Millennium Expansion Project

Environmental Impact Statement

EXECUTIVE SUMMARY

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Millennium Expansion Project (MEP) is the proposed expansion of the existing Millennium Mine, an open-cut coal mine in the Bowen Basin coal field in Central Queensland. Currently the mine production is limited to a maximum of 2 Million tonnes per annum (Mtpa) and the MEP is seeking to increase production up to 5.5 Mtpa. It is proposed to use excavator and truck fleets to produce coking and pulverised coal injection (PCI) coals for the export market over a mine life of approximately 16 years.

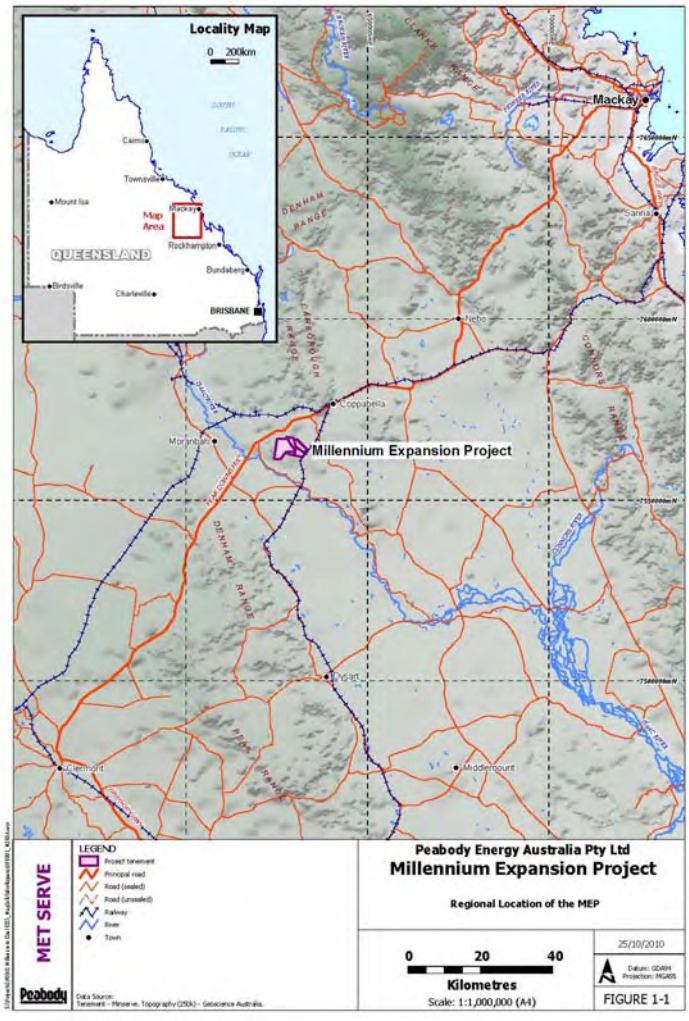
1.2 PROJECT PROPONENT

Millennium Coal Pty Limited (MCPL) is a wholly owned subsidiary of Peabody Energy Australia Pty Limited (Peabody). MCPL is responsible for operating the Millennium Coal Mine and is also the Proponent for the proposed MEP.

1.3 LOCATION

The MEP is located approximately 140 kilometres (km) southwest of the city of Mackay, between the towns of Moranbah, 22 km to the west and Coppabella, 16 km to the northeast as shown in **Figure 1-1** below.

Figure 1-1 Regional Location of the MEP



1.3.1 Local Context

The existing Millennium Mine, on Mining Leases (ML) 70313 and ML 70344, is situated within the Isaac Regional Council (IRC) area. The site is accessed via the Millennium-Poitrel access road (mine access road), which intersects the Peak Downs Highway, approximately 22 km east of the Moranbah township. The mine access road is a shared road that also services the Red Mountain Joint Venture (RMJV) - Coal Handling and Preparation Plant (CHPP) and the Poitrel and Daunia Mines, which adjoin the southern boundary of the Millennium Mine.

The CHPP is jointly owned by Peabody and BHP Mitsui Coal (BMC) and is located on ML 70312. Other mines in the vicinity include Carborough Downs underground mine to the north, Isaac Plains to the north-west and Peak Downs Mine to the south-west.

1.4 PROJECT DESCRIPTION

The MEP footprint covers an area of approximately 966 hectares (ha) over three leases namely, ML 70313 (granted and part of the existing Millennium Mine), Mining Lease Application (MLA) 70401 and Mineral Development Licence (MDL) 136. ML 70313, MLA 70401 and MDL 136 together cover an area of 2,977 ha.

In summary the MEP comprises the following components:

- a coal mine, including:
  - up to two open pits operating at any one time, up to 190 metres (m) deep, producing approximately 5.5 Mtpa of run-of-mine (ROM) coal to produce up to 3.6 Mtpa of product coal for the export market;
  - waste rock emplacements external to the pit, including initial ex-pit box-cut dumps, which will subsequently combine with the in-pit dumps;
  - progressive backfilling of the pits with overburden (in-pit waste rock emplacements) once there is sufficient space for in-pit dumping;
  - mine haul roads which connect the pits to the RMJV CHPP; and
  - a mine water management system including clean water diversion, integrated mine area runoff collection, and including the ability to convey water to various water storages to ensure maximum reuse of Project site water and minimise the likelihood of water discharges from the site;
- coal tailings and rejects from processing the MEP coal in the RMJV CHPP returned by truck to the MEP's waste rock emplacements; and
- construction of a haul road across New Chum Creek.

The MEP will utilise the existing Millennium Mine infrastructure, such as power supply, explosives storage, sewage and wastewater processes and the site offices/industrial area.

The MEP will utilise the existing RMJV CHPP on ML 70312. ML 70312 has an existing Environmental Authority (EA) MIN 100846708 to process coal and manage coal washery wastes from the Millennium Mine. It is not the intent of the MEP to increase production beyond the limits allowed for in the current EA. As the CHPP is owned by the RMJV, any major modification to the CHPP will be the subject of a separate approval process.

The product coal will be railed approximately 150 km to the Dalrymple Bay coal terminals for distribution to the international market.

1.5 ENVIRONMENTAL IMPACT STATEMENT

This Environmental Impact Statement (EIS) has been prepared in accordance with the provisions of the *Environmental Protection Act 1994* as they relate to the requirements of an EIS. The principal objective of the EIS is to identify and assess the environmental impacts that could occur as a result of the construction and operation of the MEP. Impacts have been considered for all relevant aspects of the natural, social and economic environments, and where appropriate, controls and safeguards are proposed to mitigate potential impacts. The content of the EIS addresses issues contained in the Terms of Reference (TOR) issued by the Queensland Department of Environment Resource Management (DERM) (**Appendix A – Final Terms of Reference**).

The MEP has been determined by the Commonwealth Department of Water, Environment, Heritage and the Arts (DEWHA) as a 'controlled action' and under the existing bilateral agreement between the Commonwealth and Queensland Governments, the EIS will be assessed by both DERM and DEWHA. DEWHA has been replaced by the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC).

1.6 PROJECT NEEDS AND BENEFITS

The global demand for coal is increasing every year. Australia has a large resource of high-quality coal, however the Bowen Basin in Central Queensland contains virtually all of the state's hard coking coal resource. These high quality, low sulphur coals are attractive to overseas buyers conscious of minimising the environmental impact of their coal usage. The MEP seeks to further develop a known high quality coal resource and is strategically placed to service the expanding demands of Asia and the wider international metallurgical coal sectors. As an expansion project, the MEP would extend the life of the mine and largely utilise existing mining, rail and port infrastructure and services - thereby minimising associated impacts - to provide an excellent opportunity for efficient resource recovery and export.

The socio-economic benefits associated with the MEP are considerable and are summarised as:

- maintaining the existing 220 employees for an additional 12 years beyond currently expected mine life at the Millennium Mine;
- additional long-term employment opportunities for approximately 160 people directly and over 627 people indirectly during the mine operations phase;
- the expected employee wages and salaries of up to $38 million per annum into the local and regional economies;
- the expected wages flow-on effect to the regional economy of around $180 million per year;
- export income of between $525 - $700 million per annum;
- significant state and federal government taxes and royalties;
- the economic opportunity of developing a coal resource that is viable and in demand; and
- local and regional community employment opportunities.

1.7 CONSEQUENCES OF NOT PROCEEDING

The consequences of the MEP not proceeding would be that a major coal resource would remain undeveloped, the social and environmental impacts as a result of the planned expansion outlined in this EIS would not eventuate and the socio-economic benefits associated with the development of the MEP would not be realised.

1.8 PROJECT ALTERNATIVES

As a mining project, the positional requirements of the MEP are governed by the quality and location of the targeted coal resource within the exploration and mining tenements controlled by Peabody. From Peabody's perspective, as the project proponent and with regard to the proximity of the proposed MEP to existing infrastructure and operations already managed by Peabody, there is limited scope for an alternative location for the MEP.

However, during the planning process, a number of project alternatives and options were considered by Peabody, including the development of alternative coal resources within Queensland. The following alternatives and options were considered:

- as part of both good business practice and corporate responsibility, Peabody regularly reviewed the MEP feasibility and EIS findings in comparison to its other available development resources to determine the social, economic and environmental risks and opportunity costs associated with the MEP. As part of their triple bottom line approach, if any of these indicators had been significantly negative, the MEP would not have proceeded;
- a range of mining methodologies to recover the resource were investigated, including improvements in current methods for energy consumption and efficiencies;
- mining schedules were regularly reviewed and modified to enable sustainable production in a controlled manner and as required to meet changing markets;
- alteration of mining plans to limit land disturbance, reduce final void size and maximise resource recovery;
- rejects and tailings disposal were specifically targeted for review and investigation to ensure maximum recovery of water resources and long term, stable landforms;
- minimising the raw water supply required for operations was achieved through improved water storages and systems to capture and use mine impacted water;
- the ability for the alternatives to reduce energy usage and improve efficiencies in line with legislation requirements and leading practice;
- accommodation options were closely reviewed in response to local government concerns and acknowledged accommodation shortages in the region;
- alternative methods to transport the operations workforce were studied; and
- operational raw water supply pipeline routes were investigated.

The selection of the proposed development option for each component of the MEP was made taking into account leading industry practices for operational activities, energy efficiency opportunities and regulatory, environmental, social and economic assessment criteria.

The proposed MEP, in the context of the existing Peabody owned and managed infrastructure and operations, provides the best opportunity for efficient resource recovery.

1.9 PROJECT SCHEDULE

The expansion of Millennium Mine is dependent on a successful approvals process. Approval for the MEP is expected to occur in the third quarter of 2011, with the ramp up in production commencing in late 2011. Full production from the MEP will be reached by 2015 (5.5 Mtpa), with mine closure predicted in 2027.

1.10 ENVIRONMENTAL VALUES AND IMPACT MANAGEMENT

1.10.1 Climate

The MEP area has a warm climate with mean maximum temperatures ranging from 23.6°C in July to 34.0°C in December. Mean minimum temperatures range from 9.8°C in July to 21.9°C in January. Heat wave conditions can be expected between October and March and frosts between May and August.

The region tends to have winds of low velocity (less than 10 km/hr) with the prevailing wind direction predominantly from the north and northeast during spring and summer and from the southeast during autumn and winter. The average annual rainfall is 592.4 mm, of which the majority falls in the warmer months of the year (November-February).

1.10.2 Land

1.10.2.1 Land Use

Land within the MEP area has historically been used for beef cattle grazing, although the last 20 years has also seen significant coal exploration and mining undertaken in the surrounding region. The majority of the MEP has been cleared for improved pasture, with Buffel Grass well established in most soil units.

There is no evidence of any cropping in the area, other than possibly limited areas of forage.

1.10.2.2 Soils and Land Suitability

A soil survey and land suitability assessment was undertaken for the MEP in 2009, building upon information from previous soil studies in 2004 and 2006. A total of 10 soil types have been described for the MEP. Overall, the soils of the MEP are either; uniform thin duplex Brigalow clays with quite coarse structured subsoils; or sandy duplex eucalypt plains. Some notable exceptions include localised areas of reddish brown sandy clays on sandstone and alluvial clay soils in the central portion of the MEP area associated with New Chum Creek.

1.10.2.3 Geology and Coal Resource

Regionally the MEP is within the western-central Bowen Basin, on the western margins of the Taroom Trough within a heavily faulted and folded Permian subcrop. Locally the geology is complicated by the effects of multiple faults associated with the Jellinbah Fault system that extends some hundreds of kilometres through the middle of the Bowen Basin.

The MEP is targeting three mineable seams of the Rangal Coal Measures. From the top of the coal formation these are the:

- Leichhardt Seam – On average 5.0 m thick; e.g. Mavis (5.0 - 5.3 m); Millennium Pit (5.0 m).
- Millennium Seam – Located 10 m-15 m below the Leichhardt Seam and on average is 0.5 m thick. Exploration results indicate that this seam is variable across the deposit;
- Vermont Seam – Located between 15-20 m below the Millennium Seam
  - Vermont Upper 1 Seam – is on average 1.5 m thick;
  - Vermont Upper 2 Seam - Located approximately 0.5 to 1.0 m below Vermont Upper 1 Seam and an average thickness of 1.0 m;
  - Vermont Lower Seam - The lowermost targeted seam, with an average thickness of 1.5 m. Vermont Upper 2 and Vermont Lower Seam are observed to be separated by the Yarrabee Tuff that has an average thickness of 0.5-1.0 m.

Analytical results obtained from the exploration programs show that the MEP coal is a medium volatile, bituminous coal with low raw ash, low sulphur and low phosphorus by Australian standards. The resource has the potential to produce two products, a premium quality, hard coking coal that is derived from a blend of the Leichhardt, Millennium and the Vermont seams and a PCI product.

1.10.2.4 Visual Amenity

A baseline assessment of scenic values was undertaken against which the proposed development or changes to the current land use were evaluated. The magnitude of impact or degree of change as a consequence of the proposed activities within the MEP is expected to be low to moderate due to the presence of limited vantage points which provide views of the MEP infrastructure.

The magnitude of visual impact following decommissioning is regarded as low due to the creation of a final vegetated landform that will resemble the existing undulating landscape. This will have a beneficial environmental outcome due to the re-establishment of native vegetation in an area that is currently sparsely vegetated.

The main indirect visual impact will be lighting from the proposed mine infrastructure, particularly in the vicinity of the active out-of-pit waste rock emplacements. Lighting impacts will be mitigated by following recommendations in accordance with the *AS4282:1997 Control of the obtrusive effects of outdoor lighting*.

1.10.3 Transport

The MEP will utilise all of the existing transport routes currently in use for the Millennium Mine. No existing transport routes or infrastructure will require alteration or upgrade and no new transport routes or infrastructure will be required as a result of the MEP.

The transport of mining equipment and personnel working at the MEP will be predominantly along the Peak Downs Highway. Road, intersection and pavement impacts have all been assessed in accordance with the *Guidelines for Assessment of Road Impacts of Development* (Department of Transport and Main Roads, 2006a). Impacts on the Peak Downs Highway and Local Government controlled roads as a result of the MEP are all well below trigger guidelines and show that no mitigation measures are required.

Product coal is transported to the Dalrymple Bay Coal Terminal via the Goonyella rail line. As a result of the MEP the incremental increase to the rail and port usage is predicted to be below 2%. Given there is only minor incremental change to the existing transport routes resulting from the MEP, no significant issues related to transport have been identified.

1.10.4 Waste

Peabody is committed to minimising the impact of waste on the environment and the community. Cleaner production, pollution prevention and waste minimisation will all be important components of the overall waste management strategy.

The MEP will utilise the existing waste management system in place at the Millennium Mine which has been approved by DERM and complies with all relevant legislation and existing EA conditions. The MEP will not introduce any new wastes into the waste management system, but will contribute to and potentially increase the volume of the waste types that have already been identified.

1.10.4.1 Mine Wastes

Mine wastes includes overburden, interburden and coal rejects materials. Analysis of overburden and interburden has shown this material to be relatively benign with no limitation to use in final landform development and revegetation. The overburden and interburden rocks were found to be generally not acid forming material and are therefore not expected to pose a risk of acid mine drainage.

ML 70312 currently has approvals for processing of waste and disposal from the CHPP. Current approved processes of waste disposal from the CHPP will be maintained through the MEP including:

- coarse rejects generated from the CHPP will be strategically encapsulated within waste rock emplacements; and
- fine rejects will be flocculated and settled in existing tailings sumps, then trucked to purpose built cells. The tailings will be dewatered and combined with coarse rejects within waste rock emplacements.

1.10.4.2 Regulated Wastes

All regulated wastes will be segregated as required and stored in accordance with *Australian Standard 1940*: *The storage and handling of flammable and combustible liquids* (*AS 1940*). Wastes will be collected from site, transported by licenced transport companies for disposal at a licenced waste treatment facility. The exception to this management approach is tyres that are stored in appropriate facilities on-site before in-pit burial in accordance with DERM guidelines.

The relatively minor volume of regulated waste material from the MEP will not negatively impact on the current operations or capacity of existing regulated waste management facilities or providers.

1.10.4.3 Recyclable Wastes

There are few waste recycling facilities available for the MEP, however, basic recyclables such as paper, cardboard and aluminium will be segregated and separately treated at the Moranbah landfill.

Given the relatively small increase in the volume of recyclable materials expected from the MEP, no negative impact on the current operations or capacity of recycling at Moranbah landfill is predicted.

1.10.4.4 General Wastes

General office and operational wastes will be disposed of to the Moranbah landfill. The Moranbah landfill currently receives waste from surrounding mining operations and the community of Moranbah and was upgraded in 2008 to improve operations and also extend the life of the facility. Waste disposal facilities and options beyond this time will be negotiated with the relevant local authority.

1.10.5 Water Resources

1.10.5.1 Surface Water

The MEP is located in the Isaac River catchment which flows into the Fitzroy River Basin via the Mackenzie River. New Chum Creek, North Creek and West Creek are the waterways within the MEP area, all of which flow directly into the Isaac River.

The overarching operational water management strategy for the MEP is to:

- minimise the amount of surface runoff impacted by mining operations by diverting clean water flows around the mining operations;
- minimise the amount of raw water to be imported to site by maximising the recycling of stored water resources within the mine site;
- minimise, or prevent, the need for mine water to be discharged from site;
- maintain the 100 m buffer area around New Chum Creek;
- minimise impacts to water quality and quantity on existing downstream water users; and,
- ensure adequate protection of internal water management infrastructure and external surface water values during flood events.

Peabody has developed a conceptual Mine Water Management System (MWMS) based upon the existing Millennium Mine's Environmental Authority conditions and regulatory requirements, the current operational Water Management Plan, the MEP surface water technical report (WRM 2010) and surface water management modelling results and the proposed mine plan for the MEP.

The MWMS includes:

- a site water balance;
- modelling and management of flood impacts to prevent uncontrolled discharges;
- modelling of final void water balances and appropriate flood protection requirements;
- conceptual design of water management infrastructure, including clean and dirty water drains, sediment ponds and process water dams; and,
- a proposed surface water monitoring program.

Modelling for the MWMS shows the existing and proposed mine water storages have sufficient capacity to contain the predicted increase in surface water runoff and in-pit water make; and that there is sufficient water supply in the existing Burdekin Weir allocation and the collection and recycling of mine impacted water to meet the increased water requirements for increased production rates.

The MEP will install flood management protection in the form of rock mulching and levee banks to ensure pits and waste rock emplacements will be protected from a 1:2000 year ARI flood event during operations, and that final voids will be protected at the end of mine life from a Probable Maximum Flood event.

1.10.5.2 Groundwater

Groundwater modelling indicates that dewatering associated with mining operations from the MEP and neighbouring mines will create an amalgamated drawdown cone in the Rangal Coal Measures to the north, east and west of the MEP. Dewatering during mining will reduce water levels in a limited drawdown zone, but will have no impact on water quality within the surrounding aquifer.

The cumulative impacts from combined mining operations in the region may potentially have a detrimental effect on two existing bores identified as Bore 12 and Bore 13040284. Should a detrimental impact on landholder groundwater supplies be detected, and shown to be related to the MEP operations, Peabody will seek to reach mutually agreeable arrangements with affected neighbouring groundwater users for the provision of alternate water supplies as required.

1.10.6 Air

1.10.6.1 Dust

Modelling indicates the main dust sources comprise the in-pit crusher, excavator, unpaved roads, conveying and stockpiling ROM coal, placing and spreading overburden, loading trucks and loading trains.

Dust deposition levels are predicted to be within 10 % of ambient levels within 5 km of the mine and almost undetectable at greater than 10 km from the mine. It is not anticipated that this development will adversely impact on the air shed and, as a consequence, affect other developments or competing uses.

1.10.6.2 Greenhouse Gases

Peabody is committed to reducing its Greenhouse Gas (GHG) emissions and is an active contributor to research programs to develop clean coal technologies, including supporting the Coal 21 program, a whole of coal industry funding approach to support GHG abatement.

Based on the regulated guidelines and standard assumptions contained within them, the projected Scope 1 greenhouse gas emissions over the life of the MEP have been estimated at 3.6 Mt of CO_2 equivalent.

Specific GHG abatement measures will include:

- commitments to the abatement of GHG emissions from the MEP with details of the intended objectives, measures and performance standards to avoid, minimise and control emissions;
- commitments to energy management, including undertaking periodic energy audits with a view to progressively improving energy efficiency;
- a process for regular review of new technologies to identify opportunities to reduce emissions and use energy efficiently;
- any voluntary initiatives such as projects undertaken as a component of the national Energy Efficiency Opportunities program, or research into reducing the lifecycle, embodied energy and carbon intensity of the MEP's processes or products;
- opportunities for offsetting GHG emissions, including, if appropriate, carbon sequestration and renewable energy uses; and,
- commitment to monitor, audit and report on greenhouse emissions from all relevant activities and the success of offset measures.

1.10.7 Noise and Vibration

1.10.7.1 Noise

The modelled noise levels from the MEP readily comply with DERM acoustic quality objectives during the day, evening and night at all noise sensitive receptors. This indicates that the health and well-being of all residents living near the MEP are unlikely to be adversely affected. Modelled noise levels from the MEP are predicted to maintain a suitable acoustic environment for individuals to sleep, study or learn,

be involved in recreation, including relaxation and conversation and preserve the qualities of the acoustic environment that are conducive to protecting the amenity of the community. Given the lack of significant habitat or species immediately surrounding the MEP, there will be negligible noise impacts on terrestrial animals and avifauna, including migratory species.

The predicted noise levels are below the background creep noise goal. It is therefore expected that the predicted noise levels from the MEP will not intrude into the receiving environment.

The low frequency noise level predictions at the residences readily comply with DERM low frequency noise level limit.

1.10.7.2 Vibration

Modelling of blasting contours for a Maximum Instantaneous Charge (MIC) of 500 kg – estimated to be the likely maximum blast required for the MEP - for blast over pressure and vibrations calculated the blast overpressure to be 90 dB Lin peak at Moorvale and Annandale Homesteads, well below DERM guideline of a 115 dB Lin peak.

Blasting has been ongoing at the existing Millennium Mine since commencement in 2005, with no concerns or complaints being raised in this time. There is considerable information on the existing blasting procedures that will be transferred to the MEP, to ensure the blasting noise and vibration goals are readily met, without compromising production.

Blasting contour vibration levels are expected to be well below the goal levels at all sensitive receptors for a MIC of 500 kg.

1.10.8 Nature Conservation

1.10.8.1 Flora

Clearing of vegetation and habitat is the main impact on flora and fauna associated with the proposed development. Approximately 66 ha of remnant vegetation is likely to be cleared for the MEP. This includes the loss of 2.9 ha of Brigalow-dominated or co-dominated vegetation listed as Endangered under the *Vegetation Management Act* and the *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act).*

A 2.3 ha area of Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin, listed under the *EPBC Act* is proposed to be disturbed by the proposed MEP, however this regional ecosystem does not meet the habitat quality and structural requirements for constituting this a threatened ecological community under DEWHA (2008) listing advice.

1.10.8.2 Fauna

The vegetation proposed for clearing for the MEP does not constitute any significant fauna habitat as it is extremely fragmented and of poor quality. In addition, the majority of vertebrate species and communities that were recorded in these habitats are all common within the region. The loss of these areas is therefore likely to have only a minor localised impact within the MEP itself, which would be overcome by Peabody's planned offsets package.

In addition to potential offset measures, the creation of native bushland habitats through rehabilitation measures within the MEP after mining would contribute to the mitigation of impacts on fauna.

1.10.8.3 Aquatic

Aquatic macrophytes were largely absent from the site at the time of sampling, which is not uncommon for ephemeral streams during dry periods or due to scouring following high flow periods. Macrophyte taxa recorded at the neighbouring Daunia Coal Mine (BMA, 2008), are likely to be representative of the species that may colonise the Millennium waterways when conditions permit. No species of conservation significance were recorded at that site.

Aquatic faunal assemblages on the MEP are in relatively good condition by comparison to similar ephemeral systems, although they are dominated by hardy taxa that tolerate and readily adapt to a wide variety of environmental conditions. No aquatic fauna species of conservation significance were identified at the MEP.

It is anticipated that the MEP may result in a reduction in the overall catchment area for New Chum and West Creeks, however, as the taxa recorded from the MEP tend to be more tolerant than those from more permanent water bodies, particularly with respect to hydrology and conductivity, it is unlikely that the MEP will have a discernable impact on fish or macrophyte species, either locally or regionally.

1.10.8.4 Biodiversity Offsets

There are several potential offsets options that have been identified and meet the statutory requirements for the proposed clearing of Brigalow communities on the MEP. These options are located on nearby Peabody landholdings and are currently being finalised. Peabody is working with Ecofund to develop an appropriate offsets package and commits that no areas of land requiring offsets under either State or Commonwealth legislation will be impacted until the Peabody Offsets Program has been finalised and approved by the appropriate government departments. The final Offsets Program will ensure that the identified offsets are not cleared, and are managed to maintain and enhance biodiversity values.

1.10.9 Cultural Heritage

1.10.9.1 Indigenous

Peabody commits, as far as is reasonably practicable, to avoid disturbance to Indigenous and non-Indigenous cultural heritage, and will minimise disturbance in any circumstances where avoidance is not reasonably possible. Any disturbance will only be conducted where cultural clearance from the Traditional Owners has been provided.

A Cultural Heritage Management Plan (CHMP) has been negotiated with the recognised Traditional Owners. Indigenous cultural heritage management for the MEP will be undertaken in accordance with the CHMP.

1.10.9.2 Non-Indigenous

Based on the literature review and site survey undertaken, no known non-Indigenous cultural heritage items or places were identified or are expected to be impacted as a result of the MEP.

As there were no sites of non-Indigenous cultural heritage significance identified, general mitigation recommendations to manage cultural heritage sites located within the MEP will be applied. Employees, contractors and sub-contractors will undergo an induction informing them of their responsibilities should they find any unusual or old item that has the potential to have cultural heritage value. Their responsibilities will include reporting any finds and ceasing operations in the area until the DERM is notified and a suitably qualified archaeologist can assess the cultural heritage significance of the item.

Should any such site or place be identified it will be managed in accordance with the applicable legislation.

1.10.10 Social

In isolation, the MEP is unlikely to have a significant impact on the social wellbeing of local and regional communities by creating new issues or significantly compounding existing issues. During consultation activities, stakeholders were generally neutral or supportive of the MEP.

Peabody have developed a draft Social Impact Management Plan (SIMP) in line with guidelines available at the time of EIS preparation. This SIMP will be incorporated into the ongoing management of the MEP.

Social monitoring is proposed to be undertaken as part of the ongoing Community Reference Group meeting programs. In addition, current mitigation and monitoring programs for the existing Millennium Coal Mine will be extended to cover the MEP. Comments raised throughout the engagement and consultation process focused on impacts during the operational phase of the MEP. The most commonly noted issues were impacts to the availability and affordability of housing, employment opportunities, potential skill shortages and increased number of non-resident population. Other less frequent issues included traffic impacts, dust and the economic viability of the community.

As an expansion project, rather than a greenfield mining approval, the MEP offers increased scope for a net benefit to the local, regional, State and National economies, without the significant social or environmental costs associated with establishing a completely new mining operation.

The operation of the MEP is not expected to significantly impact on the lifestyle, amenity or community cohesion of local or regional communities.

1.10.11 Health and Safety

Peabody is committed to the health and safety of all mine personnel, contractors and visitors to the site.

A Health and Safety Management Plan (HSMP) has been developed to manage the occupational health and safety risks associated with the activities at the Millennium Mine and this plan will apply at the MEP, with specific areas modified and implemented where required.

The HSMP has been established to ensure all activities that have an impact on occupational health and safety are carried out in a manner that complies, as a minimum, with:

- all relevant legislation;
- relevant advisory standards and codes of practice; and
- Peabody standards.

The objectives of the HSMP are to:

- to comply with relevant Health and Safety legislation;
- provide information relating to the management of risk;
- to prevent unauthorised acts that have the potential to impact on the health and safety of any person as a result of the MEP;
- provide detailed management plans for controlling the health and safety aspects of mining activities; and

- provide a framework for monitoring, reporting and continually improving safety performance.

1.10.12 Economics

The MEP will have a positive economic impact to the local, regional, State and National economies. At the local level and within the Isaac region, there will be a direct increase in demand for employees, local services and supplies.

Demand from the mine site for employees and services will also spill over into the wider Mackay-Whitsunday regional economy, along with increased demand for small and medium sized businesses supplying the mining industry.

On a state level there will be substantial increases in mining royalties, rail freight charges, port handling charges and demand for medium and large sized businesses supplying products and services to the mining industry.

On a national level, the increased coal production will lead to higher coal exports for Australia, having a positive impact on the national trade balance.

A summary of the major economic benefits of the proposed MEP is provided below:

- at a maximum of 5.5 Mtpa ROM coal, the mine would generate direct employment income of around $38 million per annum, and total expenditure of around $225 million per annum;
- additional coal export revenue for the Federal Government balance of payment figures would be in the order of $525 – 700 million;
- State Government revenue flowing from the MEP would be an estimated $95.5 million per annum including royalties, port charges and applicable taxes;
- revenue from rail freight and port charges are estimated at $34 million and $1.2 million per annum respectively; and
- using an income multiplier of 1.33 (Aurecon, 2010) (refer to **Appendix F12 Economics** for further information), the flow-on effect to the regional economy would be approximately $27 million per annum, yielding a total MEP related employee income stream of approximately $50.5 million per annum.

1.10.13 Hazard and Risk

A Preliminary Hazard Analysis (PHA) has been undertaken for the MEP in accordance with *AS/NZS 4360:2004 Risk Management*. The assessment outlines the potential hazards and risks to people and property associated with the MEP. It also provides controls by which the potential risks will be reduced to acceptable levels. All identified hazards and risks on the MEP site are able to be adequately controlled.

Peabody acknowledge that the process of risk management for an operational project is dynamic, requiring ongoing monitoring of the tasks, controls and human elements, to ensure that changes in the work or work environment trigger a timely review of the adequacy of the controls. Within the MEP, an integrated approach to risk management of the operations will be adopted to ensure workplace hazards and risks are identified, assessed, controlled and reviewed regularly and as required, including for unusual or emergency situations.

1.10.14 Community Consultation

During the community consultation for the EIS, a number of stakeholders that could be affected or indicated interest in the MEP were identified and broadly categorised into the following groups:

- Local, State and Federal Government;

- State Corporations;
- Local Interest Groups;
- Native Title Claimants;
- Neighbouring and Surrounding Landholders;
- Community Service Providers; and,
- Community.

A range of consultation tools and activities were utilised to aid communication between Peabody and stakeholders and the community. Use of these tools and activities reflected the different needs of each group or person, and their likely interest in the MEP or its impact on them. These tools and activities included:

- newsletters;
- community information days;
- community surveys and feedback forms;
- face to face meetings with identified stakeholders;
- maintenance of a community consultation database; and
- meetings with referral agencies.

A number of issues were raised throughout the consultation program. The issues have been broadly categorised into the following groups:

- socio-economic - the impact of the MEP on housing and the provision of local services;
- human resources - the ability of the MEP to recruit employees and potential employment impacts on local business;
- cultural heritage - developing a CHMP for the MEP and employment opportunities for indigenous people;
- water supply - concern over securing a water supply for increased operations and increased employees in the region;
- traffic on Peak Downs Highway - the additional traffic generated by the MEP on the Peak Downs Highway and potential safety issues;
- water management - the management of mine water to ensure no impact to water quality or downstream water users, including both flow volumes and water quality; and
- air quality - confirmation that there would be no increase in dust levels at Moranbah as a result of the MEP.

1.10.15 Environmental Management

A draft Environmental Management Plan (EM Plan) has been produced which provides measures to mitigate any adverse effects on the environment that were identified as required within the EIS. The EM Plan also specifies measures for continual improvement, training, monitoring, auditing and reporting.