Resources Ltd operation, is located north-east of Moranbah. The proposed expansion of Isaac Plains South is approximately 7 km south east of Moranbah. Together referred to as the Integrated Isaac Plains project, this project is an open cut mine with coal being processed at a CHPP into coking, pulverised coal injection and thermal coal fractions. Subject to receipt of all regulatory approvals, the project is planned to increase capacity of 2.8 Mtpa of product in line with the expansion at the Dalrymple Bay Coal Terminal which should be completed by 2009 (Aquila 2009).

## 1.5 The Environmental Impact Assessment Process

### 1.5.1 Methodology of the EIS

The following section briefly outlines the EIS structure and the technical studies undertaken as part of or prior to the EIS process. A more detailed account of these studies is provided in the relevant sections of the EIS.

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 Bowen Basin region. It also summarises applicable legislation, approvals and objectives for the project.
2	Project Justification and Sustainability	Discusses the need for the project and presents the project's technical feasibility and commercial viability. Alternatives to the project as well as socio-economic issues and benefits of are further discussed. The sustainability principles of the project are also addressed.
3	Project Description	Provides a detailed description of the project including information on location, project key elements, mining tenures, mine design, mine facilities and infrastructure, coal handling and preparation, water management, coal transport, power supply and other infrastructure, waste management, construction, rehabilitation and decommissioning.
4	Land Resources	<p>Climate- describes rainfall patterns, humidity, air temperature, wind (speed and direction), stability class, mixing height and temperature inversions within the region of the project.</p> <p>Topography and Geomorphology- describes the topographic and geomorphological features of the project site.</p> <p>Geology- Describes the regional geology the site geology, economic coal seams of the project site are also described.</p> <p>Soils- 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.</p> <p>Land Use- assesses the historic and current land uses.</p> <p>Sensitive Environmental Areas- identifies areas within the project site that are subject to treaties, are protected estates or parks, declared fish habitats, heritage or cultural areas, or are under world heritage listings.</p> <p>Landscape Character and Visual Amenity- describes in general terms the existing landscape character of the project site and surrounding areas. The study also provides description of existing</p>



BHP Billiton Mitsubishi Alliance

EIS Section	Title	Studies Undertaken
		<p>landscape features and views that are considered most likely to be valued by sectors of the local and broader community.</p> <p>Land Disturbance- describes the rehabilitation strategy and decommissioning procedures for the project.</p> <p>Contaminated Land- A contaminated land preliminary site investigation was carried out at the project site to determine if any previous or current land uses have resulted in possible contamination issues.</p>
5	Mineral Waste	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.
6	Surface Water	The surface water study described the surface water resources of the project site and vicinity. It included descriptions of regional stream flows, existing drainage conditions, existing water quality, among others. Impacts of the project on the surface water resources were also studied and water management measures identified.
7	Groundwater	The groundwater study described the groundwater resources in the area in terms of geology- host aquifers, groundwater levels and flows, groundwater use, and quality, among others. Impacts of the project on groundwater quality and regional groundwater levels were assessed.
8	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 through searching of relevant data bases, review of other secondary data, and actual ground survey.
9	Aquatic Ecology	The aquatic ecology of the project site was described in terms of environmental values and potential impacts and mitigation measures. The status of aquatic ecological values was determined through searching of relevant data bases, review of other secondary data, and actual ground survey.
10	Air Quality	The air quality assessment for the project has considered the potential release 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 at local residential communities.
12	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 greater Moranbah community.
13	Transport	A traffic assessment was done to account for the different traffic demand characteristics of both the construction and operation phases. Traffic impacts, pavement impacts, and required upgrades were identified in the study.
15	Cultural Heritage	Non-indigenous and Indigenous cultural heritage places and values were recorded as part of cultural heritage investigations. The study presents a description of the process for identification and management of non- indigenous and Indigenous cultural heritage associated with the project.
16	Community	An extensive program of community consultation and stakeholder engagement was carried out to identify community issues and concerns, ensure that BMA is responsive in mitigating against issues, to proactively work with stakeholders and to continue a long term relationship between BMA and the Bowen Basin community.

<b>EIS Section</b>	<b>Title</b>	<b>Studies Undertaken</b>
17	Social Impact Assessment	A social impact assessment was conducted to help understand the potential impacts that a proposed project may have on a community. A baseline study of the community's existing social environment is developed by analysing demographic characteristics, social infrastructure, social values and lifestyles. This is then used to help predict any social impacts the community may face, or changes that may occur to the existing social environment, by introducing the proposed project.
18	Economic Assessment	Potential direct and indirect impacts on the local, regional and national economies as a result of the project have been identified and quantified where possible. Strategies have been provided to mitigate potential negative economic impacts and maximise the potential economic benefits that would potentially occur.
19	Health, Safety and Risk	The study assessed the health and safety issues associated with the project's construction, operational and decommissioning phases. Mitigation strategies are outlined where appropriate. The hazards are analysed to identify any significant residual risks to human health, safety or natural ecosystems.
20	Cumulative Impacts	This section summarises the cumulative impacts for the project and the BMA BBCGP. Three separate levels of cumulative impacts were considered: project site localised cumulative impacts; regional cumulative impacts; and global cumulative impacts.
21, Appendix Q	Draft Environmental Management Plan (EM Plan)	These sections present the draft Environmental Management Plan (EM Plan) for the project that describes management strategies to achieve acceptable environmental conditions and makes commitments about how impacts will be managed.
Appendices		Appendices provide supporting technical documentation.



### **1.5.2 Objectives of the EIS**

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) (Appendix A) issued by Department of Infrastructure and Planning (DIP).

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

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

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

- Interested bodies and persons; a basis for understanding the project, alternatives and preferred solutions, the existing environment that would be affected by the project, the impacts that may occur, and the measures to be taken to mitigate all adverse impacts.
- The DIP and the Advisory Bodies; a framework for assessing the impacts of the project, in view of legislative and policy provisions.
- 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 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.

### **1.6 Public Consultation Process and Submissions**

During the production of this EIS, members of the public and other interested parties were encouraged to participate in the planning process. Key information was distributed to the community through advertising, newsletters, fact sheets and static displays. Stakeholders and the community also interacted with the project



team through briefings, feedback forms, a community reference group and mobile displays, which travelled through the region. The community's reaction to BMA's engagement process was generally positive and participants showed interest in the project and BMA's overall growth. Community members emphasised the importance of their input in planning for further mine development and managing potential impacts. Responses from all parties have been collated and considered in the design of environmental and social plans and strategies.

Details of the community consultation program are provided in Section 16.

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

Ongoing consultation and social monitoring:

BMA has a multi-pronged and ongoing social monitoring and community consultation approach (qualitative research) as part of our day to day operations, which will be used to complement the State Government's own social monitoring programs. BMA's approach involves (but is not limited to):

- Periodic community perceptions survey across BMA communities
- Community reference and community network groups (one specifically for the growth projects, others relating to locations and BMA's ongoing operations)
- Meetings with local councils (Mackay, Isaac and Central Highlands)
- Involvement in regional development corporations
- Representation on the Sustainable Resource Communities Local Leadership Group in the Bowen Basin
- Regular meetings with Indigenous and Traditional Owner groups
- Regular meetings with interagency groups in the Bowen Basin
- An email address and hotline telephone number, to log and respond to ongoing community feedback for the duration of BMA's growth projects
- A well established Community Partnerships Program, and
- Dedicated community relations employees (Brisbane-based and Bowen Basin-based), who liaise with immediate stakeholders including landholders, community groups and local businesses.

Feedback from these interactions is monitored by the Communities Team and relevant community updates will be fed into the Sustainable Resource Communities Leadership Group.



Priority social-needs projects are identified through this program of ongoing community engagement and qualitative research, and will be reflected in BMA's Community Strategy, which is being developed at present and when complete will be communicated to Government.

BMA is part owned by BHP Billiton, which also sees the company comply with prescriptive standards relating to community engagement. BMA's compliance with these standards is periodically audited as per the BHP Billiton schedule.

### **1.6.1 Submissions**

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

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

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

EIS Project Manager  
BMA Bowen Basin Coal Growth Project  
Significant Projects Coordination  
Department of Infrastructure and Planning  
PO Box 15009  
CITY EAST QLD 4002

Tel: (07) 3224 2911 Fax: (07) 3225 8282

Email: [bma\\_bowenbasincoal@dip.qld.gov.au](mailto:bma_bowenbasincoal@dip.qld.gov.au)

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

## **1.7 Project Approvals**

### **1.7.1 Relevant Legislation and Policy Requirements**

On 4 July 2008 the Coordinator-General (CG) declared the BMA BBCGP a significant project for which an EIS is required in accordance with Part 4 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) (refer Section 1.7.1.11 below). The ToR for the BMA BBCGP (Appendix A) set out a phased process for assessing the environmental impacts of each element of the BMA BBCGP. As discussed earlier, the Caval Ridge Project is the subject of this EIS, and is the second element of the BMA BBCGP for which an EIS has been completed.

The Department of Environment, Water, Heritage and the Arts (DEWHA) considered a referral assessment for the Caval Ridge Coal Mine under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Commonwealth Minister of Environment, Heritage and the Arts determined on 23 September 2008 that the Caval Ridge Project constitutes a controlled action under Section 75 of the EPBC Act, as there is likely to be a significant impact on matters of national environmental significance.

Key approvals required for the project are summarised in Table 1.2.

**Table 1.2 Key Approvals Required for the Project**

<b>Legislation</b>	<b>Relevant Authority</b>	<b>Action/ Approval</b>	<b>Timing</b>
Environment Protection and Biodiversity Conservation Act 1999	DEWHA	Approval of the controlled action and EIS (under bilateral agreement)	Dec 2009
State Development and Public Works Organisation Act 1971	DIP	Approval of the EIS	Nov 2009
Environment Protection Act 1994	DERM	Approval of EM Plan and issue of an environmental authority to operate the mine	Dec 2009
Mineral Resources Act 1989	DEEDI	Grant of ML for MLA 70403	Oct 2010
Integrated Planning Act 1997	Assessment Managers	Grant of any development permits (if required))	Pre Construction July 2010
Vegetation Management Act 1999	DERM	Vegetation clearing	Pre Construction July 2010
Nature Conservation Act 1992	DERM	Interference with species listed under the Nature Conservation (Wildlife) Regulation 1994	Pre Construction July 2010
Water Act 2000	DERM	Licensing of water course diversions  Licensing for bores constructed as part of the groundwater monitoring network	Pre Construction July 2010  Pre Construction July 2010
Aboriginal Cultural Heritage Act 2003	DERM	Approval of Cultural Heritage Management Plan	Nov 2009

Note:

1. DEWHA – Department of Environment, Water, Heritage and the Arts
2. DIP - Department of Infrastructure and Planning
3. DERM – Department of Environment and Resource Management including the former Environmental Protection Agency and Department of Natural Resources and Water
4. DEEDI - Department of Employment Economic Development and Innovation including the former Department of Mines and Energy

Below is a summary of key legislation and policies relevant to the project.

### **1.7.1.1 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 management programs (EMPs).
- Issuing environmental protection policies (EPPs)
- Regulations.
- Creating a general environmental duty.

When deciding whether to grant or refuse an application for an environmental authority (EA) or deciding on the conditions of the authority, 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 1992. These issues are addressed in Section 2.

#### ***Environmentally Relevant Activities***

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

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

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

Under Section 201 of the EP Act, an EM Plan must be submitted to the administering authority with the application for an EA (mining activities). The purpose of the EM Plan is to propose environmental protection commitments to help the administering authority prepare the draft EA for the application. The DERM has prepared Guideline Number 8 for applicants about the format and content of an EM Plan.

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

ERAs for this project include:

- ERA 8 – Chemical Storage
- ERA 31 - Mineral Processing
- ERA 56 - Regulated Waste Storage
- ERA 63 - Sewage Treatment

### ***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
- 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 1997 & Environmental Protection (Water) Amendment Policy (No. 1) 2008
- Environmental Protection (Noise) Policy 2008
- Environmental Protection (Air) Policy 2008
- Environmental Protection (Waste Management) Policy 2000.

### ***Environmental Protection (Water) Policy 1997 & Environmental Protection (Water) Amendment Policy (No. 1) 2008***

The purpose of this policy and the amendment is to achieve ecological sustainable development in relation to Queensland waters. It sets a framework for managing environmental impacts on water, the identification

of environmental values and the guidelines needed to protect the water environment. The Australian and New Zealand Water Quality Guidelines (ANZECC 2000) are an example of guidelines which may be used to assess water quality in the existing environment and assist in the setting of environmental values and water quality objectives.

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

### ***Environmental Protection (Noise) Policy 2008***

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

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

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

Modelling reported in the EIS indicates that limited exceedances of noise will occur at nearby sensitive receivers. Mitigation measures are outlined in the EIS to minimise the impacts on these sensitive receivers.

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

### ***Environmental Protection (Air) Policy 2008***

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

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

A monitoring program is proposed to monitor the impact of mining operations on the air quality in the area. Mitigation measures will be implemented to reduce the potential for air quality impacts at the nearest sensitive receivers. A complaints register for dust contamination will be maintained. Should any complaints

be registered, detailed investigation and management strategies will be developed in accordance with the EPP (Air). Further details are provided in Section 10.

### ***Environmental Protection (Waste Management) Policy 2000***

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

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

The mitigation and management measures presented in the EIS conform to the principles of the policy. Further details are provided in Sections 5 and 14.

### ***Environmental Protection (Waste Management) Regulation 2000***

The Waste Management Regulation includes:

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

Further details are provided in Sections 5 and 14.

### ***Dams Containing Hazardous Waste***

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

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



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

The storages that comprise the project's water management system will not constitute high hazard dams (there are no proposed tailings dams). However, it is likely that some will be classified as low hazard dams based on the quality of runoff water from disturbed areas. Therefore all designs and management of all sediment dams will comply with specific conditions that may be set out in the EA governing low hazard dams. Further details are provided in Section 6.

### **General Environmental Duty**

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

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

#### **1.7.1.2 Mineral Resources Act 1989**

The *Mineral Resources Act 1989* 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 to encourage and facilitate mining of minerals in an environmental responsible manner.

The 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.
- 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 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 act also provides for the surrender of mining leases, and for the amendment of conditions of a mining lease.

The assessment of MLA 70403 will be carried out pursuant to the act.

### **1.7.1.3 Integrated Planning Act 1997**

The purpose of the *Integrated Planning Act 1997* (IPA) is to seek to achieve ecological sustainability by:

- Coordinating and integrating planning at the local, regional and state levels.
- Managing the process by which development occurs.
- Managing the effects of development on the environment (including managing the use of premises).

IPA establishes the framework for planning and development assessment in Queensland. The act also established the Integrated Development Assessment System (IDAS) that calls up other related environmental and natural resource management legislation where appropriate.

All aspects of development of a mining activity for which an EA (mining activity) applies are exempt from IDAS. Hence all of the project's activities within the mining lease will not be subject to IPA. If required, BMA will submit development applications to the relevant local authority for any off lease activities requiring their approval. The development applications will be supported by this EIS and other information required to be provided with each application. Further details are provided in Section 4.

### **1.7.1.4 Water Act 2000**

The *Water Act 2000* requires that a licence to take water be obtained if water is to be taken from sub-artesian aquifers (for other than stock or domestic purposes). The construction of groundwater bores is assessable development under Schedule 8 of the IPA. A licence is required under the *Water Act 2000* for works that interfere with the flow of water, such as a stream diversion.

Dams that are more than 8 m high and meet certain storage capacity criteria require a failure impact assessment under the *Water Act 2000*. If a dam has a category 1 or 2 failure impact rating, the dam is classified as a referable dam and is assessable development under Schedule 8 of the IPA.

There are no plans for any referable dams as part of the project. Where necessary, BMA will apply for licenses for bores constructed for the groundwater monitoring network. An assessment for the need to apply for Riverine Protection Permits will be made subject to the act and the DERM Policy No. WAM/2008 3435, Guideline – Activities in a Watercourse Lake or Spring Associated with Mining Activities.

Further details are provided in Section 6.

### **1.7.1.5 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.
- The replacement of cultural heritage permitting arrangements with the duty of care, the cultural heritage management planning process and other agreement based mechanisms.
- Increased penalties for harming Aboriginal and Torres Strait Islander cultural heritage.

Representatives of the project site's traditional owners, the Barada, Barna, Kabelbara and Yetimarala (BBKY) people surveyed the site over a period of 25 days between August and November 2008. A wealth of cultural heritage sites, items and significant natural features of indigenous origin were identified during this survey. BBKY will work with BMA to monitor major land disturbance activities during construction. This will form part of a cultural heritage management plan (CHMP) that will be developed for the project.

Further details are provided in Section 15.

#### **1.7.1.6 Queensland Heritage Act 1992**

The *Queensland Heritage Act 1992* provides for the conservation and protection of places and items of historical and/or non-indigenous cultural heritage, i.e., all places that derive from the post-settlement history of Queensland. Under this act, places and items must be entered into a Queensland Heritage Register in order to be protected. Substantial penalties may apply for damage to a place or items that has been entered on the Register. At least one of the following criteria must be satisfied for entry onto the Register (Section 23 [1]):

- The place is important in demonstrating the evolution or pattern of Queensland's history.
- The place demonstrates rare, uncommon or endangered aspects of Queensland's heritage.
- The place has potential to yield information that will contribute to an understanding of Queensland's history.
- The place is important in demonstrating the principal characteristics of a particular class of cultural places.
- The place is important in exhibiting particular aesthetic characteristics valued by the community or a particular cultural group.

- The place is important in demonstrating a high degree of creative or technical achievement at a particular period.
- The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
- The place has a special association with the life or work of a particular person, group or community of importance in Queensland's history.

No 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 Section 15.

#### **1.7.1.7 Nature Conservation Act 1992**

The *Nature Conservation Act 1992* and the *Nature Conservation (Wildlife) Regulation 1994* prohibit the taking or destruction, without authorisation, of certain listed flora and fauna species. Species identified during the EIS relevant to this act are discussed in Sections 8 & 9.

#### **1.7.1.8 Transport Infrastructure Act 1994**

The *Transport Infrastructure Act 1994* (TIA) provides for the management of the national and state road network. A permit under the TIA is required to work in, or interfere with, a state-controlled road. Further details are provided in Section 13.

#### **1.7.1.9 Forestry Act 1959**

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 roads on a mining lease. There is currently no requirement for BMA to carry out quarrying activities off the project site mining leases. Further details are provided in Section 3.

#### **1.7.1.10 Environmental Protection and Biodiversity Conservation Act 1999**

The EPBC Act prescribes the Commonwealth Government's role in environmental assessment, biodiversity conservation and the management of protected areas. The act identifies six matters of national environmental significance. The act requires assessment and approval for any activity that has, or is likely to have, a significant impact on a matter of national environmental significance. Such an activity is deemed to be a controlled action. It is an offence to undertake a controlled action without the approval of the Commonwealth Minister for the Environment, Heritage and the Arts.

BMA referred the project to DEWHA with a recommendation that the project was a controlled action, because of its potential impact on a matter of national environmental significance. On 23 September 2008 the DEWHA determined that the project was a controlled action; the controlling provisions being Section 18 and 18A, listed threatened species and communities.

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



The Commonwealth Government has accredited the EIS process under the Queensland SDPWO Act, pursuant to Section 87 of the EPBC Act. This will enable the EIS to meet the impact assessment requirements under both federal and state legislation.

#### **1.7.1.11 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 Coordinator-General, who is responsible for deciding if the most important and complex private and public projects require whole-of-government management as significant projects. A project may be declared to be a 'significant project', based on one or more of the following criteria:

- Complex approval requirements, including local, state and federal Government involvement
- A high level of investment in the state
- Potential effects on infrastructure and/or the environment
- Provision of substantial employment opportunities
- 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 1.7.1 above, the BMA BBCGP is a significant project for which an EIS is required in accordance with Part 4 of the SDPWO Act.

#### **1.7.2 Planning Processes and Standards**

The IPA establishes the framework for planning and development assessment in Queensland. Schedule 9 of IPA exempts activities authorised under the *Mineral Resources Act 1989* and all aspects of development for a mining activity to which an EA (mining activities) under the *Environmental Protection Act 1994* from assessment against a planning scheme.

Regardless of the exemptions of the mining activities from IPA, an assessment of the project has been undertaken against the state planning policies (SPPs) and the Whitsunday Hinterland and Mackay (WHAM) Regional Plan. An assessment of the project against the provisions of these policies, plans and schemes is provided in Section 4.

##### **1.7.2.1 State Planning Policies**

SPPs are statutory planning instruments that relate to matters of state interest. These policies must be considered in the assessment of relevant development applications lodged under IPA. They are addressed in Table 1.3.

**Table 1.3 State Planning Policies**

State Planning Policy	Relevance
SPP 1/03 Guideline: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide	This SPP aims to minimise the potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment.  Hazards and risks are addressed in Section 19.  Management of surface water is addressed in Section 6.
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	This SPP sets out broad principles for protecting airports and aviation facilities considered essential for the state's transport infrastructure or the national defence system. This SPP does not apply to Moranbah Airport.
SPP 2/02 Planning and Management of Coastal Development Involving Acid Sulphate Soils	This SPP applies to coastal areas of Queensland. As the land involved in the project is not coastal land this SPP does not apply.
SPP 1/97 Conservation of Koalas in the Koala Coast	This SPP addresses the conservation of koalas in a defined area of South-East Queensland. This SPP does not relate to the project site.
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 Caval Ridge Project will generate employment (up to about 495 jobs). The coal produced from the mine will also increase Queensland's export earnings. Section 4 of the EIS addresses the potential impact of the project on the protection of good quality agricultural land.
State Coastal Management Plan – Queensland's Coastal Policy 2001  (Has effect of a SPP)	The State Coastal Management Plan seeks to protect and manage Queensland's coastal resources and processes, and applies within the coastal zone. The Isaac Regional Council area has catchments flowing to the coast. 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. Section 6 of this EIS addresses the potential impact of the project on water quality.
SPP 1/07 Housing and Residential Development	This SPP seeks to ensure that large, higher growth local governments identify their community's housing needs. This SPP is not directly relevant to the project.
SPP 2/07 Protection of Extractive Resources	This SPP identifies extractive resources of state or regional significance to ensure their protection from development. This SPP is not relevant to the project.

### 1.7.2.2 Regional Planning Provisions

#### WHAM 2015 Regional Plan

The Whitsunday Hinterland and Mackay (WHAM) Regional Plan was endorsed by the Queensland Government in early 2005. The region covers the former local government areas of Bowen, Whitsunday, Mackay, Sarina, Mirani, Nebo, Broadsound and Belyando. The WHAM Regional Plan is a non-strategic planning document that provides a framework for guiding the development and management of the region over the next 15-20 years. The plan assists government, industry and community planning and development decision-making.

The regional plan relies on voluntary implementation and cooperation by state and local government, in cooperation with business, industry and the community. It lists regional issues, goals and strategies and contains a regional structure plan.



The vision for the region is “The WHAM Region is distinguished as a unique and vibrant region in its own right, blessed with beauty and natural and human wealth that provides the greatest possible long term social, economic and environmental benefit for residents, visitors and future generations.” Supporting the vision is an integrated suite of outcomes that detail more specific desired future outcomes for the region. The themes for the outcomes are:

- Regional identity, leadership and management
- Environment and natural resources
- Economic development
- Social infrastructure
- Settlement pattern
- Infrastructure
- Transport.

Table 1.4 addresses the relevant WHAM goals and provides a response in relation to the project.

**Table 1.4 WHAM Goals and Responses**

<b>WHAM Goal</b>	<b>Response</b>
<p>Regional Identity, Leadership and Management</p> <p>This goal relates to establishing a recognisable regional identity, improving collaborative planning and management, building leadership capacity and securing investment and resourcing.</p>	<p>Most of these requirements are unaffected by the proposed development. The Caval Ridge Project represents a substantial investment in the region.</p>
<p>Environment and Natural Resources</p> <p>This goal encompasses conserving biodiversity, preserving scenic beauty, sustainable natural resource use, sustainable land and mineral use, water and floodplain management. It also addresses natural disaster management and climate change.</p>	<p>The impacts on terrestrial ecology are assessed in Section 8. The visual impacts are assessed in Section 4.7. The flooding impacts and water management are assessed in Section 6. Natural disaster management is addressed in Section 19. Climate change is addressed in Section 11.</p> <p>A draft EM Plan has been prepared for the project and is included as Appendix Q. Rehabilitation at the end of the mine's life will return the site to a mosaic of self sustaining vegetation communities and grazing land using appropriate native tree, shrub and grass species, and improved pasture species as appropriate.</p>
<p>Economic Development</p> <p>The economic goals seek to achieve a diverse and sustainable regional economy supported by adequate infrastructure with integrated marketing, promotion and economic development.</p>	<p>The proposed development will help strengthen the economic value of the existing mining industry and help maintain and enhance employment and investment in the area. Economic impacts are assessed in Section 18.</p>
<p>Social Infrastructure</p> <p>The social infrastructure goals seek to improve community involvement, social infrastructure and the social environment, ensure assessment of social impacts, promoting and facilitating the development of diverse cultures, and recognising and protecting indigenous and non-indigenous cultural heritage, and native title rights.</p>	<p>Social impacts of the proposal are discussed in Section 17. Indigenous and non-indigenous cultural heritage management is discussed in Section 15. Native title is addressed in Section 4.5.</p>
<p>Settlement Pattern</p> <p>The settlement pattern goals relate to a regional approach to urban centres, urban form and structure, urban character and design, housing affordability and development of rural communities.</p>	<p>The Caval Ridge project will help maintain and enhance employment in the region, especially in the townships of Nebo, Coppabella and Moranbah.</p>
<p>Infrastructure</p> <p>The infrastructure goals seek to ensure a coordinated, efficient and cost effective approach to infrastructure provision including water, sewerage, waste, energy and communication.</p>	<p>BMA supports a coordinated approach to the provision of relevant infrastructure in the region.</p>
<p>Transport</p> <p>The transport goals seek to ensure an integrated approach to the provision of transport networks including road, rail, air and water.</p>	<p>The Caval Ridge project will utilise existing transport infrastructure on the Peak Downs Highway. Coal from the mine will be transported to the port using existing rail facilities. This provides efficient use of existing infrastructure. Transport and infrastructure details are discussed in Section 13.</p>

The WHAM Regional Plan identifies coal mining as a major economic activity in the Bowen Basin, stating that accessibility to the region's coal reserves should be maintained. Moranbah is identified as a Sub-Regional Centre. The employment generated from the project will help consolidate this role.





The plan also states that the region's agricultural land needs to be protected. Dry land agriculture is identified as a major industry within the area. The project's impact on agricultural land is discussed in Section 4.

### **1.7.2.3 Local Council Planning Schemes**

The local authority amalgamations in March 2008 combined Nebo, Broadsound and Belyando Shires into the Isaac Regional Council. Though the planning schemes associated with the former shires are yet to be amended or amalgamated, a review of the assessment criteria for the Belyando Shire Planning Scheme has been undertaken. The project site is located within an area zoned as rural under the planning scheme and whilst the defined purpose activities within the planning scheme do not include the proposed activities; "Extractive Industry" best suits the activities to be undertaken. Within the rural zone, extractive industries are an appropriate land use where it is located and operated so as to ensure no unacceptable detrimental impact on surrounding uses or on the environment. The land within the project site has been identified as "mining lease areas" and the areas to the north and east of the project site as "mineral development licences". The project accords with the desired environmental outcomes (DEOs) for the Belyando Shire Planning Scheme and the applicable strategies for ensuring the environmental, social and economic impacts for the wider community as well as state interests are explored within Section 4 and as well appropriately addresses in the respective study component sections of this EIS. Further detail is provided in Section 4.5.