Peabody

Initial Advice Statement

Eaglefield Expansion Project

Peabody Energy Coal Pty Limited

January 2009

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TABLE OF CONTENTS

FIGURES

TABLES

APPENDIX

1 INTRODUCTION

1.1 BACKGROUND

The Eaglefield Coal Mine is an existing open-cut coal mine, operated by Peabody Energy Australia Coal Pty Limited (PEAC). The open-cut mine has been operating since 2003 with a current approved base production rate of 3.5 million tonnes per annum (Mtpa).

The Proponent, PEAC, proposes to extend the open-cut mining operation within the existing project Mining Lease (ML), No. 6949. Mining Lease (ML) 6949 is located within the Isaac Regional Council area (former Broadsound Shire) and is located adjacent to the Goonyella Coal Mine which is owned and operated by BHP Coal Pty Limited (BHP).

To ensure the effective utilisation of the open-cut coal resources, a reassessment of reserves has resulted in a Life of Mine (LOM) plan for the entire area of ML 6949. The LOM plan has identified additional areas for open-cut mining activities. Peabody Energy Australia Coal Pty Limited (PEAC) therefore proposes to extend the open-cut mining operation within ML 6949. The proposed open-cut extension is referred to as the Eaglefield Expansion Project (EEP).

Accordingly, the EEP proposal is requesting the:

- authorisation for additional open-cut mining and associated activities;
- permission to increase production up to 12 Mtpa of product coal;
- approval for the washing of coal sourced external to ML 6949 (toll washing).

1.2 THE PROPONENT

Peabody Energy Australia Coal Pty Limited (PEAC) is a wholly owned subsidiary of Peabody Pacific Pty Limited (Peabody Pacific). Peabody Pacific owns substantial coal assets throughout Queensland and New South Wales, comprising eleven operational mines at nine locations. Peabody Pacific is a 100% owned subsidiary of PEAC; is listed on the New York Stock Exchange (NYSE – BTU) and is the largest global private sector coal producer.

1.3 PURPOSE & SCOPE

In accordance with Part 2 of the *Environmental Protection Act 1994 (EP Act)*, PEAC voluntarily applied to the Queensland Environmental Protection Agency (EPA) to prepare an Environmental Impact Statement (EIS) for the proposed EEP. The EIS will ensure that all potential positive and negative environmental and social impacts of the EEP are identified, assessed and appropriately mitigated. On 16 September 2008, PEAC received approval from the EPA to commence the Voluntary EIS process for the proposed project.

The existing Environmental Authority (MIN100590107) for the Eaglefield Coal Mine does not authorise environmental harm from mining activities associated with the EEP. This Initial Advice Statement (IAS) serves to formally commence the EIS process for the EEP, with the intent to seek an amendment to the existing EA (MIN100590107) for the purpose of gaining approval to perform the LOM expansion plan.

In accordance with Section 240(b) of the *EP Act*, this IAS aims to describe the proposed EEP, its potential environmental impacts and accordingly, the required mitigation and management strategies identified to date. The type, extent and magnitude of environmental and social impacts associated with the proposed EEP will be understood in the forthcoming environmental impact assessments to be performed during the EIS process. Depending on the results of these assessments, appropriate mitigation and management strategies shall be developed and implemented to ensure that the impacts of the EEP are minimised to the greatest extent possible.

2 THE PROPOSAL

2.1 LOCATION

The Eaglefield Expansion Project (EEP) is located approximately 36 kilometres (km) north of Moranbah and 32 km southwest of Glenden in Central Queensland. The EEP is wholly located within the granted Mining Lease (ML) No. 6949.

Figure 2-1 illustrates the regional location of the Eaglefield Coal Mine, including the proposed EEP.

2.2 PROJECT SITE

Mining Lease (ML) 6949 is located within the Isaac Regional Council area (former Broadsound Shire) and is located adjacent to the Goonyella Coal Mine which is owned and operated by BHP Coal Pty Limited (BHP).

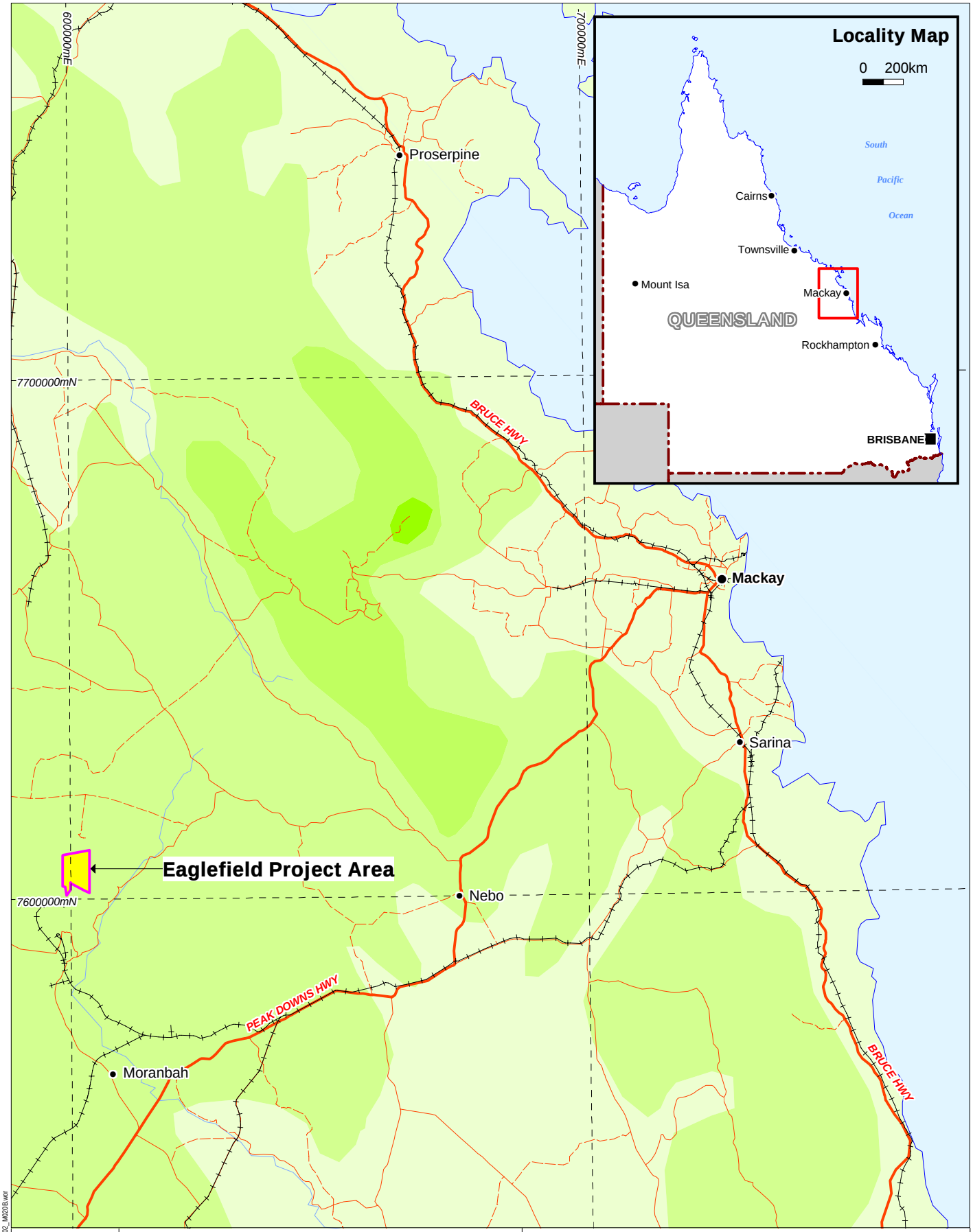
The site is accessed by following Suttor Creek Development Road, turning off just west of the Isaac River and following the mine access road past the Burton Gorge Dam for a further 17 km until the administration area of the Mine is reached. The nearest mines to the EEP are the Goonyella and Riverside Coal Mines (existing operations), which abut the southern boundary of ML 6949, and the Wards Well leases, which borders the northern boundary of ML 6949.

2.3 PROJECT DETAILS

Based on the impact studies conducted to date, and subject to future modifications as a result of ongoing assessment findings, the EEP will likely consist of the following components.

- open-cut coal mining – to increase the existing Run of Mine (ROM) extraction rate from 5 Million tonnes per annum (Mtpa) to 18 Mtpa, to enable an estimated production rate of up to 12 Mtpa product coal. Mining involves clearing of vegetation, salvage of topsoil, stripping of overburden, extraction of the coal, placement of topsoil or growth media and revegetation. Coal mining will most likely be performed using truck and shovel/dragline with an in pit conveyor to dump spoil to an outer pit spreader dump. Mined areas would be progressively rehabilitated;
- coal processing – the mined coal will be trucked and/or transported to the surface via conveyor and stockpiled in the ROM area prior to processing. As part of the coal processing, coal fines and reject material will be produced as by-products. The existing Coal Handling & Preparation Plant (CHPP) will be utilised to process the coal, following suitable infrastructure upgrades to facilitate the proposed increase in production associated with the EEP. Initially, the washed coal will be conveyed and stockpiled for offsite transport via the existing rail network. A second wash plant will be constructed to cater for the increase in production with its location determined by the rail link extension to Newlands Mine - Abbot Point line;
- co-disposal of coal fines and rejects – existing facilities will be used which will need to be extended as mining progresses. An option to utilise a final void will be investigated as part of the ongoing feasibility assessments;
- plant infrastructure – existing Eaglefield mine infrastructure area, workshops, administration facilities etc will be utilised though it is anticipated that these will be modified to suit;
- water infrastructure – new water storage and treatment dams may be required to support increased extraction and production works associated with the EEP;
- power – additional powerlines/transmission lines will be constructed along existing power line easements to accommodate the required increase in power supply;
- water supply – existing water supply will be utilised;
- coal transport infrastructure – existing coal transport and load-out facilities will be used initially with a second loadout facility planned to utilise the rail link (to be constructed) to Abbot Point;
- access road – existing access roads will be utilised; and
- pit and waste dumps – previously subsided land will be utilised as waste dump areas to limit the degree of disturbance across the site.

Further details on the existing Eaglefield Coal Mine and the proposed EEP are provided in sections 3 and 4 of this IAS.



LEGEND

- Project Tenement
- Highway
- Road
- Track
- Railway
- Watercourse

Elevation

- 0 to 500m
- 500 to 1000m
- 1000 to 1500m
- 1500 to 2000m
- 2000 to 2500m
- Capital City
- Large Town
- Small Town

Data Source:
Topography - Geoscience Australia. Tenement - Peabody.

Peabody Energy Australia Coal Pty Ltd

Eaglefield Expansion Project

Initial Advice Statement

Regional Location of the Project

0 20 40

Kilometres

Scale: 1:1,000,000 (A4)

PRINTED: 03/12/08

Datum: GDA94
Projection: MGA55

FIGURE 2-1

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2.4 TIMEFRAME

Based on current estimates, the EIS process is likely to take 12 to 18 months to complete the necessary investigations and comply with the regulatory process. The EEP would require approximately six months for construction of the boxcut.

2.5 WORKFORCE

The EEP would necessitate an additional 190 staff.

2.6 TENEMENTS & TENURE

The EEP is wholly located within ML 6949 **(Figure 2-2).** Mining Lease 6949 is the only lease listed on the EA (MIN100590107). The lease adjoins a landscape dominated by a mosaic of large scale coal mines, and low density cattle grazing stations.

Mining Lease 6949 occurs on five land tenures, as detailed in **Table 2-1** below and illustrated in **Figure 2-3**.

Table 2-1 ML 6949 Land Tenures & Landowners

Tenement	Real Property Description	Property Name	Landowner
ML 6949	Lot 1 GV334	Red Hill Station	Peabody Energy Australia Coal Pty Limited
	Lot 11 GV297	N/A	BHP Coal Pty Limited QCT Mining Pty Limited Mitsubishi Development Pty Limited QCT Investment Pty Limited BHP Queensland Coal Investments Pty Limited UMAL Consolidated Pty Limited QCT Resources Pty Limited
	Lot 14 CP846391		Peabody Energy Australia Coal Pty Limited
	Lot 3 CP852527	Denham Park Station	Douglas Victor Kemp & Rhonda Ann Kemp
	Easement A CP846331	N/A	Queensland Electricity Council

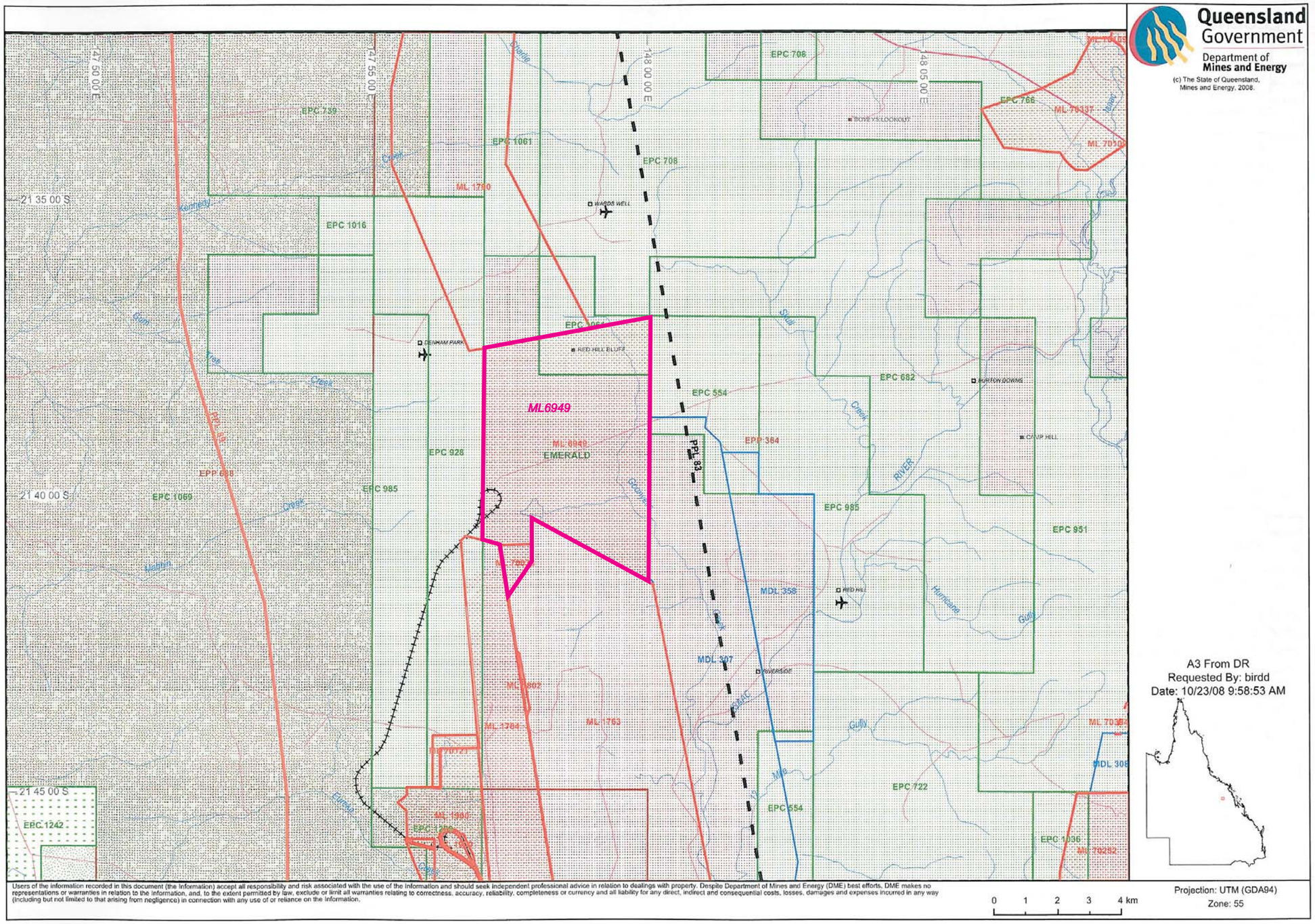
Peabody Energy Australia Coal Pty Limited owns the grazing property, "Red Hill Station", which covers the majority of the land on which ML 6949 is situated. There are a number of other smaller land parcels to the west and southwest, within ML 6949 which are held by other landholders.

2.7 NATIVE TITLE

Native Title is extinguished over the subject land however, at present, there is an unregistered native title claim over the EEP area by the traditional owners, the Wiri People 2. Despite the claim being unregistered, the Proponent will engage the traditional owners as primary stakeholders to the proposed project.

2.8 LOCAL GOVERNMENT AREA

ML 6949 lies within the Isaac Regional Shire Local Government area (formerly Broadsound Shire Council).



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0 1 2 3 4 km

Projection: UTM (GDA94)
Zone: 55

Queensland Government
Department of Mines and Energy

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Requested By: birdd
Date: 10/23/08 9:58:53 AM

LEGEND

- EPC Application
- EPC Application (Rejected) [Nil]
- EPC Grant
- EPC Proposal
- EPG Applicaton [Nil]
- EPG Grant [Nil]
- EPG Proposal [Nil]
- EPM Application (Rejected) [Nil]
- EPM Application [Nil]
- EPM Grant [Nil]
- EPM Proposal [Nil]
- EPP Application [Nil]
- EPP Grant
- EPP Proposal [Nil]
- EPS Application [Nil]
- EPS Grant [Nil]
- EPS Proposal [Nil]
- MC Access [Nil]
- MC Application [Nil]
- MC Grant [Nil]
- MDL Access [Nil]
- MDL Application [Nil]
- MDL Grant
- ML Access
- ML Application
- ML Grant
- ML Surface Area
- Mining District
- PFL [Nil]
- PL Application [Nil]
- PL Grant [Nil]
- PPL - Constructed CSG
- PPL - Constructed Gas [Nil]
- PPL - Constructed Oil [Nil]
- PPL - Offshore Constructed Gas [Nil]
- PPL - Offshore Proposed Gas [Nil]
- PPL - Proposed CSG [Nil]
- PPL - Proposed Gas [Nil]
- PPL - Proposed Oil [Nil]
- PPL - Unclassified
- PPL Areal - Application [Nil]
- PPL Areal - Grant [Nil]
- STATE [Nil]
- Topo - Airports
- Topo - Border and Coast (100K) [Nil]
- Topo - Drainage (250K)
  - canal
  - watercours_l
- Topo - Lakes, Dams [Nil]
  - lake [Nil]
  - mangrove [Nil]
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  - reservoir
  - saln_cst_fft [Nil]
  - sub_to_inund [Nil]
  - swamp marine [Nil]
  - swamp [Nil]
- Topo - Localities (100K) [Nil]
  - Bay / Inlet / Cove [Nil]
  - Beach [Nil]
  - Cape / Headland / Point [Nil]
  - Cemetery [Nil]
  - Gorge [Nil]
  - Homestead
  - Mountain / Peak / Hill
  - Pass [Nil]
  - Populated Place [Nil]
  - Road Junction [Nil]
  - Waterbody Island [Nil]
- Topo - Offshore [Nil]
- Topo - Railway Stations
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- Topo - Rivers
- Topo - Road
  - Highways
  - Major Roads
  - Roads
- Topo - Streams [Nil]
  - rapid_s [Nil]
  - watercours_s [Nil]
  - waterline
- Topo - Towns [Nil]

LEGEND

EEP Tenement

Data Source: Tenement & Cadastre - Queensland Government.

Note: Location of Tenements are based on visual estimates and are therefore subject to minor inaccuracies.

Peabody Energy Australia Coal Pty Ltd

Eaglefield Expansion Project

Initial Advice Statement

ML6949 and Surrounding Tenements

PRINTED: 03/12/08

Datum: GDA94
Projection: Long/Lats

Scale: NTS

FIGURE 2-2

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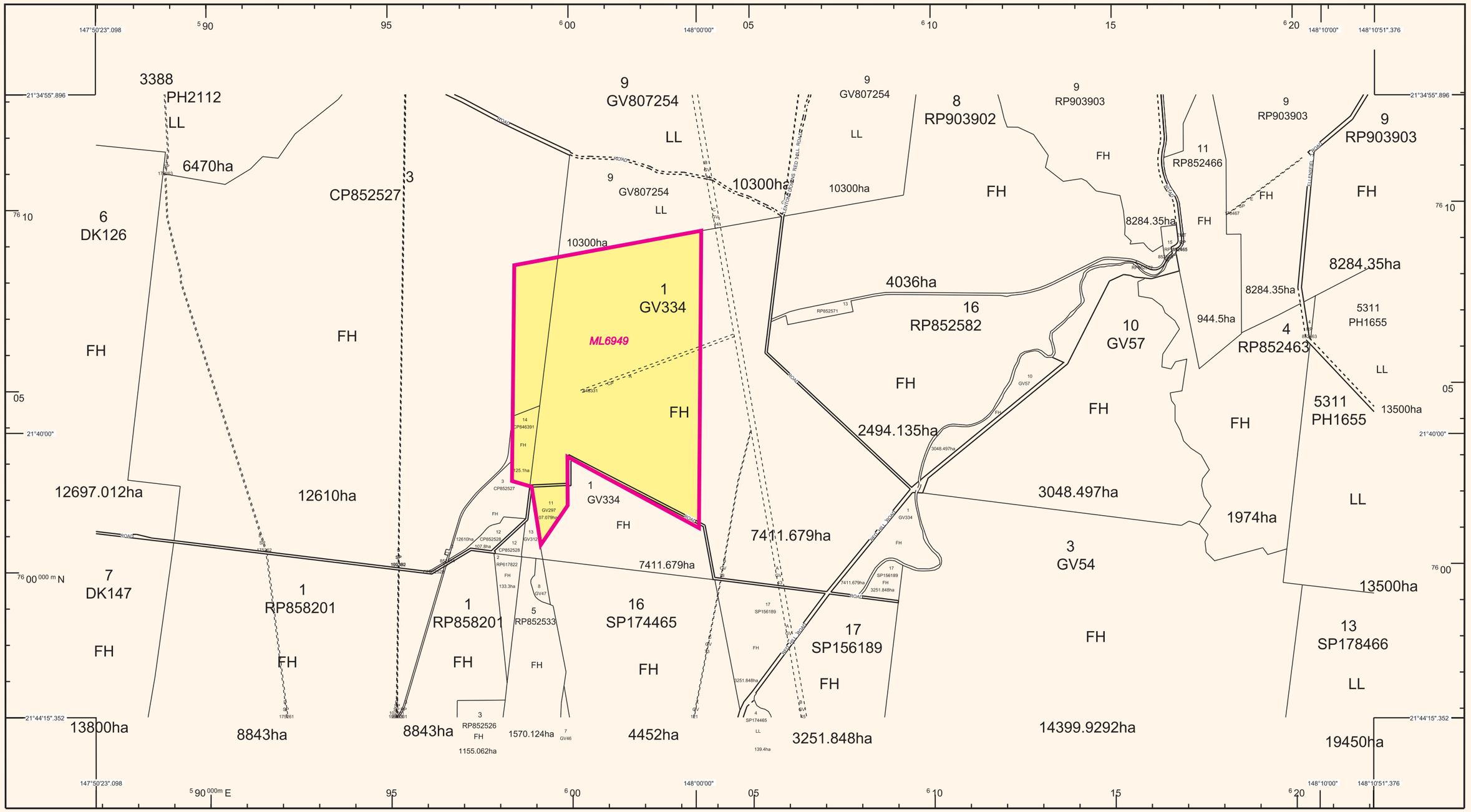

LEGEND

EEP Tenement

Data Source: Tenement & Cadastre - Queensland Government.

Note: Location of Tenements are based on visual estimates and are therefore subject to minor inaccuracies.

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Eaglefield Expansion Project

Initial Advice Statement

Background Land Tenures of the EEP

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Datum: GDA94
Projection: Long/Lats

Scale: NTS

FIGURE 2-3

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2.9 REGULATORY REQUIREMENTS

The EEP requires approval from the Queensland Environmental Protection Agency (EPA) and is subject to the Environmental Impact Statement (EIS) assessment process under Chapter 3 of the *Environmental Protection Act 1994 (EP Act).* The EEP may require approval by the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA). A determination of a "controlled action" or a "non-controlled action" will be made by the DEWHA following the submission of the project referral under the *Environmental Protection and Biodiversity Conservation 1999 (EPBC Act).*

2.9.1 Commonwealth Assessment Process

The proposed EEP will be referred to the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) to allow for the determination of the appropriate assessment process under the *Environmental Protection and Biodiversity Act 1999 (EPBC Act)*. Whilst the occurrence of endangered flora and fauna across ML 6949 has been assessed, approximately 118 hectares (ha) of "mapped" Regional Ecosystems will require clearing. Any clearing conducted of actual endangered RE shall be conducted in accordance with relevant Commonwealth legislation, policies and procedures.

2.9.2 State Government Assessment Process

Chapter 5, part 8 of the *EP Act* allows for the amendment of an existing Environmental Authority (EA). An amendment to the EA for the existing operation (EA No. MIN100590107) is required to authorise mining activities within the EEP area.

Section 246(1) of the *EP Act* requires a proposal to be assessed for the likelihood of causing a significant increase in environmental harm and for this proposal, it is highly probable due to the increased scale of disturbance required as a result of the proposed EEP.

Appendix 1 reviews the proposal against the EPA Guideline 4: *'Deciding the Level of Impact Assessment for the Mining Industry (EPA, 2000)'*. This assessment has been made with regard to the impact caused by the LOM expansion only, as current disturbance has previously been authorised by the:

- Environmental Impact Statement (1995)
  - For approval to begin underground mining operation and associated surface infrastructure; and
- EA amendment (2003)
  - For approval to begin open-cut mining in the Eaglefield open cut pit (stages 1 – 3).

The diversion of any drainage lines that feed Goonyella Creek will be designed and approved in accordance with the *Water Act 2000* and Queensland Department of Natural Resources and Water (DNRW) policies and guidelines.

3 CURRENT MINING ACTIVITIES

3.1 UNDERGROUND OPERATIONS

From the inception of the mine in 1994, the North Goonyella underground operation has produced premium hard coking coal with an average annual rate of approximately 1.8 Mtpa. This annual production rate has reached as high as 4 Mtpa and is scheduled to continue for another 9 years at a rate of approximately 3.2 Mtpa.

The longwall panels are separated by chain pillars that contain access roads to service equipment and to transport the extracted coal. Continuous miners are employed to develop longwall panels and to provide access to deeper sections of the underground mine.

The EEP will not impact on the current approved underground mining operation.

3.2 OPEN-CUT OPERATIONS

Since approval in October 2003, the Eaglefield open-cut area has been operating as a variant to the truck and shovel terrace method. The Eaglefield open-cut area has operated an average production rate of 1.3 Mtpa. The original pit was completed early in 2008. The southerly progression of the pit into the area known as ASA3 is planned for November/December 2008 which will allow a further 2-3 years of production.

Peabody Energy Australia Coal Pty Limited (PEAC) and BHP Coal Pty Limited (BHP) are collaborating on a separate application to the EPA to authorise the 3rd stage of the approved Eaglefield open-cut, whereby ASA3 pit progresses to the east and north through the boundary of ML 6949 and into BHP's Mining Lease (ML 1763). A rationalisation of overburden dumps, improving the final landform, would occur as part of this project and the expected production from this venture has been included as part of the assessment.

To date, out of pit overburden dumps with a total surface area of 180 hectares have been created in accordance with EA MIN100590107, which allows for an elevation of 50 metres above natural surface level and batter slopes of 14%.

3.3 COAL HANDLING & PREPARATION PLANT

Coal extracted from underground is transported via the drift conveyor to the raw coal skyline stacking conveyor. It then free falls to the Run-of-Mine (ROM) stockpile and is reclaimed via bulldozers. Run-of-Mine coal from the Eaglefield open-cut area is stockpiled 'downstream' of the skyline conveyor crusher and this coal is then re-claimed by front end loaders.

The Coal Handling and Preparation Plant (CHPP) throughput capacity is currently 650 – 850 tonnes per hour.

Coarse rejects are a combination of material that is removed as part of the crushing (breaker reject) and coarse coal circuit (plant reject) processes. On occasion, the rejects are reused onsite to form road surfaces. Coarse and fine rejects (tailings) are co-disposed in purpose built emplacement areas.

4 THE PROPOSED MINING & PROCESSING ACTIVITIES

4.1 THE EAGLEFIELD EXPANSION PROJECT (EEP)

The purpose of this IAS is to authorise an expansion of the existing mining activities at the Eaglefield Coal Mine to allow the maximum recovery of the economically viable open-cut resource located within ML 6949. This LOM plan will extend the mine life for a further 11 years after the current approved underground mining is completed. The major aspects of the EEP are detailed in the below sections.

Figure 4-1 illustrates the proposed layout of the EEP.

4.1.1 Underground Mining

All underground mining was authorised in the initial 1992 EIS, therefore no further approvals are required for the existing area. Alternate underground mining opportunities will be investigated whilst there are avenues to ensure maximum recovery of resources. For example, highwall mining could be possible to retrieve coal from under infrastructure or the coal between the open cut bounds and the lease boundary.

4.1.2 Open-Cut Mining – Additional Pits

The EEP will be a continuation of current open-cut truck and shovel terrace mining methods however, conveyor systems may be utilised for movement of both overburden and ROM coal.

4.1.2.1 Denham Pit

The Denham open-cut pit will allow access to approximately 213 Mt ROM of premium quality hard coking coal. Mining of the Denham Pit aims to retrieve all economic coal located between the Eaglefield out of pit dump, eastern perimeter of ML 6949, the northern underground panels and the southern lease boundary.

The total open-cut disturbance area will be 635 hectares (ha). Approximately 250 ha of additional overburden dump area will be created until backfilling of the active mining pit can occur. The majority of this dump will cover the subsided area from the underground operation.

To maximise resource recovery whilst minimising energy outlay, overburden and coal may be partially processed through a primary crusher in the pit floor, prior to being extracted by a conveyor belt system. As conveyors are powered by mains power supply, they result in lower production of greenhouse gases when compared to traditional diesel truck haulage.

A minor diversion will be required to enable drainage from the north of the site to the south. Any diversions shall be designed in accordance relevant State legislation and DNRW policies and guidelines.

A final void of approximately 60 ha will remain at the end of the mine life. It is anticipated that further synergies may be developed with neighbouring mines. BHP Coal Pty Limited expansion plans conceptualise an out of pit dump along the eastern perimeter of ML 6949 which could conceivably be used to infill the Denham Pit final void.

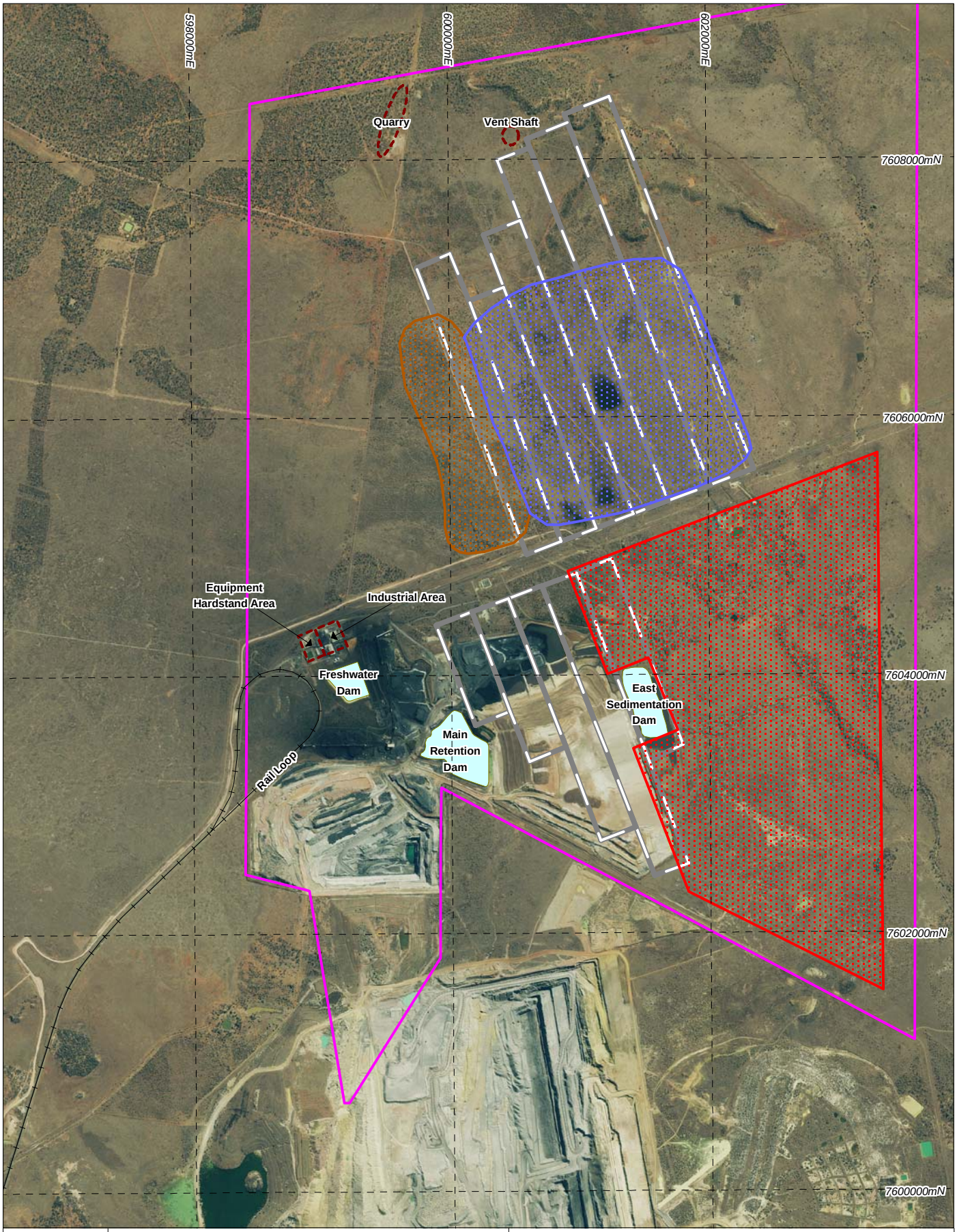
4.1.2.2 Sub-Crop Pit

The Sub-crop pit is a relatively minor pit requiring 140 million bank cubic metres (Mbcm) of overburden removal to win 7.5 Mt of hard coking coal, however further exploration is required to confirm this resource. A potential use for this final void could be for coal washery waste emplacement.

4.1.3 Production Rates

The existing EA (MIN100590107) authorises an extraction of up to 5 Mtpa of ROM coal. Subsequent amendments authorised the open-cut extraction of the Eaglefield open-cut area (incorporating ASA2 and ASA3).

With the LOM review and the combination of the existing operations, toll washing and the proposed open-cut expansion, the EEP proposes to increase the production rate from 5 Mtpa ROM coal to 18 Mtpa ROM coal.



LEGEND

- ML6949
- Existing Underground Mine

Proposed

- Open-cut Mine
- Co-Disposal/Rejects Area
- Overburden Dump Area

Data source:
Imagery, Infrastructure, Tenement - Peabody.

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Peabody Energy Australia Coal Pty Ltd

Eaglefield Expansion Project

Initial Advice Statement

Proposed Layout of the EEP

0 0.5 1

Kilometres

Scale: 1:40,000 (A4)

PRINTED: 03/12/08

Datum: GDA94
Projection: MGA55

FIGURE 4-1

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4.1.4 Additional Infrastructure

4.1.4.1 Coal Handling & Preparation Plant (CHPP)

The CHPP has the capacity to wash 850 t/hr and this is sufficient for the projected production over the next four years. Additional wash plant capacity shall be required to cater for expanded production and to wash sourced coal on a commercial basis, which will be achieved by the combination of the following options:

- Upgrading the existing CHPP to improve its production rate and recovery;
- Inclusion of additional processing modules and;
- Construction of an additional CHPP.

The size of the current product and ROM stockpiles will be increased as required to meet additional throughput. There is sufficient "real estate" adjacent to the current facility that can cater for the existing plant expansion requirements. The location of the second washplant is still to be determined but will be based on its final size, rail and product stockpile requirements as well as the location of the proposed Northern Rail Line.

4.1.4.2 Co-Disposal Facilities

A co-disposal plan is being developed to accompany the LOM mine plan. The aim of this plan is to provide sufficient treatment and storage capacity for coal washery waste for the remainder of the Mine life. Currently, co-disposal is stored in a raised earthen walled facility adjoining the eastern out of pit dump and approval is currently being sought for expansion to this facility to cater for the next five years.

The options being considered for the life of mine co-disposal plan include:

- construction of out of pit dumps with concave sections, acting as storage cells;
- construction of a final void tailings dam within the completed Sub-crop pit; and
- construction of a specific co-disposal facility.

All co-disposal containment facilities will be designed and regulated as required.

4.1.4.3 Water Management

Water is sourced from the Burton Gorge Dam and the Eungella Dam. The potential interconnection of the three Peabody operations in the region (i.e. Burton Coal Mine, Millennium Coal Mine and Eaglefield Coal Mine) will enable adequate supply and reuse options to maximise water security and flood mitigation strategies.

The water management system focuses on separating clean runoff from mine impacted water, and maximising the recirculation of process water for utilisation within the CHPP and for dust suppression.

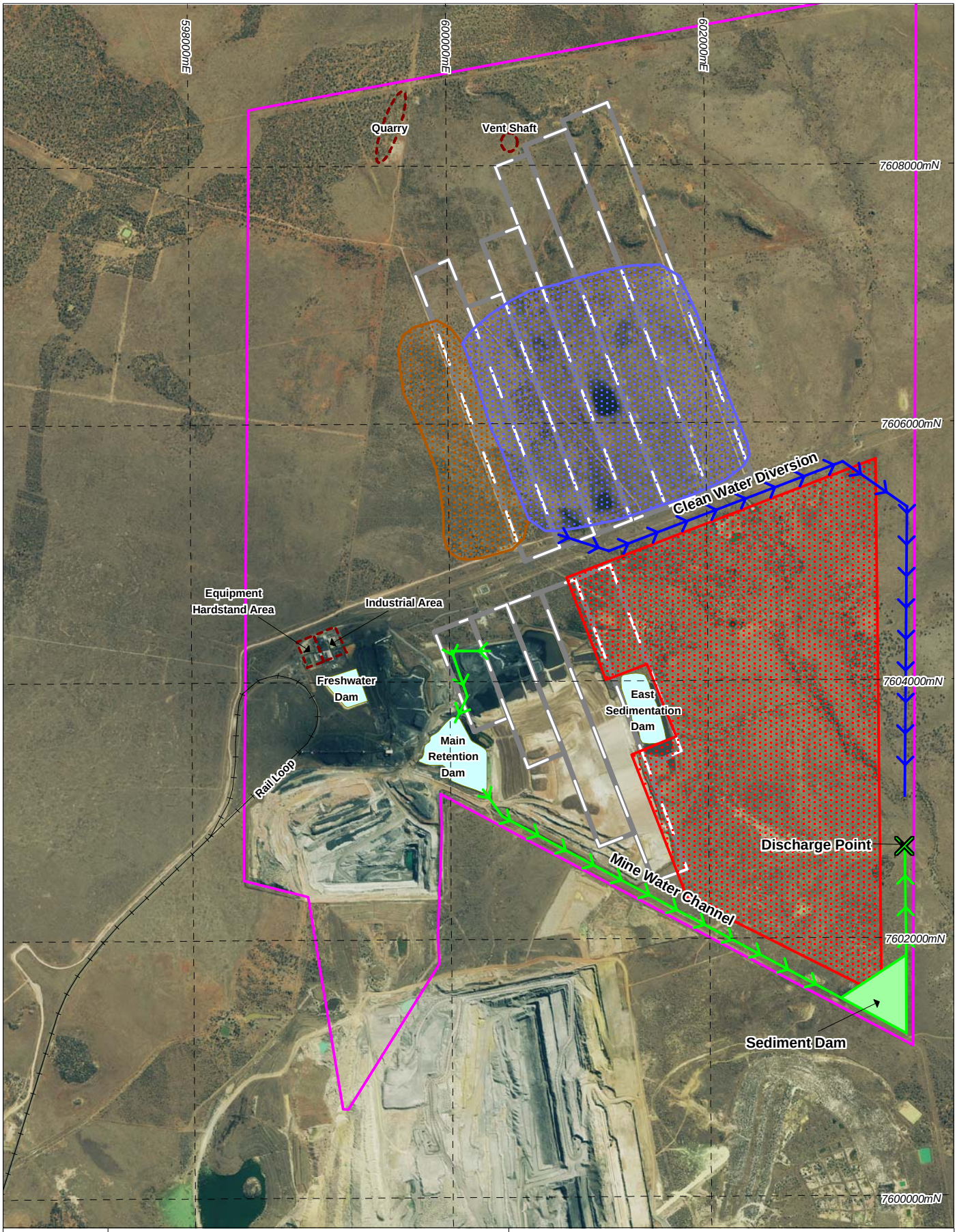
Due to the location of the Denham Pit, changes to the water management infrastructure will be required and involve the construction of new water holding structures.

Figure 4-2 shows a conceptual map of the EEP water management system. Clean water will be diverted around the pit along the site access road before turning south and exiting ML 6949 through the existing channel. Due to the proposed progression of the Denham pit, the natural drainage system can remain largely untouched for the first five years of mining. This time frame will enable the diversion channel to be created, stabilised and revegetated prior to receiving runoff water.

Mine impacted water will be directed along the southern boundary prior to entering an appropriately sized sedimentation dam. Overflow from the dam will drain north and exit ML 6949 in the intact creek channel.

All dams, levees and diversions will be designed to appropriate standards and sized in accordance to calculations from water balance models.

The consumption of raw water will be kept to a minimum by implementing water efficient work practices and recycling where possible.



LEGEND

- ML6949
- Existing Underground Mine

Proposed

- Open-cut Mine
- Co-Disposal/Rejects Area
- Overburden Dump Area

Data source:
Imagery, Infrastructure, Tenement - Peabody.

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Peabody

Peabody Energy Australia Coal Pty Ltd

Eaglefield Expansion Project

Initial Advice Statement

Proposed Water Management System of the EEP

0 0.5 1

Kilometres

Scale: 1:40,000 (A4)

PRINTED: 03/12/08

Datum: GDA94
Projection: MGA55

FIGURE 4-2

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4.1.4.4 Drainage Diversion

To maximise coal recovery within the Denham pit and maintain it in a safe condition, a minor diversion of the upper Goonyella Creek drainage lines will be required. Goonyella Creek is a ephemeral tributary creek of the Isaac River and it is the 'receiving water' for the EEP. The drainage lines requiring diversion are in the very upper catchment and as a result, they do not experience substantial or consistent flow.

Any diversion shall be designed following relevant legislation, policies and guidelines. Stream diversions stability and sustainability are to be gained by a number of key processes, including:

- effective management of flood impacts;
- short and long term morphological and geotechnical stability;
- hydro-geological sustainability; and
- ecological sustainability.

4.1.4.5 Power

To enable efficient recoveries from the Denham pit, a series of conveyor systems may be installed to transport both coal and overburden from the pit.

Options for internal electrical reticulation are being considered to accommodate the additional demand for power from the EEP (both conveyor systems and plant upgrades) however an additional 66kV feeder line may need to be installed to provide the additional grid supplied power needs. This line would be placed within existing power easements to minimise the extent of disturbance.

Options for power generation from coal seam methane drained from the underground and/or open-cut will be investigated.

4.1.4.6 Accommodation

The Village (mining accommodation) will be upgraded as required by ongoing maintenance and this will involve replacement and rearrangement of some of the mobile accommodation units. An upgrade to the sewage treatment plant involving improvements in treatment and recycling processes is also planned.

Additional support or construction personnel and contractors may be housed during peak times at the Burton Mine – Kerlong Camp.

4.1.4.7 Rail and Port

The port allocation currently available to the Mine is via the Dalrymple Bay Coal Terminal (DBCT). This port will continue to be utilised as required by the EEP operations. Allocation has also been secured at the Abbot Point Coal Terminal (APCT).

With the installation of the northern missing link that will join the Goonyella rail line to the Newlands rail line, flexibility and capacity will be gained to ship out of the APCT and/or DBCT.

There will be improvement works needed to the current Rail Loadout Facility in line with increased plant output. A new loadout facility with product stockpiles will be required for the Northern Line to the APCT. The new rail loadout location will also depend on the alignment of the Northern Rail Line.

4.2 ENVIRONMENTALLY RELEVANT ACTIVITIES

The existing operation is currently authorised under the *EP Act* to perform the Environmentally Relevant Activities (ERA) described in **Table 4-1**.

No additional ERA's will be required for the EEP however, due to potential increases in the intensity of the ERA's, amendments to the existing approvals may be required for the EEP.

Table 4-1 Authorised Environmentally Relevant Activities (ERAs)

ERA No. & Level	ERA Description
ERA 7 - Chemical Storage	Storing chemicals (other than crude oil, natural gas and petroleum products), including ozone depleting substances, gases or dangerous goods under the dangerous goods code in containers having a design storage volume of (a) more than 10m3 but less than 1000m3.
ERA 11 (b) - Crude oil or petroleum product storing	Storing crude oil or a petroleum product in tanks or containers having a combined total storage capacity of – 500 000 L or more.
ERA 15 (b) - Sewage Treatment	Operating a standard sewage treatment works having a peak design capacity to treat sewage of 100 or more equivalent persons but less than 1500 equivalent persons.
ERA 23 - Abrasive Blasting	Commercially cleaning equipment or structures using a stream of abrasives.
ERA 24 - Boiler Making or Engineering	Commercial boiler making, electrical machine manufacturing or building or assembly of agricultural equipment, motor vehicles, trains, trams or heavy machinery.
ERA 28 – Motor vehicle workshop	Operating a workshop or mobile workshop in the course of which motor vehicle mechanical or panel repairs are carried out in the course of a commercial or municipal enterprise (other than on a farm) or on a commercial basis.
ERA 75 – Waste management	Operating a facility for – (b) disposing of regulated waste (other than limited regulated waste) whether alone or in combination with any waste mentioned in paragraph (a), if the facility is designed to receive waste a the rate of – (iv) 200 000 t or more per year.
ERA 84 - Regulated waste storage	Operating a facility for receiving and storing – (b) other regulated waste, other than waste stored – (i) on a farm for use as a soil conditioner or fertiliser in carrying out an agricultural activity; or (ii) for use in manufacturing a saleable product under another items of this schedule; or (iii) (iii) for incineration under item 76; or recycling, reprocessing or reconditioning under items 77-79, 81.

5 EXISTING ENVIRONMENT & POTENTIAL IMPACTS

Technical studies on the environmental aspects (e.g. water, soils, flora & fauna etc) of the EEP area will be undertaken as part of the EIS process. These assessments serve to identify the environmental values of the site and the potential impacts on those values as a consequence of the construction and operation of the proposed Project. The following sections summarises the information obtained to date.

5.1 CLIMATE

The most reliable source of meteorological data that can be used for the EEP is from Moranbah. The Bureau of Meteorology (BoM) has a weather station at the Moranbah Water Treatment Plant, (Station 034038) which has collected climatic records from 1972 to 2004. This is the closest long-term weather station to the EEP area, located approximately 37km southwest of the site.

Moranbah has a warm climate with mean maximum temperatures ranging from 34.2°C in January to 23.6°C in July. Mean minimum temperatures range from 22°C in January to 9.8°C in July. Heat wave conditions can be expected between October and March and frosts between May and August.

The average annual rainfall at Moranbah is 592.4 mm, of which the majority falls in the warmer months of the year (November to February). It is noted that variability occurs throughout the region. Historically, the highest monthly rainfalls occur in December.

5.2 SOILS

Soils over ML 6949 largely comprise Dermosols and Vertosols, with soil mapping units across the Mine being generally consistent. The soils in the area are sodic and dispersive and these characteristics will necessitate appropriate erosion and sediment control measures to be implemented on disturbed areas. The upper horizons of these soils are suitable for use in rehabilitation. If required for rehabilitation, the strongly to very strongly sodic and potentially dispersive soil horizons may require remediation through blending of gypsum and compaction of the exposed sodic soil surface.

In general terms, soil management in the EEP area will involve the following:

- Identification of suitable topsoil resources via topsoil profiling and characterisation assessment, prior to stripping and stockpiling as per standard industry and internal procedures;
- Erosion protection of disturbed areas, topsoil stockpiles and waste rock dumps (including dust management). This will be achieved by sediment control traps, drainage lines and progressive rehabilitation; and
- Sedimentation control through the surface water management system.

By following these industry standard management techniques, it is expected to result in the recovery and maintenance of sufficient volumes of topsoil to successfully rehabilitate lands disturbed by mining activities.

5.3 OVERBURDEN CHARACTERISATION

A waste rock characterisation study was conducted over the existing Eaglefield open-cut area with the aim of determining the level of environmental risk associated with exposing layers across the geological profile uncovered by mining. This characterisation study focused on the potential for the material to release acid, alkaline or saline compounds when exposed to air and moisture, and if selective management was required to mitigate this potential risk.

The overburden characterisation study demonstrated that the waste rock has a very low risk of producing acid, however some material was relatively sodic. The material analysed was very typical for the geology of the area exposed by mining activity, and it was determined that no selective handling is required.

The geology is known to be identical throughout the adjoining EEP area though additional overburden characterisation will be conducted as part of the exploration and EIA program across the EEP site. Any identified strata of acidic or saline material will result in that material being selectively handled and managed.

5.4 LAND SUITABILITY

Mining leases are generally classified as Agricultural Land Class C (Pasture Land - suitable only for improved or native pastures, due to limitations which preclude continuous cultivation for crop production). The majority of the land is categorised as Suitability Class 5 (Unsuitable) for dryland cropping, and Classes 4 to 5 (Marginal to Unsuitable) for grazing.

The entirety of ML 6949 and surrounds has historically only been used for low intensity cattle grazing. Current land uses include grazing and coal mining.

Land disturbed by the EEP operation will be returned to low level grazing land where practical. Notable exceptions of disturbance categories that will not be returned to grazing include voids, dams, cod-isposal emplacements and remaining infrastructure such as buildings. Grazing of out of pit dump slopes will be discouraged through the re-establishment of a native bushland. A comprehensive land suitability survey has been conducted throughout the remaining mining lease to confirm pre-disturbance land condition.

5.5 SURFACE WATER

The EEP is located on the ridge of the watershed that divides the Suttor Creek and Isaac River catchment areas. The creek beds within ML 6949 are poorly defined, with flows intermittent and restricted to periods of high rainfall. Minor diversion works will be required for the EEP to ensure the drainage from the north of the lease can re-enter the Goonyella Creek to the south and eventually into Isaac River.

Current surface water reporting to the open-cut demonstrates a low electrical conductivity (~500µS/cm) and pH ranging from 6.0 to 9.0. Total suspended solids (TSS) vary significantly depending on the ground cover of the catchment. Extreme occurrences of 16000mg/L TSS can be common. Appropriate sediment control systems will be installed to ensure that the maximum amount of sediment is retained onsite.

Surface water is diverted away from active work areas (including pits, CHPP, stockpiles) to maintain and preserve the existing water quality values. The premise of the water management system is to separate clean and dirty waters, contain mine affected water and maximise recycling and reuse of the resource.

The water management system will be adapted to deal with the changes wrought by the EEP and to ensure water can be effectively separated. Mine affected waters are either contained onsite or discharged in a fashion acceptable with the conditions of the EA (MIN100590107).

At this stage, the final use for mine surface water in the EEP area is for stock watering. An environmental monitoring system is currently in place at the Mine to determine impacts from the site operation and to establish trends on the downstream water quality values.

There has been some concern regarding the potential for more extreme floods and droughts as a result of climate change. The effect of these long-term weather patterns on surface water is expected to be minimal during the life of the mine.

5.6 GROUNDWATER

Groundwater is largely associated with the coal seam aquifers and is naturally hyper-saline, with an electrical conductivity of over 20,000 μS/cm being common. There is no realistic reuse value for this groundwater, either for agricultural, domestic or industrial purposes.

Three main aquifers exist in the EEP area though they are not hydrologically connected due to large layers of predominantly impermeable overburden separating the seams.

- Top of the lowest tertiary basalt horizon, with a flow of 1L/s;
- Base of a thick, stony coal interval marking Fort Cooper/Moranbah Coal Measures boundary, with a flow of 1L/s; and
- Goonyella Upper Seam, with a flow of 2L/s.

Pockets of low yielding but reasonable quality alluvial aquifers associated with the Isaac River, may be intersected during pit development for the EEP. It should be noted that no alluvial aquifers have been intersected during the development of the existing Eaglefield open-cut pit to date.

Construction of the Denham pit will cause a hydrological gradient flow towards the pit, therefore acting as a sump for any potential (but unlikely) impact to groundwater quality. Experience from mining within the existing open-cut pit has demonstrated that there is very little interaction with groundwater. This is understood to be the result of dewatering by the adjacent and surrounding mining operations. Groundwater that is encountered during the development of the Denham Pit may be utilised for dust suppression throughout the mine site.

Groundwater monitoring will be reassessed as part of the EIA and an ongoing program will be developed for the EEP to further monitor the potential impacts from mining.

5.7 TOPOGRAPHY

The natural topography of the eastern and northern sections of ML 6949 comprises predominantly flat slopes to undulating, low hilly lands, primarily based on Quaternary alluvial plains overlying Permian sedimentary rocks. In general, the terrain units (topography and geology) across ML 6949 are consistent and typical for the region.

The existing out of pit dumps were authorised in 2003 to a maximum elevation of 50 metres from natural surface level. It is the intention of the LOM Plan for the EEP to maintain this maximum elevation where possible to retain consistency across the mine site.

Due to the existing operations and the large scale (dragline) adjacent mine, the visual impact of the expansion areas will be a minor progressive component of the landscape. The proposed out of pit dumps will be blended into existing dumps and mimic where possible the naturally existing flat top mesa structures located on ML 6949.

5.8 FLORA

The major vegetation communities of the EEP and surrounds include savannah woodlands, mixed shrub woodlands and brigalow. The mining lease is situated within the Brigalow Belt North Bioregion. Significant conservation values are currently placed on Brigalow *(Acacia harpophylla)* dominated vegetation communities as the range of this vegetation type has significantly declined within the bioregion.

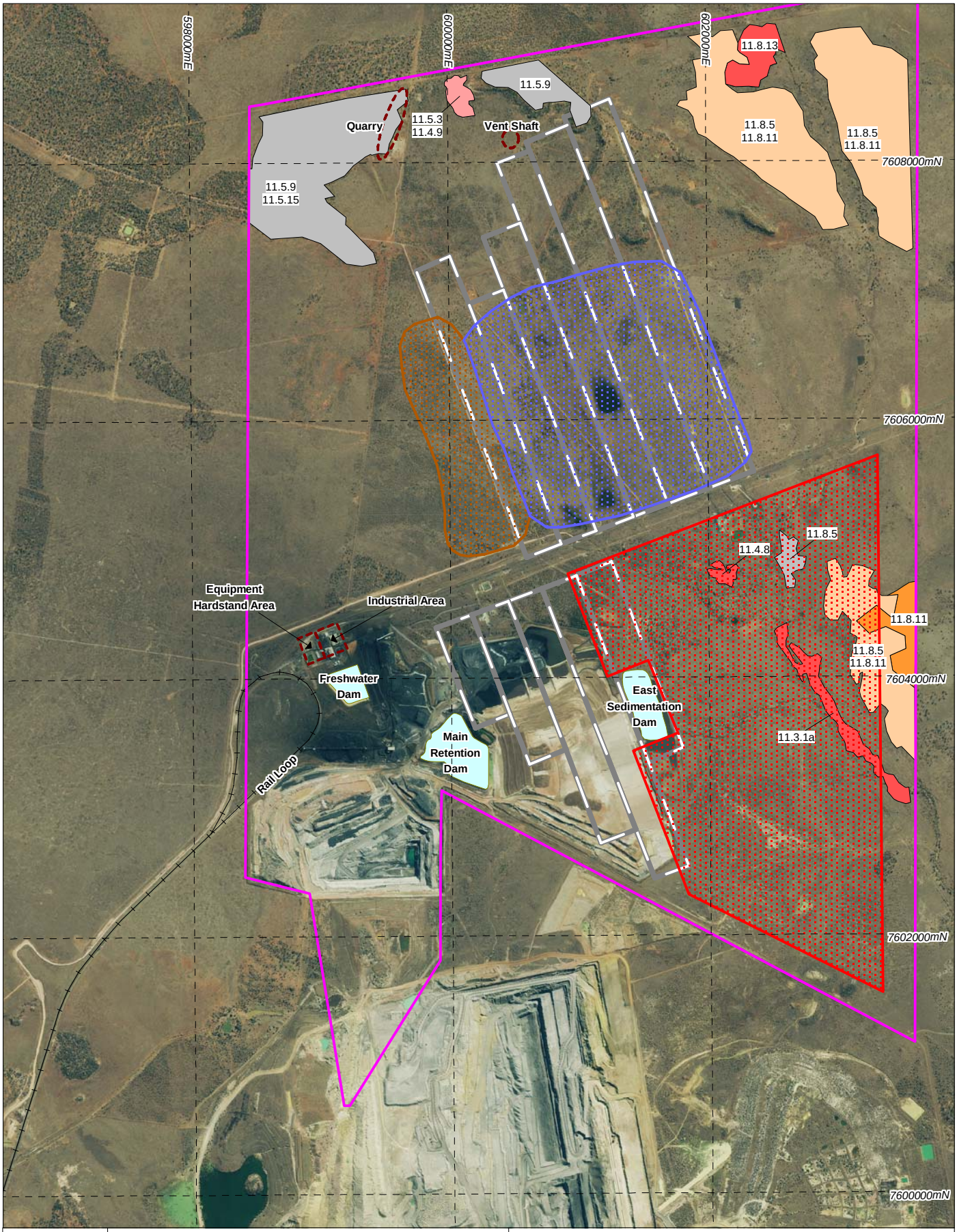
To date, no flora species of conservation significance under State or Commonwealth legislation have been found to inhabit the EEP area.

Five mappable vegetation communities have been identified within the EEP area.

- Community 1 – Brigalow Open Woodland
- Community 2 – Non – Remnant Grassland
- Community 3 – Brigalow Riparian Woodland
- Community 4 – Eucalypt Open Woodland
- Community 5 – Mixed Open Woodland

Two Regional Ecosystems (RE 11.3.1 and RE 11.4.9) have been identified within the EEP area (**Figure 5-1**). These RE's are listed as 'endangered' under the *EPBC Act* and the *Vegetation Management Act 1999 (VM Act).* Furthermore, RE 11.3.25 *(Eucalyptus camaldulensis woodland fringing drainage lines)* is listed as 'Of Concern' under the *VM Act.* Figure 6 illustrates the identified Regional Ecosystems of the EEP.

Four weed species listed as Class 2 pests under the *Land Protection (Pest and Stock Route Management) Act 2002* were identified within the Project area. The site actively monitors weed infestations and has an annual control budget and program of works.



matrixplus

Peabody

LEGEND

- ML6949
- Existing Underground Mine

Proposed

- Open-cut Mine
- Co-Disposal/Rejects Area
- Overburden Dump Area

Regional Ecosystems

- Endangered (dominant)
- Endangered (sub-dominant)
- Of Concern (dominant)
- Of Concern (sub-dominant)
- Not Of Concern

Data source:
Imagery, Infrastructure, Tenement - Peabody. RE Mapping - Ecotone.

Peabody Energy Australia Coal Pty Ltd

Eaglefield Expansion Project

Initial Advice Statement

Regional Ecosystems of the EEP

0 0.5 1
Kilometres

Scale: 1:40,000 (A4)

PRINTED: 03/12/08

Datum: GDA94
Projection: MGA55

FIGURE 5-1

P:\Projects\Peabody\PEA802_Eaglefield_Coal\MapInfo\Workspaces\PEA0802_M023B.wor

5.9 FAUNA

A comprehensive dry season fauna survey was conducted across ML 6949 in April 2008.

In total, 65 vertebrate species were identified comprising 43 birds, 6 mammals, 9 reptiles and 7 amphibians. All species identified were typical of the Bowen Basin region.

Impacts on fauna by the EEP would involve modification of habitats and would specifically include:

- loss of habitat through clearing;
- changes in weed species abundance;
- changes to the structure and species of vegetation;
- possible degradation of water quality; and
- relocation, removal or introduction of permanent water bodies.

5.10 NOISE

Impacts from noise generated by the EEP are expected to minimal. The nearest landowner to the project area is located approximately 3 km away from the administration area and predominant wind direction is directed away from this residence. There will be no change in technique or hours of operation associated with the EEP. There have been no complaints received regarding noise emissions from the existing Mine to date.

5.11 AIR QUALITY

Air quality issues are considered to be typical of open-cut mining operations throughout the region. There will be no change in technique or hours of operation associated with the EEP. Progressive rehabilitation of the available disturbed areas will occur with the aim to reduce exposed areas to wind generated dust. Regular dust abatement methods will be implemented on active areas. The feasibility of utilising conveyor systems for bulk transport will take into account added benefits of reduced traffic generated dust and greenhouse gas generation.

The nearest landowner to the EEP is located approximately 3 km away from the administration area and predominant wind direction is directed away from this residence. There have been no complaints regarding air quality received to date.

5.12 WASTE MANAGEMENT

Onsite waste management practices will expand as required to cater for any increases in waste products generated from the EEP. Currently, all wastes (with the exception of tyres and some conveyor belts) are disposed of offsite either as general waste to landfill, regulated waste for disposal as appropriate and as recyclable materials.

The Mine operates a waste management plan that details requirements for employee and contractor responsibility, training and disposal of all materials used on the mine site. The adoption of the principles of the waste management hierarchy minimises the inappropriate loss of resources and ensures appropriate disposal of wastes. The existing waste management system and the waste program will continue to be employed for the EEP.

5.13 POST MINING REHABILITATION

Rehabilitation, decommissioning and closure activities will be part of the overall rehabilitation strategy for the EEP. The objectives outlined in the existing Environmental Management Plan will be complied with for the expansion areas.

Current strategies used to ensure closure criteria are met include:

- exploration investigations;
- subsidence management;
- landform designs for out of pit dumps, co-disposal facilities, and final voids;
- revegetation trials, programs and monitoring;
- contaminated land registers; and
- annual review of disturbance footprint and liability.

5.14 HEALTH & SAFETY

The EEP will be operated under the existing and proven Health and Safety requirements for Peabody operations. This Safety Management System has been established to ensure all activities that have an impact on occupational health and safety are carried out in a manner that complies with:

- PEAC standards;
- All relevant legalisation and where possible, exceed its requirements; and
- Relevant advisory standards and codes of practice.

5.15 EUROPEAN & CULTURAL HERITAGE

The area surrounding the mine has a history of both Aboriginal and European activity. The existing mine and surrounding areas have been subjected to extensive land clearing for agricultural and mining developments.

A cultural heritage survey was conducted in July 1990 over the entire area of ML 6949. This survey showed that four artefact sites were present in the Denham pit area. As per the site cultural heritage management procedures such sites will be relocated by the traditional owners prior to disturbance.

Further consultation with traditional claimants will occur as part of the EIS process.

5.16 SOCIO-ECONOMICS

The majority of employees at the mine are living in the Mackay region with camp facilities provided at the Village. Transport to and from the mine site and Village is provided by the company.

The EEP will benefit local and regional areas with increased security of employment and the ongoing requirement for services and support. This will have an impact on the region and state in relation to water supply, electricity supply, labour supply, infrastructure, accommodation and road traffic.

The EEP would necessitate, approximately 190 additional staff.

The EIS will consider the social impacts of the EEP as part of the EIS process.

5.17 COMMUNITY CONSULTATION

The EEP is committed to providing active and transparent community consultation to all stakeholders, following a clear communication plan. Consultation and social research during the EIS process will focus on minimising the impacts identified during the assessment process.

Some of the stakeholders involved in the EEP include:

- Queensland Environmental Protection Agency (EPA);
- Queensland Department of Natural Resources and Water (DNRW);
- Queensland Department of Mines and Energy (DME);
- Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA);
- Isaac Regional Shire Council;
- directly affected landholders;
- indirectly affected landholder/groundwater users;
- Mackay Conservation Council; and
- general community.

APPENDIX A

EPA Guideline 4: EIS Trigger Criteria

EPA Trigger	Y/N/U	Comment
Have a significant impact on Category A and Category B environmentally sensitive areas (ESA's).	Y	A preliminary desktop assessment has identified the presence of Category B ESA, namely, Endangered Regional Ecosystems, within the proposed disturbance area. A detailed review of the existing flora and fauna report is required and ground truthing to determine whether these ESA's are correctly mapped. Approximately 118 hectares of regional ecosystems will be cleared as a result of the progressive development of the Denham Pit for the EEP. The vegetation is currently degraded from interaction with grazing cattle. The final landform shall include rehabilitation of native species.
Involve mining in a marine area.	N	The proposal does not involve mining in a marine area.
Involve mining less than 500 m landward from the highest astronomical tide (HAT).	N	Given the Project location in central western Queensland, the proposal will not involve mining within 500 m of HAT.
Require construction of more than 150 new dwellings.	N	Unknown at present but unlikely that it will require construction of 150 dwellings on the site.
Include an ERA that would otherwise be a Level 1 ERA with an annual fee of greater than $4,000.	Y	ERA 15(b) – Sewage treatment, and ERA 16 – Municipal water treatment plant are performed at the Mine and are authorised under EPA Permit (Number IPDE01088308) and Registration Certificate. The proposed Project works is likely to involve the conduct of one or more ERAs (e.g. ERA 11 – Crude oil or petroleum product storing). The type and level of the ERA(s) to be performed may already be approved under the existing EPA Permit (Number IPDE01088308) however, confirmation on the additions or changes to the existing ERAs, if any, as a result of the proposed EEP, will be confirmed in the EIS.
Involve the mining of more than 2 million tonnes of mineral or run of mine ore per year.	Y	The proposed EEP will involve the extraction and processing of approximately 18 Mtpa of ROM coal to enable a production rate of approximately 12 Mtpa.
Involve the abstraction of more than 2 million m^3 of water per year from natural surface and/or groundwater.	N	A detailed groundwater investigation will be conducted to determine the impacts if any, on natural surface and groundwater reserves within the EEP area. Upon completion of appropriate investigations, the predicted rate of water abstraction as a result of the EEP operations will be defined.
Result in more than 25 ha remaining post mining in a non-beneficial land capability where an acceptable alternative may be feasible.	Y	Upon completion of the EEP open-cut operation, it is considered likely that due to the size of the remaining open-cut final void (i.e > 25ha), including the co-disposal reject dump areas; the EEP will result in more than 25 ha of non-beneficial land at the end of the mine's life.
Involve any non-standard mining activity less than 2 km from a town.	N	The site is located approximately 36 km north of Moranbah and 32 km southwest of Glenden.
Contain a dam which requires a dam failure assessment under the *Water Act 2000.*	N	At present, it is not expected that there will be no requirement to construct additional dams which require a failure impact assessment.
Include Mining for uranium or asbestos.	N	The proposal is for the mining of coal only.

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