

Environmental Impact Statement (EIS) Assessment Report under the *Environmental Protection Act 1994*

Millennium Expansion Project
Proposed by Millennium Coal Pty
Limited

August 2011

Prepared by: Environment and Natural Resource Regulation , Department of Environment and Resource Management

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1 Introduction

This report provides an evaluation of the environmental impact statement (EIS) process pursuant to Chapter 3 of the *Environmental Protection Act 1994* (EP Act) for the Millennium Expansion Project (MEP) proposed by Millennium Coal Pty Limited (MCPL).

On 16 September 2008 MCPL applied for approval to prepare a voluntary EIS for the project. On 19 September 2008 the Department of Environment and Resource Management (the department) approved the application.

The project was declared a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (EPBC Act), including assessment through the EIS process under the Agreement between the Commonwealth of Australia and the State of Queensland (the Bilateral Agreement) relating to Environmental Impact Assessment. This report contains an assessment of the significance of impacts of the action on the controlling provisions. A copy of this report will be given to the Commonwealth Environment Minister, who will decide whether to approve or refuse the controlled action under Part 9 of the EPBC Act.

The department as the administering authority of the EP Act, coordinated the EIS process. This assessment report has been prepared pursuant to sections 58 and 59 of the EP Act. Section 58 of the EP Act lists the criteria that the department must consider when preparing an EIS assessment report and section 59 requires the content of the report must:

- a. address the adequacy of the EIS in addressing the final terms of reference (TOR)
- b. address the adequacy of the draft environmental management plan (EM plan)
- c. make recommendations about the suitability of the project
- d. recommend any conditions on which any approval required for the project may be given.

The purpose of this report is to:

- a. provide an assessment of the MEP EIS documentation to complete the EIS process under section 60 of the EP Act
- b. provide information for assessment of the project under the Bilateral Agreement for the purposes of the EPBC Act.

This report summarises the key issues associated with the potentially adverse and beneficial environmental, economic and social impacts of the MEP. It discusses the management, monitoring, planning and other measures proposed to minimise any adverse environmental impacts of the project. It notes those issues of particular concern that were either not resolved or require specific conditions for the project to proceed.

The giving of this report to the proponent will complete the EIS process under the EP Act.

2 Project details

The proponent for the MEP is MCPL, which is a wholly owned subsidiary of Peabody Energy Australia Pty Limited. The project is located in the Bowen Basin approximately 22 kilometres (km) east of Moranbah and 16 km south-west of Coppabella within the Isaac Regional Council area. The MEP proposal is located wholly within Mining Lease (ML) 70313 'Millennium East', ML Application (MLA) 70401 'North Poitrel' and Mineral Development Licence 136 'Mavis Downs'. The MEP encompasses an expansion of the existing Millennium Mine operation. The proponent seeks to extend its current open-cut hard coking coal and pulverized coal injection (PCI) mining operation and increase the existing run of mine (ROM) coal extraction rate from 1.9 million tonnes per year (Mt/y) to 5.5 Mt/y to produce up to 3.6 Mt/y of product coal for export. MCPL expects that mine expansion will commence in the late 2011 and continue for a period of approximately 17 years. The estimated capital costs of the MEP is \$276 million.

MCPL commenced mining operations at the existing open cut Millennium Mine in 2005. The Millennium Mine under its existing approval is producing a hard coking and PCI coal product at an average annual rate of 1.4 Mt/y via convention truck and excavator mining methods.

The Environmental Authority (EA) (Mining Activities) MIN100344305 for the existing Millennium Mine would require amendment for the MEP to proceed.

The MEP proposes to continue the existing open-cut truck and excavator terrace mining methods, though the use of electric shovels and/or a dragline including upgrade to the current high voltage power supply may be considered at a later stage. An approval would be required if electrically powered mining equipment is introduced. The MEP would utilise the existing Millennium Mine infrastructure such as offices, workshops, power supply, explosives storage and wastewater network. Accommodation facilities would be provided at the Mac Coppabella Accommodation Camp for construction and operational contractors and personnel. Additional staff may be housed at the MAC Moranbah Accommodation Village.

Water would be sourced from the Burdekin Dam via the Burdekin Pipeline and water collected onsite from the West Dam catchment. Coal would be crushed, sized and washed through the existing adjacent off-site Red Mountain Joint Venture (RMJV) Coal Handling and Preparation Plant (CHPP). MCPL and BHP Mitsui Coal Pty Ltd (BMC) are the joint holders of the RMJV. Coal tailings and rejects from the processing of MEP's coal in the RMJV CHPP would be returned by truck to the MEP's waste rock emplacement areas. MCPL do not intend to increase production beyond the limits allowed for in the RMJV EA. RMJV would require a separate approval for any major modification or increase in the annual production on the RMJV site. The size of current ROM and product stockpile areas at the RMJV would be increased to meet the additional throughput. Product coal would be railed to the Dalrymple Bay Coal Terminal for export to international markets.

The proposed MEP mine footprint would cover an area of approximately 2977 ha. Up to two open pits with a depth of approximately 190 metres would be operating at any one time. The waste rock emplacement areas external to the pits, including the initial ex-pit box-cut dumps would subsequently be combined with the in-pit waste rock dumps. MCPL propose progressive backfilling of pits with overburden once sufficient area is available for in-pit dumping. Two final voids would remain after the cessation of mining activities. The Millennium Pit final void would be approximately 190 m deep and approximately 97.5 ha in area and the Mavis Pit final void would be approximately 190 m deep and approximately 182.7 ha in area.

3 The EIS process

3.1 Timeline of the EIS process

On 16 September 2008 MCPL applied to prepare a Voluntary EIS under section 70 of the EP Act. The application to undertake a Voluntary EIS was approved 19 September 2008.

MCPL seeks to amend an existing Level 1 EA to authorise a number of Environmentally Relevant Activities (ERA) within the MEP area.

The draft TOR and updated Initial Advice Statement for the EIS was submitted on 18 March 2009.

A notice of publication of the draft TOR was issued on 6 April 2009. A public notice of the comment period for the draft TOR was placed on the department's website on 8 April 2009 and advertised in *The Courier-Mail*, *Central Queensland News* and the *Mackay Daily Mercury*. The comment period on the draft TOR started on Thursday 9 April 2009 and closed on Monday 25 May 2009.

The draft TOR and public notice forecast that the MEP was likely to be a controlled action under the EPBC Act. On 28 April 2009 the project was determined to be a controlled action under Section 75 of the EPBC Act. The controlling provisions relate to listed threatened species and communities. The State's EIS process has been accredited for the assessment under Part 8 of the EPBC Act in accordance with the Agreement between the Commonwealth of Australia and the State of Queensland (the Bilateral Agreement) relating to Environmental Impact Assessment.

Comments on the draft TOR were received from 13 stakeholders within the comment period. Four other stakeholders provided comments soon after the close of the comment period. These comments were accepted by the delegate and together with those of the department, were forwarded to MCPL on 9 June 2009. MCPL responded on 6 July 2009. The department considered that response and all the comments received on the draft TOR prior to issuing the final TOR on 3 August 2009 in accordance with section 46 of the EP Act.

MCPL submitted an EIS on 27 October 2010. The department reviewed the EIS in accordance with section 49 of the EP Act and on 22 November 2010 decided that the submitted EIS did not address the final TOR in an acceptable form and it was not suitable to proceed to public notification. Comments were provided to MCPL, setting out the required changes for the EIS to make it acceptable. On 30 November 2010 a revised EIS was submitted. On 6 December 2010 the department decided under section 49 of the EP Act that the EIS addressed the terms of reference in an acceptable form and that the EIS could proceed. On 17 December 2010 a notice of that decision was issued MCPL including that the public submission period for the EIS was set at 32 business days starting on 20 December 2010, till close of business on 21 February 2011.

An EIS notice announcing the start of the submission period for the EIS was published on the department's website on 20 December 2010 and in *The Courier-Mail* and *Mackay Daily Mercury* on Saturday 18 December 2010, the *Central Queensland News* on Wednesday 22 December 2010 and the *Miners MidWeek* on the Wednesday 5 January 2011.

MCPL was required to issue copies of the EIS notice to all affected and interested persons. It was noted that initially MCPL only provided a copy of the EIS notice to a limited number of the identified affected and interested persons. On 24 February 2011 MCPL provided the required statutory declaration under section 53 of the EP Act for the public notice requirements of the EIS. Due to the delay in notifying all interested and affected persons and the significant affects of severe flooding and cyclone events in many regions of the State at that time, the department advised that it would accept submissions from stakeholders after the submission period closed in accordance with section 55 of the EP Act.

Ten submissions on the draft EIS were received within the submission period. The submissions were from commonwealth, state and local government agencies, a community association and non-government organisations. Three submissions were received after the close of the submission period; from a state government department, local government agency and a mining company. All 13 submissions were accepted in accordance with section 55

of the EP Act. Those submissions and a submission from the department were forwarded to MCPL for consideration and response.

In response to submissions, MCPL provided a supplementary report to the EIS on 4 April 2011. Copies of the response to submissions were distributed to all submitters. The department on the basis of its own review and the reviews of submitters decided that the supplementary report failed to address the outstanding matters for the EIS. Consequently, on 6 May 2011 a decision was made under section 555 of the EP Act to extend the period in which a decision on the adequacy of the EIS was to be made. The extension was made to provide MCPL additional time to improve the EIS. MCPL provided the additional information on 25 and 26 May 2011, consequently on 27 May 2011 a further extension was decided to allow the department time to consider the new information.

On 20 June 2011, under s56A of the EP Act, the department decided that the submitted EIS could proceed to the assessment report phase. A notice of that decision was given to MCPL on 4 July 2011. Noting inadequacies in the EM plan, the decision notice also included an attachment that set out matters that would need to be addressed in the EM plan to meet the statutory requirements of section 203 of the EP Act.

In the preparation of this report, consideration has been given to submissions and comments from members of the department's advisory body (see section 3.3.2 for advisory body constituents) and other interested parties made at all stages of the EIS process. This EIS assessment report will be available on the department's website (www.derm.qld.gov.au).

3.2 Approvals under the EP Act

The project will require a new mining lease for MLA 70401 and MDL 136.

MCPL proposes to operate the MEP under the EA for the existing mine, consequently that EA will require amendment if the MEP is approved. MCPL has nominated that the amended EA would need to cover the following activities that are directly associated with, or facilitate or support, the mining activities and which would otherwise require approval under the EP Act as environmentally relevant activities (ERAs):

- ERA 7 Chemical manufacturing
- ERA 8 Chemical storage
- ERA 16 Extractive and screening activities
- ERA 21 Motor vehicle workshop operation
- ERA 60 Waste disposal.

The EA amendment application will need to list all the relevant ERAs, including relevant thresholds under schedule 2 of the Environmental Protection Regulation that would apply to the project.

3.3 Consultation program

3.3.1 Public consultation

In addition to the statutory requirements for advertising the TOR and EIS notices and the mailing of notices to interested and affected parties, MCPL also undertook a community engagement process during the public submission period of the draft EIS. This included:

- landholders directly affected by the project
- a community reference group
- members of the public
- other stakeholders.

Although no formal submissions on the MEP were received by the department from these groups, the information provided in the EIS documentation informed the department's EIS public comment process. MCPL also circulated information (e.g. factsheets and website) about the MEP to the Moranbah and Clermont communities through community information days and conducted surveys on the communities views about the proposal.

3.3.2 Advisory Body

The following organisations were invited by the department to assist in the assessment of the TOR and EIS by participating as members of the advisory body for the MEP:

- Department of Communities
- Department of Education and Training
- Department of Emergency Services
- Department of Employment and Industrial Relations
- Department of Housing
- Department of Infrastructure and Planning
- Department of Local Government, Planning, Sport and Recreation
- Department of Main Roads
- Department of Mines and Energy
- Department of Natural Resources and Water
- Department of Primary Industries and Fisheries
- Queensland Health
- Queensland Police Service
- Queensland Rail Limited
- Queensland Treasury
- Isaac Regional Council
- Mackay Regional Council
- Ergon Energy
- Powerlink Queensland
- Sunwater
- Fitzroy Basin Association
- Capricorn Conservation Council
- Mackay Conservation Group Inc.
- North Queensland Land Council
- Barada Barna People
- Central Queensland Land Council
- Construction, Forestry, Mining & Energy Union.

However, on 26 March 2009 the names of several of those departments changed (see Public Service Departmental Arrangements Notice (No.2) 2009). Table 1 summarises the changes that occurred to Queensland Government departments referred to in this report.

Table 1 - Changes to Queensland Government departments

Previous department/s	New department (as of 26 March 2009)
Department of Primary Industries and Fisheries Department of Mines and Energy Department of Tourism, Regional Development and Industry Department of Employment and Industrial Relations	Department of Employment, Economic Development and Innovation (DEEDI)
Environmental Protection Agency Department of Natural Resources and Water	Department of Environment and Resource Management (DERM)

Department of Local Government, Sport and Recreation	Department of Local Government and Planning (DLGP)
Department of Main Roads Queensland Transport	Department of Transport and Main Roads (DTMR)
Department of Communities Department of Housing Disability Services Queensland Department of Child Safety	Department of Communities (DoC)
Department of Emergency Services	Department of Community Safety (DCS)

An advisory body briefing for the project was held in Brisbane on 21 December 2010. A field trip to inspect the project site was scheduled to be held in January and February 2011. However, due to the significant flooding and cyclone weather events at the time it was not possible to access the site during the public submission period.

3.3.3 Public notification

In accordance with the statutory requirements of sections 42 and 52 of the EP Act, public notification of the of the draft TOR and EIS and public comment periods was made through notices in *The Courier-Mail*, *Mackay Daily Mercury* and the *Miners MidWeek* and on the department's website.

The draft TOR and EIS were placed on public display at the following locations during their respective public comment and submission periods:

- the department's website
- the department's Customer Service Centre, 160 Ann Street, Brisbane
- the department's office, 400 George Street, Brisbane
- the department's office, 99 Hospital Road, Emerald
- Moranbah Town Library, Grosvenor Complex, Bachelor Parade, Moranbah
- Nebo Library, Reynolds Street, Nebo
- Peabody Energy Australia Pty Limited, Level 4, HSBC Building, 300 Queen Street, Brisbane
- Peabody Energy Australia Pty Limited, Level 13, BOQ Centre, 259 Queen Street, Brisbane.

3.4 Matters considered in the EIS assessment report

Section 58 of the EP Act requires that an EIS assessment report consider the following matters:

- the final TOR for the EIS
- the submitted EIS
- all properly made submissions and any other submissions accepted by the chief executive
- the standard criteria
- another matter prescribed under a regulation.

These matters are addressed in the following subsections.

3.4.1 The final TOR

All of the matters listed in the final TOR, issued on 3 August 2009, were considered when preparing this EIS assessment report. While the TOR was written to include all the potential major issues associated with the project, they were not exhaustive, nor were they to be interpreted as excluding other matters from consideration in the EIS.

Where matters outside of those listed in the final TOR were addressed in the EIS, those matters have also been considered in this EIS assessment report.

3.4.2 The submitted EIS

The submitted EIS was considered when preparing this report. The submitted EIS comprised the:

- the EIS that was made available for public submissions on 20 December 2010
- properly made submissions
- the response to submissions and the amendments to the EIS received by the department on 4 April 2011
- additional information provided by MCPL on 25 May 2011 and 26 May 2011 and other information submitted from time to time after 26 May 2011.

The department accepted thirteen submissions on the EIS including from:

- Department of Communities
- Department of Community Safety
- Department of Employment, Economic Development and Innovation
- Department of Transport and Main Roads
- Queensland Health
- Queensland Police Service
- Queensland Treasury
- Commonwealth Department of Sustainability, Environment, Water, Population and Communities
- Mackay Regional Council
- Isaac Regional Council
- Fitzroy Basin Association
- Moorvale West Coal Pty Ltd
- Ergon Energy.

The department also made its own submission on the EIS.

All submitters were also given the opportunity to provide a follow-up response to the department on their view of the suitability of the MCPL response to their respective submissions.

3.4.3 The standard criteria

Section 58 of the EP Act requires that, among other matters, the standard criteria listed in Schedule 3 of the EP Act must be considered when preparing the EIS assessment report. The standard criteria are:

- a. the principles of ecologically sustainable development as set out in the National Strategy for Ecologically Sustainable Development
- b. any applicable environmental protection policy
- c. any applicable Commonwealth, State or local government plans, standards, agreements or requirements
- d. any applicable environmental impact study, assessment or report
- e. the character, resilience and values of the receiving environment
- f. all submissions made by the applicant and submitters
- g. the best practice environmental management for activities under any relevant instrument, or proposed instrument, as follows -
 - i. an environmental authority
 - ii. a transitional environmental program
 - iii. an environmental protection order
 - iv. a disposal permit
 - v. a development approval

- h. the financial implications of the requirements under an instrument, or proposed instrument, mentioned in paragraph (g) as they would relate to the type of activity or industry carried out, or proposed to be carried out, under the instrument
- i. the public interest
- j. any applicable site management plan
- k. any relevant integrated environmental management system or proposed integrated environmental management system
- l. any other matter prescribed under a regulation.

The department has considered the standard criteria when assessing the project.

3.4.4 Prescribed matters

Section 58 of the EP Act requires that the following matters prescribed, under the Environmental Protection Regulation 2008, are considered when making an environmental management decision for this project:

- Section 51, matters to be considered for environmental management decisions
- Section 52, conditions to be considered for environmental management decisions
- Section 53, matters to be considered for decisions imposing monitoring conditions
- Section 55, release of water or waste to land
- Section 56, release of water, other than stormwater, to surface water
- Section 57, release of stormwater
- Section 60, activity involving storing or moving bulk material
- Section 62, activity involving acid-producing rock
- Section 64, activity involving indirect release of contaminants to groundwater.

3.4.5 Notifiable activities

The EIS identified and listed the following relevant notifiable activities under schedule 3 of the EP Act that would apply to the project:

- Notifiable activity 6 - Chemical manufacture or formulation
- Notifiable activity 7 - Chemical storage
- Notifiable activity 14 - Engine reconditioning works
- Notifiable activity 24 - Mine wastes
- Notifiable activity 29 - Petroleum product or oil storage.

MCPL will be required to provide notification to the Contaminated Lands Register for all notifiable activities and the identified notifiable activities should be clearly identified and listed in the EM plan. Any notifiable activity, as defined under Schedule 3 of the EP Act would be a relevant mining activity if it is directly associated with, or supports or facilitates, the mining or processing of coal on the MEP tenures.

3.5 Environment Protection and Biodiversity Conservation Act 1999

On 27 March 2009 the MEP was referred (EPBC No 2009/4821) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to the (then) Commonwealth Department of Environment, Water, Heritage and the Arts. On 28 April 2009 the project was declared to be a controlled action with the controlling provisions relating to listed threatened species and ecological communities (sections 18 and 18A of the EPBC Act).

The project has the potential to impact matters of National Environmental Significance as the project area contains:

- endangered ecological communities listed under the under the EPBC Act, namely Brigalow (*Acacia harpophylla*) - dominant or co-dominated vegetation communities
- species listed under the EPBC Act as vulnerable:
 - the Brigalow Scaly-foot legless lizard (*Paradelma orientalis*)
 - the Little Pied Bat (*Chalinolobus picatus*)
 - the Squatter Pigeon (Southern) (*Geophaps scripta scripta*)
- species listed under the EPBC Act as threatened and migratory species were either found on site or have the potential to occur on-site:
 - Rainbow Bee-eater (*Merops ornatus*)
 - Great Egret (*Ardea ibis s. lato*)
 - Cattle Egret (*Ardea ibis*)
 - Fork-tailed Swift (*Apus pacificus*)
 - White-throated Needletail (*Hirundapus caudacutus*)

Matters of national environmental significance are further discussed in section 4.14 of this report.

This EIS process is accredited for the assessment under Part 8 of the EPBC Act in accordance with the Agreement between the Commonwealth of Australia and the State of Queensland (the Bilateral Agreement) relating to Environmental Impact Assessment. The Commonwealth was included as an advisory body for the assessment of the project and provided its comments on the draft TOR and EIS documents. A copy of this report will be given to the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities to assist in making a decision on the project under the EPBC Act.

4 Adequacy of the EIS in addressing the TOR

4.1 Introduction

The EIS provided an adequate introduction to the project, its objectives and scope. It adequately identified the necessary approvals and outlined the assessment and approval processes.

4.2 Regulatory approvals

The EIS provided an adequate summary of the purpose of legislation and regulatory approvals required for the MEP.

Table 2 - Approvals required for the Millennium Expansion Project

Approval	Legislation (Administering Authority)
Environmental authority (mining activities) Amendment required of existing Millennium Mine EA which includes the following tenements: (Mining Lease (ML) 70313, ML 70344, Mineral Development Licence (MDL) 135, MDL 136, MDL 137 and Exploration Permit Coal (EPC) 728 MEP EA amendment will comprise ML 70313, MLA 70401 and MDL 136	<i>Environmental Protection Act 1994</i> (Department of Environment and Resource Management)
The MEP requires leases to be approved for MLA 70401 and MDL 136 which are applicable to the MEP.	<i>Mineral Resources Act 1989</i> (Department of Employment, Economic Development and Innovation)
Water Licences (Taking or interfering with water from an aquifer and using the water for coal processing and dust suppression. Pit dewatering which interferes with the flow of water in an aquifer) Diversion of a defined watercourse	<i>Water Act 2000</i> (Department of Environment and Resource Management)
Approval to undertake action that may impact on a matter of national environmental significance (Nationally listed threatened species and ecological communities)	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwth) (Commonwealth Department of Sustainability, Environment, Water, Population and Communities)
Clearing permits for relocating any threatened species	<i>Nature Conservation Act 1992</i> (Department of Environment and Resource Management)
Cultural Heritage Management Plan (CHMP)	<i>Aboriginal Cultural Heritage Act 2003</i> (Department of Environment and Resource Management)

4.3 Project need and alternatives

The EIS adequately described the need for the project and briefly outlined the social, economic and environmental benefits and costs. The EIS considered the principles of Ecologically Sustainable Development (ESD) which were further considered in the feasibility and planning stages of the MEP. The positive and negative impacts,

appropriate mitigation and management measures and environmental protection commitments of the MEP were addressed in later sections of the EIS. The preferred mining method in the EIS was open pit mining, noting that the block caving method may be another practical method and that underground mining is likely to be suitable.

4.4 Project description

The EIS adequately described the location, scope and phases of the project. No submissions on the EIS requested additional information. A brief outline of the project is in section 2 of this report.

4.5 Climate

The EIS adequately described the local climate with regard to how the climate could affect the potential for environmental impacts and the management of operations at the site. The principal aspect is the effect of seasonal rainfall on water management on site to prevent the release of unauthorised contaminants from the site.

4.6 Land

The EIS adequately described those aspects of the site and project related to the existing and proposed qualities and characteristics of the land. The following subsections address those qualities and characteristics in more detail. There are a range of inconsistencies in the area data provided, for example the various sub-areas such as mine affected voids and rehabilitation did not appear to sum to the total mine foot print. However, the numbers provided in the EIS process and included below were used as indicative rather than precise for the purpose of determining impacts.

4.6.1 Land disturbance

The project will result in significant land disturbance. The open cut operation would change the local topography and change the surface water drainage patterns. It will disturb approximately 1449 hectares (ha) of land including, the loss of approximately 66 ha of remnant vegetation. Disturbance will also include the removal of two mesa landforms, stripping and stockpiling of approximately 1,100,000 m³ top soil, the creation of mine pits, four approximately 60 metre (m) high (above natural surface level) external waste rock dumps (approximately 231 ha in total) and two approximately 190 m deep residual voids which will remain at the end of mining. Dewatered tailings and coarse coal rejects from the coal processing would be trucked back from the RMJV site and buried in cells within the external and internal waste rock emplacements at depths of at least 10 m from the final emplacement surface.

4.6.2 Land use

The dominant land uses within the project area are currently beef cattle grazing and mining. The majority of the project area has been cleared for pasture and improved for grazing purposes with introduced Buffel Grass (*Cenchrus ciliaris*).

The EIS included two land suitability assessments comparing grazing and cropping land uses for each soil type identified on the MEP site. The EIS stated that the resultant post-mining land use for the mine site would be grazing.

Land Suitability Classes 2, 3, 4 and 5 (grazing) were identified on the proposed site, where Land Suitability Class 1 is the highest through to Class 5 the lowest. No Good Quality Agricultural Land (GQAL), Class A Crop Land or Class B Limited Crop land were identified on the MEP site. The majority of the areas that would be disturbed by mining activities were classified as Class 2 and Class 3, (approximately 1813 ha) suitable for grazing and improved pasture and approximately 283 ha and 862 ha respectively of that would be removed as an impact of the MEP.

The EIS stated that the MEP will result in the permanent alienation of approximately 900 ha of grazing land from the pre-mining land use; for example through unsuitable steep slopes of out of pit spoil dumps and the two final voids that would remain at the end of the mine operations. It was not clear if that figure included the loss of grazing from the otherwise suitable areas on the waste rock emplacement given that the slopes are likely to be too

steep to allow stock access to the level tops. Unless treated that barrier will further limit grazing on significant areas of otherwise suitable land.

The EIS assessed that approximately 1,362 ha of mine disturbed land will be rehabilitated. All areas that will be rehabilitated will aim to provide stable landforms with a self-sustaining vegetation cover. Progressive and final rehabilitation measures will aim to provide stable final landforms supported by a mosaic of self-sustaining native, tree shrub vegetation, and native and pasture grass species to support grazing post mining and will be permanently alienated from grazing through the retention of the approximately 190 m deep Millennium Pit and Mavis Pit residual voids that will each cover approximately 65 ha and 166 ha respectively, high walls, ramps and the establishment of steep outer slopes at a maximum angle of 3(H):1(V) on out-of-pit waste rock dumps.

The EIS did not provide a Rehabilitation Management Plan (RMP) for areas to be disturbed by mining activities. The success or failure of rehabilitated lands disturbed by mining activities will be measured against yet to be agreed outcomes and rehabilitation completion criteria for land suitability, land use, landform stability and land contamination. Access of stock to the rehabilitated tops of the rock emplacements should be considered in any rehabilitation plan to improve the realisation of the stated aim of land use.

The EIS includes a commitment to provide a RMP to the department by 1 April 2012.

4.6.3 Soils and land suitability

The soils and land suitability assessment were comprehensively discussed. The EIS provided sufficient detailed information on land resources to determine MEP soil type distributions, land suitability, soil erosion, rehabilitation potential and stormwater runoff quality.

The EIS concluded that the suitability of the waste rock dumps for future grazing will be limited because of slope length and angle, soil depth and altered soil moisture profile. The EIS identified significant changes in post-mining land suitability for grazing. The 1145 ha of land suitability Class 2 and Class 3 area will be reduced to poorer quality land suitability Classes 4 and 5.

4.6.4 Resource utilisation

The EIS adequately addressed resource utilisation, stating that the mine plan is based on maximum coal resource recovery, including the potentially uneconomic Millennium Seams and the Lower Vermont Seams. Coal resource sterilisation was minimised through locating the Mavis Pit overburden in out-of-pit external waste rock emplacements where they will not sterilise any coal reserves.

4.6.5 Land contamination

The MEP site has been used for sheep and cattle grazing. Land contamination may have occurred from the past use of agricultural chemicals such as dips, drenches and herbicides. No evidence was found of potentially contaminating farming practices or facilities such as cattle yards, dips or old waste disposal dumps during soil surveys that were conducted for the EIS. The EIS included a search of the Environmental Management (EMR) and Contaminated Land Register (CLR). No registered sites from the MEP were found. The EIS concluded that it is highly unlikely that the land has been contaminated by past agricultural activities to any significant extent.

The EIS noted a number of notifiable activities under Schedule 3 of the EP Act, that may pose a risk to human health or the environment, are carried out on the existing Millennium Mine and would also be associated with the MEP. Land contamination can occur from poor environmental management and waste disposal practices or accidental spills from agricultural and mining activities.

The proposed mining activities will inevitably result in some contamination of land. The EIS proposed a range of mitigation measures to reduce the potential negative impacts to land and waters from operational activities, including accidental spills of hydrocarbons and chemicals.

The EIS identified the following notifiable activities that would be conducted on the site, including:

- Notifiable activity 6 - Chemical manufacture or formulation
- Notifiable activity 7 - Chemical storage

- Notifiable activity 14 - Engine reconditioning
- Notifiable activity 24 - Mine wastes
- Notifiable activity 29 - Petroleum product or oil storage.

In accordance with section 371 of the EP Act, once MCPL becomes aware of a notifiable activity being carried out on MEP land, or the land is being contaminated by a hazardous contaminant, MCPL must give notice to the department's (EMR/CLR Registrar) of the all relevant notifiable activities that will require recording on the Environmental Management Register. The proponent of the activities on the registered site will be required to provide a management plan for the site(s) to prevent the contaminant from posing a risk to the environmental or human health. The Environmental Management Register will provide information about the site that is searchable for any future owners or users of the site.

The EIS included a commitment to notify the EMR/CLR Registrar should any potentially contaminating activities be carried out on site.

4.6.6 Landscape character and visual amenity

The MEP is located wholly within the Isaac Regional Council area. The EIS characterised the MEP site as gently undulating rural land with isolated rocky knolls. The mine site is an irregular shape that will cover an area approximately 9.0 km by 5.0 km. Three irregular-shaped low (60 m high) mesa-like features are located on the eastern and southern portions of the site with a more significant mesa/ridgeline to the west of the MEP. New Chum Creek dissects the site from north-west to south-east eventually draining to the Isaac River. The site has been changed by human activities including extensive areas previously cleared for cattle and sheep grazing and historic and current mining activities. Remnant riparian vegetation is still evident along drainage and creek lines. Cattle grazing activities still occur on the non-operational areas of the existing Millennium mine and on land to the east and west of the site. The MEP is bounded to the north by the Carborough Downs underground mine and to the south by the Poitrel and Daunia open-cut mines. Mining activities are conducted on the RMJV site to the south-east of the MEP including a CHPP, ROM stockpiling, tailings management, rail-load-out and mine infrastructure. The Peak Downs Highway is located approximately 4.0 km to the north of the MEP site with the Millennium-Poitrel Access Road entering the MEP on the north-west boundary.

During the operational phase, the MEP will include a range of infrastructure and activities that will influence visual amenity and landscape character. Mining activities will negatively impact on the visual quality, amenity and landscape character of the site. Large scale changes proposed include the removal of the two existing elevated landscape features (mesas), construction of larger, approximately 60 m elevated waste rock dumps areas and the creation of two residual mine pits which will remain as permanent changes to the amenity and landscape character of the site. Following the end of mining operations, the building features associated with infrastructure activities will be decommissioned and removed.

The negative impacts on visual amenity and landscape character from activities of the MEP and its residual physical features would be mitigated to a small degree by:

- the generally low lying nature of the MEP landscape and infrastructure within the overall landscape and their distance from the publically accessible vantage points
- simulation of the MEP final landform design to replicate existing natural mesas features in the area and
- existing vegetation along Peak Downs Highway which would provide some screening of the potential mining impacts from roadside observation points.

Vegetation on the rehabilitated waste rock dumps will take a significant time to establish and may soften the visual impact of the elevated waste rock dumps, but the residual void will remain a prominent negative impact.

4.7 Transport

4.7.1 Road

The majority of the predicted 160 additional MCPL mine employees are expected to choose to live in the coastal regional city of Mackay and use the Bus-In-Bus-Out (BIBO) arrangements to travel from Mackay to the existing MAC Coppabella Accommodation Camp at the start and end of their shift rotation. The shift rotation is currently four days on, four days off.

Shuttle buses will transport employees from the workers camp to and from the mine site at the start and end of each shift. Shuttle buses with a capacity of 55 seated persons will transport mine workers approximately 16 km south-west along the State-controlled Peak Downs Highway to the privately owned and maintained Millennium-Poitrel Access Road.

The EIS estimated that approximately 5% of employees will choose to live locally in Moranbah. Moranbah based employees would likely travel approximately 22 km to and from the mine site via their own light vehicles. Some employees may choose to car pool.

The EIS assessed that no major upgrade improvements, other than pavement rehabilitation works would be required for the locally controlled Moranbah Access Road.

The Department of Transport and Main Roads (DTMR) is generally satisfied with the proponents proposal to resolve traffic issues. However, DTMR consider further consultation and specific action is required regarding a number of significant issues including:

- information on the proposed upgrading of the State-controlled road network, in particular DTMR requires an upgrade of the lighting of the Peak Downs Highway/Millennium-Poitrel Access Road intersection. The upgrade is required prior to the commencement of the MEP and at no cost to DTMR. The upgrade may be provided through another mine project not related to this EIS
- reviewing and finalising the road impact assessment
- reporting the findings to DTMR in a Road-Use Management Plan (RMP) including detailed commitments to address road impacts of project traffic.

It is recommended that the proponent continue to liaise with the Network and Planning Unit of DTMR to discuss and resolve the outstanding issues. A road-use impact assessment including Road-Use and Traffic Management Plans along with any necessary permits for any excess mass or over-dimensional loads associated with the project will be required prior to the commencement of any MEP construction works.

4.7.2 Rail

The existing Millennium Mine transports coal product directly to the Dalrymple Bay Coal Terminal (DBCT) via the existing Norwich Park branch line take-off from the Goonyella Coal Chain system. There is currently approximately 1.56Mt/yr of coal product transported by 240 train movements of coal per year from the existing Millennium Mine. The MEP will use the existing coal load-out facility and dedicated rail-loop which is operated as part of the RMJV. At peak production, it is expected that the MEP would increase coal production to 3.5Mt/yr and train movements to 368 per year.

4.7.3 Port

The anticipated additional coal product volume would equate to approximately 25 additional shipping movements from the DBCT, an increase of approximately 2.4% on current DBCT operations.

4.7.4 Air

The MEP is predominantly a BIBO operation, therefore the EIS concluded that additional passenger demand for air transport services at Mackay, Emerald and Moranbah commercial regional airports is not expected to be significant and that the MEP will have no impact on air transport infrastructure.

4.8 Waste

The EIS identified that the MEP's major sources of waste with the potential to cause impacts to the environment and to human health and well-being include:

- mine waste that may produce poor quality, saline or acid water runoff/seepage including:
 - waste rock and overburden (approximately 60 million cubic metres/yr), which is the consolidated and unconsolidated material including topsoil strata that overlays the economic coal deposit
 - coarse rejects and fine tailings (approximately 2 Mt/yr at full production) which are the waste by-products from the Coal Handling and Preparation Plant (CHPP) process
- regulated wastes including, hydrocarbon contaminated wastes/materials, batteries, tyres, cleaning chemicals, vehicle wash down waters and detergents and solvents from workshop activities
- general waste including, timber and wooden pallets, green waste and domestic waste including, food scraps, wrapping paper from crib rooms, office administration and workshops areas
- recyclable materials including, paper and cardboard, glass and aluminium cans, scrap metal from workshop and office administration areas
- sewage waste including sewage effluent and dried sewage sludge from crib rooms and office administration areas.

The EIS identified that the inappropriate management and disposal of wastes may lead to the to the contamination of land and water with potential adverse impacts on human and ecosystem health.

MCPL has committed to managing waste generated by the MEP in accordance with the waste management hierarchy (i.e. avoidance, recycling, waste to energy and disposal) and in accordance with relevant legislation including the Queensland Environmental Protection (Waste Management) Policy 2000 (EPP Waste). MCPL have committed to incorporating a program of best practice waste management including the ongoing assessment of cleaner production and waste management opportunities for the life of the project. Regulated waste will be removed off-site by an appropriately licensed waste management service contractor for disposal at a facility that is appropriately licensed to accept such waste.

The EIS did not provide a Waste Management Plan for the MEP. MCPL have committed to developing and implementing a Waste Management Plan by 1 April 2012.

Recommended waste management conditions have been provided in Appendix 1.

4.8.1 Mine waste / Waste rock and Overburden

The Millennium Mine currently has waste rock emplacement areas. The MEP will require additional waste rock emplacement areas to accommodate overburden from mining and coarse rejects and fine tailings from processing.

MCPL ROM coal would be hauled via heavy-vehicle trucks to the adjacent RMJV CHPP for processing. That facility is authorised to accept, process and manage ROM coal and coal washery waste from the Millennium and Poitrel mines. The CHPP is stated in the EIS to have sufficient production capacity to process ROM coal and manage coal washery waste from the MEP on top of its other inputs. After processing through the RMJV CHPP, MEP coal wash tailings, coarse rejects and dewatered fine rejects would be returned by heavy-vehicle trucks for disposal within MEP waste rock emplacement areas.

The EIS did not provide a detailed Rejects Management Plan. MCPL committed to developing a Rejects Management Plan that will provide sufficient treatment and storage capacity for coal washery waste for the life of the mine.

Any future expansion or modifications of the RMJV operations would require a separate assessment and approval process. The EIS notes that current tailings dewatering cell operations at the RMJV CHPP site is not operational best practice. MCPL is currently investigating alternative tailings management methods and has committed to conducting further investigations into operational and management controls for dewatered tailings and annual reporting of progress and implementation.

MCPL has committed to annual reporting to the department at the end of each financial year on the following:

- identification of and investigation into strategies, technologies and/or works to improve the operational and management controls
- requirements and limitations associated with the implementation of any preferred strategies, technologies and/or works
- progress on testing and planning associated with the implementation of any preferred strategies, technologies and/or works
- anticipated timeframes associated with implementation of any preferred strategies, technologies and/or works, following confirmation of suitability and success.

Overburden material was assessed in the EIS as generally alkaline, with low salinity, not acid forming and therefore no acid mine drainage is expected from the overburden. Any waste rock and overburden material with high sodicity, salinity or is net acid producing will be encapsulated within waste rock dumps. Potential acid forming (PAF) material will be encapsulated within non acid forming (NAF) material.

The EM plan sets out a management regime for the disposal of potentially acid forming, sodic or saline overburden.

4.8.2 Regulated waste

The EIS adequately addressed the management of regulated waste generated by the MEP. All regulated waste generated by the MEP would be segregated, stored and managed in accordance with relevant legislation and then collected and transport by a appropriately licensed contractor and disposed of or recycled at a waste management facility licensed to accept such waste.

4.8.3 Other waste

The EIS adequately addressed the management of general, recycled and sewage waste generated by the MEP.

4.9 Water resources

4.9.1 Surface water

The MEP is located in the Isaac River catchment which flows into the Fitzroy River Basin via the Mackenzie River. New Chum, North and West Creeks are identified ephemeral waterways within the MEP area that flow to the Isaac River. Stream flow in these tributaries is highly variable with flows most likely to occur during the period from December to March. The MEP covers an area of approximately 17.6 km² and approximately 35% of the 51 km² New Chum Creek catchment.

The environmental values of surface waters in the Isaac River catchment have been characterised by significant changes to the land use of the catchment. Extensive and widespread vegetation clearing within the catchment has occurred from past and current agricultural and coal mining activities. The EIS concluded that the aquatic ecosystem was a slightly to moderately disturbed system.

MEP proposes to divert clean water from undisturbed parts of the catchment around the proposed mining operations in order to minimise the amount of surface runoff impacted by mining operations. The existing Burdekin Dam water supply allocation and on-site collected and recycled mine impacted water would be stored in existing and proposed mine water storages to meet the increased water requirements for mine operations.

Flood protection measures including rock mulching and levee banks will be constructed to protect the working pits and waste rock emplacement areas from a 1:2000 year average recurrence interval (ARI) flood event during mine operations. The EIS includes a commitment to protect final voids from the Probable Maximum Flood Level from the end of mine life.

A final water management plan for the MEP has not been provided during the EIS. A water management plan (WMP) is critical; it should identify sound water management practices for the operation of the mine including:

- clearly identify all potential impacts
- minimise the potential risks of contaminants being released to the environment

- include water quality monitoring for all storages, release points and receiving waters.

The EIS includes a commitment to provide a WMP to the department by 1 November 2011.

4.9.2 Groundwater

The removal of overburden and coal seams will require the localised dewatering of aquifers. Limited groundwater quality data was provided in the EIS. The EIS assessed and modelled the groundwater resource of the MEP and surrounding area to predict changes in groundwater quality and quantity, standing water levels and the potential impacts of dewatering on the local and regional groundwater values. The EIS concluded that mine dewatering operations will reduce both water-table levels and groundwater flows and consequently potentially reduce borewater yields on the site and in surrounding areas.

MCPL have committed to provide an alternative water supply to any affected neighbouring landholder(s) whose groundwater use has been affected by the MEP.

At the end of mine operations, the Millennium and Mavis Pits will remain as approximately 190 m deep final voids, covering approximately 65 ha and 166 ha respectively. Once dewatering operations cease groundwater will continue to discharge into the voids. Groundwater seepage, direct rainfall and evaporation will contribute to the final water levels in the voids. The EIS groundwater simulation modelling concluded that void water levels would not stabilise until approximately 200 years after the end of mine life. Water quality in the residual voids is expected to deteriorate over time due to high evaporation rates and the ongoing input of saline groundwater. The EIS concluded that the final void waters would become hypersaline but would not seep or discharge into or impact on the groundwater quality of the aquifer surrounding the MEP.

An external submission by Moorvale West Coal Pty Ltd (MCL) raised issues with potential groundwater impacts on that company's proposed adjacent underground mining operation, safety management, resource sterilisation and final rehabilitation and decommissioning options for the Mavis Pit final void. Those issues are not yet resolved to the satisfaction of MCL.

A groundwater monitoring program (GMP) was not provided in the EIS. MCPL have committed to providing a GMP to the department by 31 December 2011. The GMP must detail, as a minimum, the following:

- the location of groundwater monitoring sites and the location of aquifers the sites are monitoring
- the frequency at which sampling will be undertaken
- the groundwater contaminant trigger values
- the groundwater monitoring reporting requirements
- the management measures to effectively mitigate and manage potential impacts on aquifers and existing groundwater users.

MCPL has committed to finalising the groundwater trigger levels based on the background groundwater monitoring program by 1 January 2013.

The recommended groundwater conditions for the draft environmental authority are outlined in Appendix 1

4.10 Air quality

The EIS adequately addressed the air quality matters raised in the TOR, including dust emissions and greenhouse gas emissions.

The MEP would be located approximately 22 km east of the town of Moranbah in a sparsely populated rural area. Five homesteads are located within 15 km of the proposed mine. The major sources of particulate emissions to air from the proposed open-cut mine would include:

- operating mining vehicles and heavy earthmoving equipment to clear vegetation and strip and remove topsoil
- drilling, blasting and extracting overburden and interburden
- road grading and transporting and stockpiling large quantities of waste rock
- coal crushing, stockpiling and rail load-out

- gas emissions from mobile plant and equipment exhausts
- wind erosion from stockpiles and waste rock emplacements
- vehicle movements on unsealed roads

Air quality modelling undertaken for the EIS concluded that the background 24-hour average PM₁₀ concentrations of particulate matter of 20 ug/m³ is predicted to be within the air quality objectives set out in Queensland Environmental Protection (Air) Policy 2008. However, background dust deposition at the adjacent sensitive receptor sites (homesteads) will be greater than the department's proposed licence limit of 120 mg/m²/day.

In the EIS, MCPL has committed to meet the department's proposed limit of 120 mg/m²/day for dust deposition at sensitive receptors.

An Air Quality Management Plan has not been finalised in the EIS, however a range of commitments have been made in the EIS to manage dust from the MEP including:

- ongoing (life of mine) dust deposition and meteorological monitoring
- dust suppression by regular water spraying (i.e. watering stockpiles and internal unsealed haul roads to reduce dust generation)
- dust suppression sprays in coal handling facilities (e.g. crushers)
- management of topsoil stripping such that dust does not become a safety hazard or severe environmental nuisance
- vegetation burn management
- all complaints about dust will be investigated promptly and appropriate action taken to reduce dust nuisance
- a register of dust complaints will be maintained on site
- progressive rehabilitation and revegetation of available disturbed areas will occur with the aim to reduce wind generated dust
- regular maintenance of dust suppression equipment.

The EIS included a satisfactory assessment of potential Greenhouse gas (GHG) emissions using the National Greenhouse Accounts Factors published by the Commonwealth Department of Climate Change and Energy Efficiency.

The direct and indirect GHG emissions generated from the MEP include:

- fuel (diesel) burning in heavy mining earthmoving equipment and light vehicles
- combustion in explosives used for blasting
- methane emissions (fugitive) from exposed coal seams
- land clearing (e.g. burning of vegetation).

The recommended conditions for management of environmental impacts of air emissions are outlined in Appendix 1.

4.11 Noise and vibration

The EIS adequately addressed the noise and vibration matters raised in the TOR. There are five noise sensitive places (farm homesteads) within 15 km of the site, including Moorvale Homestead located within approximately 7 km. The EIS noted that each of the sensitive receptors was also located closer to one of the other existing coal mining operations than they were to the MEP. Modelling of noise levels undertaken for the EIS concluded that the noise sensitive places would not be impacted by noise or vibration from the MEP at any time of day, evening or night. The modelling also concluded that mining operations would not contribute to an increase in either background noise levels (known as "background creep") or low frequency noise level exceedences at the sensitive receptors.

The recommended conditions for the management of noise impacts are outlined in Appendix 1.

4.12 Ecology

4.12.1 Flora and Fauna

The majority of the vegetation within the MEP has been extensively modified as a consequence of historical vegetation clearing practices for beef and sheep grazing activities and clearing associated with the existing Millennium Mine operation.

The EIS identified potential impacts of the MEP on nature conservation values, including:

- approximately 66 ha of remnant vegetation would be cleared including, clearing of approximately 2.5 ha of Brigalow-dominated and co-dominated vegetation listed as 'endangered' under the *Vegetation Management Act 1999* (VM Act) and EPBC Act including:
 - 0.9 ha of Brigalow (RE 11.9.5, *Acacia harpophylla-Eucalyptus cambageana*)
 - 1.6 ha of Brigalow (RE 11.9.1, *Acacia harpophylla* and/or *Casuarina cristata*)
 - 2.3 ha area of Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin (RE 11.9.3, *Dichanthium* spp./*Astrebla*)
- impacts on several specimens of *Cerbera dumicola* (shrub) listed as 'near threatened' under the NC Act
- impacts on the Brigalow Scaly-foot Legless Lizard (*Paradelma orientalis*) listed as 'vulnerable' under the NC Act and EPBC Act
- impacts on the Ornamental Snake (*Denisonia maculate*) and the Squatter Pigeon (Southern) (*Geophaps scripta scripta*) listed as 'vulnerable' under the NC Act and EPBC Act
- impacts on the Little Pied Bat (*Chalinolobus picatus*) listed as 'vulnerable' under the NC Act and EPBC Act
- impacts on one migratory species, Rainbow Bee-eater (*Merops ornatus*).

A commitment was made in the EIS to develop an offset management plan and conservation program for species and communities impacted previously by the existing mine, including approximately 22 ha of Brigalow RE previously cleared.

MCPL propose to maintain a 100m buffer along New Chum Creek as an ecological corridor to protect wildlife including riparian vegetation and fauna species listed under the EPBC Act and NC Act. MCPL has committed to revegetating the 100m buffer corridor each side of New Chum Creek in areas previously cleared by grazing activities.

The EIS did not provide sufficient detail, including practical measures for protecting and enhancing terrestrial ecological values, including rehabilitation and restoration of habitat values and connectivity of fauna habitat.

To resolve this inadequacy and prior to the conduct of the relevant activities MCPL will be required to:

- significantly expand the survey effort, scope and detail to avoid or mitigate the impacts of the MEP on flora and fauna
- develop and implement appropriate management measures to mitigate potential impacts to fauna species affected by the haul and access road crossing, including minimising vegetation clearing, having a spotter catcher present on site prior to any clearing of vegetation, installation of suitable fauna control fencing, fauna underpasses, fauna crossing signage to reduce fauna deaths
- develop species specific management plans and programs, including offsets, for listed species under the EPBC Act and NC Act that are confirmed as present or likely to be present in the MEP area, including the *Cerbera dumicola*, Brigalow Scaly-foot, the Ornamental snake, the Squatter Pigeon (Southern) and the Little Pied Bat
- develop a Rehabilitation Management plan including a Weed and Pest Management Plan by 1 April 2012
- design and construct the two road crossings over New Chum Creek in accordance with Fish Passage in Streams: Fisheries Guidelines for Design of Creek Crossings (FHG 001) in accordance with the *Fisheries Act 1994*.

A commitment was made in the EIS to conduct a BioCondition assessment at the end of mine life to measure the performance of rehabilitation works against the relevant benchmarks.

Refer to section 4.14 of this report for further matters relevant to the EPBC assessment.

4.12.2 Aquatic ecology

The MEP site experiences variable rainfall patterns and is characterised by highly ephemeral waterways. Aquatic ecology field surveys and assessment were undertaken and reported in the EIS. Aquatic surveys found a relatively diverse assemblage of macroinvertebrates and a low abundance and diversity of fish species. The EIS noted that the highly seasonal rainfall, flow velocity and water quality all influence the existing aquatic ecological processes and species abundance and diversity. The EIS concluded that MEP has the potential to negatively impact on aquatic ecosystem communities both directly and indirectly. The EIS noted the impacts would occur through:

- alteration to surface water flows
- generation of poor quality stormwater from mine affected areas and waste rock dumps
- a reduction of the overall catchment area for New Chum and West Creeks
- a reduction of the volume of surface water reporting downstream of the mine
- a reduction in the frequency, magnitude and duration of flow events
- construction of creek crossings
- vegetation clearing and disturbance.

The EIS and EM plan propose a range of mitigation measures to reduce the negative impacts to aquatic values including:

- the diversion of uncontaminated water away from active mining and infrastructure areas
- capture and diversion of runoff from active mine areas to fit-for-purpose water storage facilities
- appropriate erosion and sediment control measures (e.g. silt curtains) to be implemented for disturbed mine areas and exposed soils in unrehabilitated areas near or adjacent to waterways
- establishment of a 100m riparian buffer zone along the bed and banks of New Chum Creek.

The recommended conditions for the protection of aquatic ecosystem values are outlined in Appendix 1.

4.13 Cultural heritage

The EIS has adequately addressed both the Indigenous cultural heritage and non-Indigenous cultural heritage matters raised in the TOR.

4.13.1 Indigenous cultural heritage

MCPL has developed and negotiated a Cultural Heritage Management Agreement with the Barada Barna People Kabalbara Yetimarla (BBKY) People #4 who had the recognised native title claim over the MEP area prior to the Barada Barna claim being registered. The EIS noted that a search of the current native title status of the MEP area ascertained that Barada Barna People (Tribunal Number QC08/11) are the registered native title claimants for the MEP area. MCPL has been in negotiation and discussion on the Indigenous cultural heritage values of the site with the Barada Barna People.

The EIS notes that MCPL has negotiated and agreed with the Traditional Owners to manage and mitigate the impacts of the MEP on areas that contain significant Indigenous cultural heritage values. At the request of the Traditional Owners the location and specific details of the Indigenous cultural heritage surveys, results and management plans are to be kept confidential, this request is acknowledged by the department. Consequently, this EIS assessment report provides no specific details of the findings of the Indigenous cultural heritage field surveys, nor the proposed management measures.

To mitigate the potential impacts of the MEP on Indigenous cultural heritage three areas have been identified for protection:

- New Chum Creek and 100m buffer zone corridor
- Cultural Heritage Protection Zone
- Red Mountain.

The EIS notes that mining activities are to be excluded from those areas, with the exception of the clearing of vegetation for the construction of haul road crossings in the New Chum Creek corridor. The Traditional Owners will be consulted prior to any clearing or construction works being undertaken for the access road and haul road crossings.

Section 87 of the *Aboriginal Cultural Heritage Act 2003* requires that a cultural heritage management plan (CHMP) must be developed and approved under that Act before an environmental authority is issued for the MEP or otherwise that the environmental authority may include conditions to ensure that no disturbance due to mining activities occurs before approval of the CHMP. At the time of writing this report, the CHMP had not been completed and approved.

4.13.2 Non-Indigenous cultural heritage

A Non-Indigenous cultural heritage assessment was undertaken of the MEP site. On that basis the EIS concluded that the earliest European land use practice was sheep grazing which was established in the area in the early 1860's. This was soon replaced by cattle grazing which along with coal mining, are the predominant current land uses in the region. Extensive vegetation clearing occurred in the area between 1950-1990.

The EIS concluded that no sites of non-Indigenous cultural heritage significance had been identified on-site.

4.14 Matters of National Environmental Significance

The MEP was referred to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) and declared a controlled action under the EPBC Act. The controlling provisions were section 18 and 18A (Listed threatened species and communities) as a project that was likely to have significant impacts on listed threatened species and communities. An assessment of the potential impacts on matters of national environmental significance was included in the EIS.

On the basis of fieldwork, the vegetation communities present on-site and database searches, the EIS noted that a number of EPBC Act listed threatened fauna species and migratory species were either found on site or have the potential to occur on-site:

- Rainbow Bee-eater (*Merops ornatus*) - known to occur within the MEP
- Great Egret (*Ardea ibis s. lato*) - known to occur within the MEP
- Cattle Egret (*Ardea ibis*) - known to occur within the MEP
- Fork-tailed Swift (*Apus pacificus*) - likely to occur within the MEP
- White-throated Needletail (*Hirundapus caudacutus*) - likely to occur within the MEP
- Brigalow-dominated and co-dominated vegetation *Acacia harpophylla-Eucalyptus cambageana* and *Acacia harpophylla* and/or *Casuarina cristata* - 2.5 ha known to occur within the MEP
- 22 ha of previously cleared Brigalow RE species and communities
- a grassland community *Dichanthium Astrebla* - 2.3 ha known to occur within the MEP
- the Brigalow Scaly-foot Legless Lizard (*Paradelma orientalis*) - known to occur within the MEP
- the Ornamental Snake (*Denisonia maculate*) - known to occur within the MEP
- the Squatter Pigeon (Southern) (*Geophaps scripta scripta*) - likely to occur within the MEP
- the Little Pied Bat (*Chalinolobus picatus*) - known to occur within the MEP.

Whilst the EIS generally addressed NES matters, DSEWPaC reviewed the EIS materials and has advised that further detailed information will be required to adequately address the potential impacts on identified listed and threatened species and communities. Mitigation measures and offsets were initially developed in the EIS but

incomplete at the time of writing this report. Consequently DSEWPAC has requested specific additional information on appropriate management measures to mitigate potential impacts including:

- details on indirect offsets for the Brigalow Scaly-foot Legless Lizard including, details of any proposed research program(s) that would result in a better understanding of affected species. Any such offsets will be required to address the priority actions identified in the EPBC Recovery Plan, Listing Advice or Conservation Advice for the relevant species
- details on any further proposed indirect offset(s)
- details of the proposed draft offset proposal, including:
 - an improved layout that clearly addressed matters of NES
 - an improved survey effort to provide further details on fauna habitat within the proposed offset area
 - the condition of the existing vegetation
 - clarification of the ecological communities in the proposed offset area
 - further details on the mapped non-assessable vegetation
 - further details on the proposed enhancement and future management of the proposed offset, including management measures to be implemented to actively manage the offset area for a long-term conservation gain
 - details on which portion of the land will be the offset for the MEP given that MCPL propose to use the offset proposal for more than one project
 - details on contingency plans and management activities to be enacted if the establishment of the remnant community is unsuccessful
 - details of the party/parties responsibly for the management of the offset areas and how the offsets will be protected in perpetuity.

At this stage DSEWPac considers that the offsets proposed are not adequate to mitigate the potential impacts of the project on matters of NES and that confirmation of additional offsets or mitigation actions is required before consideration of approval of the project could occur.

4.15 Social issues

The MEP is located in a rural area within the Isaac Regional Council area, the closest towns are Moranbah and Nebo. Historically the surrounding area has been used for cattle grazing. Current neighbouring land uses involve cattle grazing and coal mining. Mine expansion is expected to commence in late 2011 and continue for a period of approximately 17 years. The workforce would increase by 160 persons.

The EIS assessed the potential impacts on the lifestyle, wealth, safety, health and wellbeing of the community surrounding the MEP. Baseline data in the EIS was sourced from desktop studies, statistical and demographic reports and MCPL's community and stakeholder engagement program.

The EIS concluded that property owners living near the MEP would likely be negatively impacted by displacement of land use by the mine, dust, noise, airblast overpressure and ground vibration, traffic lighting and groundwater level impacts from MEP mining operations.

The MEP is likely contribute to the cumulative negative social impacts of mining on the community on a local and regional level. The negative social impacts identified in the EIS included, housing demand and supply, community infrastructure and services and social implications of the MEP and workforce housing and accommodation arrangements. For example, Isaac Regional Council in its submissions on the EIS noted that the long-term success of the coal mining industry is clearly linked to a sustainable vibrant regional community. Council noted that the EIS did not make a clear commitment to the community to diversify the provision of accommodation, which in its view is undermining the social cohesion and resilience of local and regional communities.

Whilst the EIS generally addressed the social impact matters raised in the TOR, a Social Impact Management Plan (SIMP) is required for the MEP by the Department of Employment, Economic Development and Innovation

(DEEDI) under the Queensland Government's Sustainable Resource Communities Policy 2008. The SIMP will provide the framework for ongoing management of social impacts during the operation and decommissioning stages of the MEP.

At the time of writing this report the SIMP has not been developed. MCPL has committed to develop and submit a draft SIMP to DEEDI for review by 1 April 2012.

The EIS commits to monitoring of the potential impacts and to provide information to the community and the regulator on environmental monitoring and mitigation measures for any noise, dust and vibration impacts from the MEP. The recommended conditions for noise, dust and vibration impacts and are outlined in Appendix 1.

4.16 Economy

The EIS adequately addressed the economic impact matters raised in the TOR.

Traditionally the economic base of the region is supported by agricultural activities such as sugar and beef production. More recently the region has seen the development of aquaculture, fruit and vegetable growing and coal mining.

The current land use at the MEP mine site is coal mining and low intensity cattle grazing. While, some of the land could be rehabilitated for a mix of cattle grazing and native wildlife habitat, the expansion of the Millennium Mine will result in the permanent alienation of some land from the pre-mining land use. For example, unsuitable steep slopes of out of pit spoil dumps and the two final voids would remain at the end of the mine operations. The Millennium Pit and Mavis Pit residual voids will cover an area of approximately 65 ha and 166 ha respectively to a maximum depth of approximately 190 m. The EIS estimated that the capacity of grazing land would be reduced by approximately 900 ha, and based on that area the opportunity cost of the lost cattle grazing is estimated at \$28,800 per year or approximately \$600,000 over 20 years (which includes a three year buffer for the vegetation to re-establish). The EIS assessed the value of estimated value of ecosystem services for the remnant vegetation to be cleared for the MEP at \$40,000 per year (\$800,000 over 20 years), the net projected opportunity cost of the MEP is over \$1.2 million over 20 years. The EIS concluded that the MEP would have little impact on ecosystems services and this would be offset by the wealth created by the mine.

The value of impacts on the regional economy were assessed using input-output (I-O) analysis. This approach is based on industry tables that model the structure of an economy by describing inter-industry relationships.

The EIS assessed that there would be a positive economic impact to the local, regional, State and National economies.

At a local level the town of Moranbah would be most affected by the MEP. The EIS reported that the IRC area would receive a direct increase in the demand for employees, local services and supplies, whilst noting that most employees will:

- commute from the regional centre of Mackay to the local area
- reside in temporary accommodation for the duration of their shifts
- have little or no interaction with the local community
- have minimal spending in the local community.

The value of the coal resource to be mined is subject to the exchange rate and coal price fluctuations. The royalty payment to the State was estimated in the EIS as \$42-\$59.5 million per year. The EIS estimated that the MEP would employ an additional 160 additional workers in addition to the 220 existing employees. The total employment related contribution to the local and regional economy was estimated at approximately \$54 million per year over the 17 years of operation of the MEP.

The EIS concluded that the negative impacts would be offset by the positive economic impacts of the MEP and that there would be a net positive economic impact to the local, regional, State and National economies.

4.17 Health and safety

The Health and Safety section of the EIS adequately addressed the matters raised in the TOR, noting that the potential impacts on the workforce are covered by other relevant legislation and are not the subject of approvals under the EP Act.

The EIS committed to modify and implement the existing Health and Safety Management Plan (HSMP) from the current mining operation. The revised MEP HSMP should ensure the all activities that have the potential to impact on occupational health and safety on the mine site are carried out in accordance with all relevant legislation and Australian Standards.

The modelling undertaken for the EIS predicted that the air quality objectives of the EPP(Air) for the protection of health and wellbeing would be met at nearby sensitive receptor locations identified within 15 km from the mine site. The EIS concluded that dust emissions to air from the MEP are unlikely to impact on health in the community.

Queensland Health its submission on the EIS noted the following general areas of concern regarding public health including:

- a health impact assessment
- drinking water supply
- food safety
- waste management
- control of vector breeding sites.

These matters were all appropriately addressed in the EIS.

4.18 Hazard and risk

The EIS conducted a preliminary hazard and risk assessment (PHA) of the potential hazard and risks to people and property associated with the MEP. The EIS presented an acceptable Risk Management Framework and Risk Assessment Methodology and Criteria for the MEP.

The EIS summarised the risk and hazard sources and outlined management measures. The EIS includes a commitment to:

- review and revise the existing Millennium Mine's Emergency Management Plan (EMP) in consultation with the relevant emergency and health services
- provide a detailed evaluation of the hazards associated with the MEP prior to the commencement of the construction and operational phases of the MEP when the mine's detailed design and operational plans are finalised.

The EMP must address the:

- measures to be implemented in an emergency situation
- emergency services required
- communication and emergency responsibilities
- control centre establishment
- training and participation of employees and contractors in regular emergency drills and exercises.

The EIS outlined control strategies for all identified potential hazards and risks for the project to mitigate and manage the risks to acceptable levels.

The EIS satisfactorily addressed the matters related to hazard and risk raised in the TOR.

4.19 Rehabilitation

The EIS reported that all areas of land that will be disturbed by mining activities, other than two residual voids, will be rehabilitated to create a stable landform with the aim of establishing a self-sustaining vegetation cover of native trees, shrubs and grasses, including specific areas suitable for cattle grazing as the post mining land use. However, some proposed post mine landform features will not be suitable for grazing. Grazing will not be possible on disturbed mine areas with limited soil-water availability, low vegetation cover and steep slopes that are erosion prone.

A finalised rehabilitation management plan was not provided as part of the EIS. Relevant commitments provided in the EIS included:

- topsoil management
- best practice revegetation techniques
- seed and tree stock sourcing
- fertilizer management
- maximum slopes set at 33 % (i.e. 3(H):1(V)) gradient slope
- one metre minimum cover of erosion resistant rock mulch and soil placed on external slopes
- drainage management on slopes to manage erosion processes from storm runoff
- spoil dump tops designed to encourage internal ponding which may enhance some habitat values
- revegetation of haul roads and creek crossing.

A finalised rehabilitation management plan (RMP) is required to ensure that the intent set out in the EIS is achieved. The RMP should address the following aspects, at a minimum:

- landform design and acceptance criteria for all end of mine landforms, including residual voids
- detailed progressive rehabilitation methods for all disturbed areas
- water management criteria
- leading practice rehabilitation performance criteria
- revegetation criteria
- rehabilitation monitoring and success criteria
- weed and pest management
- a process to progressively report the rehabilitation management actions undertaken, the outcome of those actions and the mechanisms to be used to identify the need for improved management
- a description of the potential risks to successful management and rehabilitation on site and a description of the contingency measures that would be implemented to mitigate these risks
- details of the parties responsible for reviewing and implementing the RMP.

The RMP should address the rehabilitation of all mine affected areas.

The rehabilitation process should be developed in conjunction with a mine closure management plan. The mine closure management plan should address the decommissioning and rehabilitation of disturbed overburden, mine pits, residual voids, regulated dams and mine infrastructure.

The above commitments to manage and rehabilitate mine affected areas are considered adequate for the project.

The EIS included a commitment to provide a rehabilitation, weed and pest management and mine closure management plans by 1 April 2012.

Recommended conditions relating to rehabilitation are outlined in Appendix 1.

5 Adequacy of the environmental management plan

For the purposes of this report the department expects MCPL to consider the outstanding issues outlined in this report and make the necessary amendments to the EM plan prior to submitting the amended EM plan to the department for final assessment. An amended EM plan will be assessed by the department after the EIS process is completed and would need to be determined to adequately address the content requirements of section 203 of the EP Act, prior to the department finalising the conditions of the draft environmental authority. The conditioning requirements for the draft environmental authority are set out in further detail in Appendix 1 of this report.

The EM plan developed through this EIS process has included input from the department, other state government departments, the commonwealth, local organisations, industry and the public. At this stage the draft EM plan is not complete nor adequate for the purposes of section 203 of the EP Act. Throughout the EIS process, the proponent has been advised of a range of deficiencies in the EM plan, those matters have been progressively resolved to the extent required for the EIS process, however many are now noted as outstanding commitments to be delivered after this EIS process is completed. Those actions will be required prior to the EM plan being assessed, separately to this EIS process, as adequate for the purpose of section 203 of the EP Act. An assessment of the draft EM plan submitted on 18 July 2011 has not been included in this report.

The draft EM plan prepared in the EIS process was incomplete but contained sufficient commitments to future actions to inform the EIS process. Therefore after the EIS process and in conjunction with the relevant recommendations in this report, the EM plan should be amended prior to submission for the purpose of assessment for granting of an EA.

6 Recommendations about the suitability of the project

The EIS process has compiled information about the proposed project, the values of the site and the potential impacts to those values. A range of mitigation measures and those residual impacts unable to be mitigated are summarised in this assessment report. Importantly, one of the principal tools to implement those mitigation measures and environmental commitments is the environmental management plan (EM plan). The EM plan sets out how each matter is to be managed to deliver the acceptable environmental outcome.

This report recommends that the following outstanding matters be addressed prior to the project proceeding:

- development and approval of a cultural heritage management plan prior to excavation, construction or any other activity
- development and submission of a water management plan by 1 November 2011, commitment to be made in revised EM plan
- development and submission of a groundwater management plan by 31 December 2011, commitment to be made in revised EM plan
- development and submission of rehabilitation management plan by 1 April 2012, commitment to be made in revised EM plan
- development and submission of a weed and pest management plan by 1 April 2012, commitment to be made in revised EM plan
- development and submission of a mine closure plan by 1 April 2012, commitment to be made in revised EM plan
- development and submission of a waste management plan by 1 April 2012, commitment to be made in revised EM plan

- development and submission of a social impact management plan by 1 April 2012, commitment to be made in revised EM plan
- development and submission of a final void study by 1 April 2012, commitment to be made in revised EM plan
- development and submission of an environmental offset plan, likely to be required prior to any Commonwealth approval
- development and submission of any proposed indirect offset(s), likely to be required prior to any Commonwealth approval
- development and submission of specific species and ecological communities management plans for species under the EPBC Act, to be provided prior to any interference with the relevant species or communities
- development and submission of a BioCondition assessment at the end of mine of mine life, commitment to be made in revised EM plan
- development and submission of specific species management plans for listed species under the NC Act, to be provided prior to any interference with the relevant species
- development and submission of specific management programs, including an environmental offset, to be provided prior to any interference with the relevant species or communities
- development of agreed rehabilitation monitoring and success criteria for land suitability, land use, landform stability and land contamination, commitment to be made in revised EM plan
- development and submission of a receiving environment monitoring program, commitment to be made in revised EM plan
- development and submission of an air quality management plan, commitment to be made in revised EM plan
- development and submission of a rejects management plan, commitment to be made in revised EM plan
- development and submission of a health and safety management plan, commitment to be made in revised EM plan
- development and submission of an emergency management plan, commitment to be made in revised EM plan
- development and submission of design and construction drawings for the two road crossings over New Chum Creek in accordance with Fish Passage in Streams: Fisheries Guidelines for Design of Creek Crossings, commitment to be made in revised EM plan
- consult with the Traditional Owners prior to any clearing or construction works being undertaken for the access road and haul road crossings, commitment to be made in revised EM plan
- provide a detailed evaluation of the hazards and risks to people and property associated with the MEP prior to the commencement of the construction and operational phases of the project, commitment to be made in revised EM plan.

7 Recommendations for conditions for any approval

7.1 Environmental Protection Act 1994

Throughout this EIS process, including development of the draft EM plan, a range of environmental impacts and mitigation measures have been identified. Where that is the case and where legislation, policy or guidelines dictate, the actions of the project need to be constrained to achieve an acceptable environmental outcome.

For that purpose and as required under section 59 of the EP Act, this report includes at Appendix 1 a set of recommended conditions for approval. The conditions are not consider complete nor finalised and are provided for

consideration in developing final conditions if an environmental authority is granted for the MEP. At that time the administering authority will decide what conditions under section 210 of the EP Act are necessary or desirable.

7.2 Approvals under other legislation

7.2.1 Water Act 2000 and Sustainable Planning Act 2009

As outlined in section 4.2 of this report and discussed within relevant sections of this report, a number of separate water licences and associated development approvals under the *Water Act 2000* and *Sustainable Planning Act 2009* respectively would be required for the MEP. These approvals relate to the construction of the diversion drains in the upper reaches of New Chum Creek, North Creek and West Creek catchments to direct clean water around the site and away from mining areas, water bore drilling and licence requirements, two creek crossings, groundwater inflow to coal mine pit voids, as well as the take of surface water resources.

However, the EIS has provided insufficient detail about the engineering designs, rehabilitation and monitoring for diversion drains, the groundwater bores for the proposed pit dewatering operation, for this EIS assessment report to be able to include recommended conditions for those water licences and development approvals. Conditions for these activities will be decided when the company has lodged water licence and development approval applications subsequent to the EIS process being completed.

7.2.2 Cultural Heritage Act 2003

As outlined in section 4.2 of this report and discussed within section 4.13.1 of this report the *Aboriginal Cultural Heritage Act 2003* (ACH Act) requires the proponent of a project subject to an EIS process to develop a CHMP and have it approved by the relevant Aboriginal party. At the time of writing of this report a CHMP that covers the proposed activities at the MEP has not yet been approved by the chief executive responsible for the ACH Act. Unless the CHMP is approved under the ACH Act before the environmental authority is issued, it may be necessary for the environmental authority to include conditions requiring the approval of the CHMP prior to any disturbance due to mining activities for the MEP.

7.2.3 Transport Infrastructure Act 1994

As outlined in section 3.2 of this report and discussed within section 4.7.1 of this report, a number of licences and permits for works within the state-controlled road network associated with the transport route and intersection upgrades under the *Transport Infrastructure Act 1994* would be necessary for the MEP. Furthermore, excess mass, over-dimensional loads or non-standard vehicle movements on state-controlled roads will require a permit under the *Transport Operations (Road Use Management) Act 1995*.

It is recommended that the proponent continue to liaise with the Network and Planning Unit of DTMR to discuss and resolve the outstanding issues. DTMR has advised that a road-use impact assessment including road-use and traffic management plans along with any necessary permits for any excess mass or over-dimensional loads associated with the project will be required prior to the commencement of any MEP construction works.

In order to address outstanding issues, MCPL is required to prepare prior to the commencement of any construction works on site undertake the following work:

- a road-use management plan (RMP) for all use of state-controlled and other roads for each phase of the project. The RMP will detail traffic volumes, proposed transport routes, required road infrastructure maintenance and/or upgrades to mitigate road impacts, any necessary conditions about access/connection to public roads, transport scheduling, dust control and road safety. The RMP is to include arrangements to ensure compliance with the management of workforce movements associated with the project. DTMR must approve the plan prior to implementation
- resolve intersection lighting works and any necessary road maintenance and upgrades identified in the finalised RMP to ameliorate any adverse impacts of the road use by the project on the assets of DTMR to:
 - Peak Downs Highway/Millennium-Poitrel Mine Access Road intersection
 - Provide all necessary access to the State-controlled road, to a standard agreed upon by DTMR

- prior to undertaking any works, obtain the relevant licenses and permits under the *Transport Infrastructure Act 1994* for works within the State-controlled road corridor
- a traffic management plan (TMP) detailing drawings and traffic management plans for all construction and other activities in the State-controlled road corridor
- present detailed drawings and TMP for review by DTMR, the Queensland Police Service, Isaac Regional Council, and take account of the reviews
- obtain the necessary permits for any excess mass or over-dimensional loads associated with the project as required under the *Transport Operations (Road Use Management) Act 1995*.

7.2.4 Fisheries Act 1994

DEEDI submission on the EIS noted that the two road crossings over New Chum Creek are defined as waterway barrier works under the *Fisheries Act 1994* and should be designed and constructed in accordance with Fish Passage in Streams: Fisheries Guidelines for Design of Creek Crossings (FHG 001).

7.2.5 Nature Conservation Act

A clearing application must be made for plants that are listed as Endangered, Vulnerable or Near Threatened, unless otherwise authorised under the Protected plant exemption under section 41(1)(a)(ii) of the Nature Conservation (Protected Plants) Conservation Plan 2000.

Any offsets proposal, including any species management plans should be developed generally in accordance with the Queensland Government's Environmental Offset Policy 2008 and offset requirements under the EPBC Act for loss of ecological values.

7.3 External submissions

7.3.1 Moorvale West Coal Pty Ltd

An external submission by Moorvale West Coal Pty Ltd (MCL) raised issues with potential groundwater impacts on their proposed adjacent underground mining operation. Those issues are not yet resolved to the satisfaction of MCL.

MCL are proposing an underground bord and pillar mining operation which would be located on tenements adjoining the east of the Mavis Pit final void on MDL 136. MCL raised a number of issues that are potential unresolved impacts of the MEP, including:

- potential groundwater ingress into the adjacent coal resource areas, vibration from blasting and surface water issues
- potential sterilisation of the coal resource located on MCL tenements due to safety and engineering risk factors associated with the adjacent water filled void
- any potential MCL mine access options that that may arise from MCPL's development of final rehabilitation plan and decommissioning acceptance criteria for the MEP.

Future consultation between the parties around these issues is recommended.

8 Suitability of the project

The department has considered the submitted EIS, all submissions and the standard criteria. The project is assessed here as being suitable on the basis of the EM plan being completed and the subsequent environmental authority, if granted, being conditioned suitably to implement the specific environmental protection commitments set out in the EIS and summarised here in this EIS assessment report. Consequently, the project is considered suitable to proceed to the next stage of the approval process noting that the recommendations of this EIS assessment report should be fully implemented.

Approved by

Stuart Cameron

Signature

Stuart Cameron

Director, Environmental Impact Assessments

Department of Environment and Resource Management

15 August 2011

Date

Enquiries: EIS Coordinator

Ph. (07) 3330 5600

Fax. (07) 3330 5754