



BHP Billiton Mitsubishi Alliance

Daunia Coal Mine Project

Environmental Impact Statement Supplementary Report April 2009



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Appendix F	Tailings and Rejects Management Plan
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Appendix K	BMA Contractor EMP
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Appendix P	Community Fact Sheets
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1 Introduction

1.1 Purpose of Supplementary Report

This Supplementary Report responds to issues raised in submissions from Advisory Agencies and the public on the Environmental Impact Statement (EIS) for the Daunia Coal Mine Project. BMA is the proponent of the Project.

The EIS was placed on public display on the 29 November 2008 and was available for comment until 2 February 2009. A total of 18 submissions were received from Advisory Agencies and other organisations.

The submissions were reviewed and this Supplementary Report was prepared in response. This Supplementary Report also describes any amendments to the Project description which have been made since the EIS was released.

1.2 Structure of the Supplementary Report

- Section 1 lists the Advisory Agencies making submissions and key issues raised.
- Section 2 provides a description of any amendments to the project description that have occurred since the release of the EIS.
- Section 3 provides an update on the community consultation activities that have occurred since the release of the EIS.
- Section 4 contains a detailed Response Table that addresses the issues raised in each individual submission.
- Section 5 groups the submissions by the chapter headings in the Project draft EIs, presenting an alternative format for reviewing the responses.
- Appendices A - R provide supporting documentation to the Supplementary Report.

1.3 Advisory Agencies Making a Submission

Table 1-1 details the Advisory Agencies who provided submissions to the EIS. The submissions are addressed in Section 4.

Table 1-1 Advisory Agencies

Advisory Agency/Organisation	Response Table Section
Department of Main Roads	4.1
Department of Natural Resources and Water	4.2
Department of Primary Industries and Fisheries	4.3
Department of Community	4.4
Department of Housing	4.5
Queensland Transport	4.6
Queensland Rail	4.7
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Advisory Agency/Organisation	Response Table Section
Department of Environment, Heritage and Water	4.12
Department of Mines and Energy	4.13
Department of Infrastructure and Planning	4.14
Department of Emergency Services	4.15
Department of Employment and Industrial Relations	4.16
Disability Services Queensland	4.17
Department of Tourism, Regional Development and Industry	4.18

1.4 Public Submissions

Table 1-2 Public Submissions

Organisation/Individual	Response Table Section
Construction, Forestry, Mining and Energy Union	4.8

1.5 Key Issues Raised in Submissions

The key areas addressed in the submissions were:

- Hydrology of the final landform and impacts from the final void;
- Characterisation and management of coal rejects and tailings;
- Social issues associated with housing;
- Groundwater resource impacts;
- Details of site geology and coal resources; and
- Traffic management.



2 Amendments to Project Description

No changes have been made to the core designs and concepts presented in the Project draft EIS - **Section 2 Project Description**.

Appendix A provides further details on the Project water management system.

Appendix C provides further information on the impacts of the final void.

Appendix F provides further details on the proposed technology and methods for managing coal rejects and tailings.

3 Updates to Community Consultation

BMA continued community engagement throughout the display period for the Daunia draft EIS. The project team engaged with over 350 community members throughout November and December 2008 and January 2009. A key focus of the display period was to present the EIS in plain English and to gather key community issues for further study and consideration. The following summary provides an outline of key activities and community responses. It is important to note the comments raised by the community were in addition to the official EIS submission process.

Community engagement activities

During the release of the Project draft EIS, BMA conducted a number of activities including:

- distribution of the third project newsletter to 3,299 households in Moranbah. The newsletter outlined how to access the Project draft EIS, dates and locations for BMA's mobile information displays, and the submission and approvals process;
- display of information posters in key public locations in Moranbah. The poster advertised mobile display information, project profiles and contact details for the Project team;
- local and regional advertising in the Daily Mercury, the Miner's Midweek and local radio station Rock FM between November 2008 and January 2009. A flashing sign on the outskirts of Moranbah also advertised the mobile display dates and locations;
- development of a plain English Community Overview document which presented key aspects of the Project draft EIS.
- meetings with the Isaac Regional Council;
- updating the project webpage with the Daunia draft EIS, community overview document and relevant fact sheets;
- uploading copies of the Project draft EIS on USBs for distribution to interested parties and individuals.
- hosting a Community Reference Group (CRG) site tour of the proposed Daunia Mine;
- distribution of copies of the Project draft EIS on USBs to interested parties and individuals;
- contacting affected property owners and offering a copy of the Project draft EIS, in hard copy or USB;
- presentations to government agencies in Brisbane and Mackay. Consultation with agencies also included a Daunia site tour;
- six mobile information displays in Moranbah and Mackay between November 2008 and January 2009. 316 people attended the displays; and
- managing the project contact points. A total of 41 community members contacted the project team during the display period.

A total of 19 community members and stakeholder groups requested a copy of the Daunia draft EIS.



Results

Participants showed general interest for the Project and other BMA growth projects. Key community comments and concerns relating to the Project draft EIS specifically, included:

- timing and location of the Project;
- the type of mining and facilities planned for the Project;
- whether the mine would be open cut or underground;
- where coal will be railed to for shipping;
- environmental issues such as noise, dust, vibration, climate change and impacts to water ways, flora and fauna;
- proposed mine rehabilitation activities;
- availability and affordability of housing as a result of the Project;
- global economic conditions and impacts on the Project;
- impacts on existing social services;
- employment opportunities;
- where BMA would source employees from;
- opportunities to provide business services;
- negative and positive impacts of FIFO workforces on the community; and
- the location and design of local roads.

4 Supplementary Report - Response Table

4.1 Department of Main Roads

ID	Major issues - Summary	Response
1.01	<p><i>Relevant Project draft EIS Section:</i> 13.1.1.1. State Controlled roads Table 13-1</p> <p>State-controlled road classifications & multi-combination vehicle permits Table 13-1 in EIS has errors.</p>	<p>Appendix G Table G1-3 contains a corrected version of Table 13-1 from the Project draft EIS.</p>
1.02	<p><i>Relevant Project draft EIS Section:</i> 13.2.1.6 Impacts on Road Pavement during Construction</p> <p>Paragraph 2 states the project trips will generate approximately 0.2 to 0.4% of a standard 20 year design life in ESAs on affected parts of the Peak Downs Highway but provides little additional information about potential pavement impacts.</p> <p>The EIS should provide brief details of the actual ESA's generated, particularly during the construction phase.</p>	<p>Appendix G Table G1-2 provides details of the ESA's generated during both construction and operation.</p>
1.03	<p><i>Relevant Project draft EIS Section:</i> 13.2.1.2 Site Access</p> <p>The EIS should provide an analysis of the adequacy of the intersection in accordance with the requirements for a ten year design horizon. The analysis of the form of the intersection should take into consideration adequate provision for both deceleration length, plus vehicle storage. If required, the EIS should then detail any required improvements to the mine access intersection.</p>	<p>Appendix G presents further information in relation to the intersection design. While the analysis demonstrates the adequacy of the current intersection, BMA will implement an upgrade of the intersection. Plans detailing the design of the upgrade are also contained in Appendix G.</p>

4.2 Department of Natural Resources and Water

ID	Major issues - Summary	Response
2.01	<p><i>Relevant Project draft EIS Section:</i> Section 1.6.1 Project Approvals</p> <p>There is no requirement for a water licence under the Water Act 2000, or development permit under the Integrated Planning Act 1997 to authorise the operation and/or construction of a groundwater monitoring network to monitor sub-artesian groundwater in the area.</p> <p>However the project lies within the Highlands Declared Sub-Artesian area, as listed in schedule 11 of the Water Regulation 2002. Therefore a water license is required to take groundwater.</p>	<p>In Queensland, a number of subartesian areas have been declared under the <i>Water Act 2000</i>. Some have been declared within water resource plans, while most have been declared under the <i>Water Regulation 2002</i>, both of which are subordinate legislation to the Act. Water licensing and development permit requirements for subartesian areas defined in the <i>Water Regulation 2002</i> are as follows:</p> <ul style="list-style-type: none"> ■ a water license is required to take or interfere with subartesian water, other than for the purposes specified within Schedule 11 of the <i>Water Regulation 2002</i>. ■ under the <i>Integrated Planning Act 1997</i>, a development permit is required to construct or install works that take subartesian water, other than works constructed or installed solely for the purposes mentioned within schedule 11 of the <i>Water Regulation 2002</i>. <p>The Project lies within the Central Highlands declared groundwater area. Therefore, a water licence and a development permit are required for all bores that take from groundwater unless it is for stock or domestic purposes. However, the coal seam aquifer will not be dewatered prior to mining. While mining will generate groundwater inflows to the pit that will be managed in the mine water management system, these groundwater activities will be licensed in accordance with the <i>Environmental Protection Act 1994</i> through the preparation of an Environmental Authority.</p> <p>BMA's understanding therefore is that a license to take groundwater will not be required under the <i>Water Regulation 2002</i>.</p>
2.02	<p><i>Relevant Project draft EIS Section:</i> Section 6.1.2.3 – Local Flooding Impacts – Infrastructure area</p> <p>The EIS identifies a proposed haul road crossing for New Chum Creek. A Riverine Protection Permit application was submitted to this Department for the installation of the crossing. However, the application was subsequently withdrawn by the applicant as the activity would be undertaken in accordance with the Departmental Guideline: Guideline – activities in a watercourse, lake or spring associated with mining operations. This guideline may be used by the holder of a mineral development licence or mining lease under the <i>Mineral Resources Act 1989</i> when destroying native vegetation, excavating, or placing fill in a watercourse, lake or spring necessary for and associated with mining operations within the area of the licence or lease.</p>	<p>BMA confirms that the New Chum Creek crossing works will be undertaken in accordance with the Departmental Guideline- activities in a watercourse, lake or spring associated with mining operations.</p>

ID	Major issues - Summary	Response
2.03	<p><i>Relevant Project draft EIS Section:</i> Section 6.1.2.3 – Local Flooding Impacts – Infrastructure area</p> <p>The EIS identifies that there will be an increase in flooding upstream of the crossing during the 100yr ARI and that these impacts appear to extend off lease.</p> <p>The proponent should liaise with any affected landholders regarding the increase in inundation. It should also be noted that the crossing must not store water.</p>	<p>Appendix O contains further details and a hydraulic analysis of the New Chum Creek crossing. This analysis confirms that while there are minor increases in flood levels upstream, the crossing does not store water.</p> <p>BMA has commenced discussions with upstream landholders over these minor increases in flood level.</p>
2.04	<p><i>Relevant Project draft EIS Section:</i> Section 3.13 – Decommissioning</p> <p>Section 3.13 states: Water dams will remain if required by landholders and approved by the regulators, otherwise the dams will be breached and rehabilitated.</p> <p>The taking of overland flow water under the exemption is to facilitate mining within the Fitzroy Basin and should only be of a volume necessary to facilitate the mining operation including meeting the requirements of their environmental authority and is not about the take of water for further uses post mining.</p> <p>NRW made the following additional comments:</p> <p>It is assumed that the water dams referred to are storages that are constructed onsite to take overland flow under the current exemption in the Water Resource (Fitzroy Basin) Plan 1999.</p> <p>The current exemption for the take of overland flow currently applies for this project. However the Water Resource (Fitzroy Basin) Plan 1999 is currently under review. This review may result in possible amendments to the overland flow provisions during the life of the mine development.</p> <p>The Department’s position at this point in time is that dams that are constructed under this exemption or are constructed to meet the requirements of an environmental authority.</p>	<p>BMA agrees with the assumptions made by DNRW with respect to the Project’s status under the <i>Water Resources (Fitzroy Basin) Plan 1998</i>.</p> <p>Water management infrastructure will be removed post mining. If other arrangements are planned, such as retaining dams for local farmer use, this will be done in consultation with the Department of Natural Resources and Water.</p> <p>BMA understands that a review of the <i>Water Resource (Fitzroy Basin) Plan 1999</i> is underway and will consult with DNRW over any changes to the <i>Water Resource (Fitzroy Basin) Plan 1999</i> that may have implications for the Project.</p>
2.05	<p><i>Relevant Project draft EIS Section:</i> Section 3.14.4 - Final Voids</p> <p>The taking of overland flow water under the exemption is to facilitate operations during mining. The final void should only be of the minimum volume possible.</p>	<p>A Mine Landform and Final Void Management Plan is presented in Appendix C. The report highlights the Proponent’s intention to minimise the catchment area that flows to the final void.</p>

ID	Major issues - Summary	Response
2.06	<p><i>Relevant Project draft EIS Section:</i> Section 6.1.1 – Existing Environmental (Surface Waters)</p> <p>NRW has not undertaken an assessment of the two unnamed tributaries of the Isaac River to determine whether these features are watercourses under the provisions of the Water Act 2000. An assessment by a Departmental Officer will need to be undertaken. If they are determined to be watercourses then authorisations from NRW will be required.</p>	<p>BMA has consulted with the DNRW Rockhampton and Biloela offices. The process for completing a watercourse determination assessment is now underway. If either or both unnamed drainage paths are watercourses then authorisation from DNRW will be required.</p>
2.07	<p><i>Relevant Project draft EIS Section:</i> Section 6.1.2.5 – Licensing Water Management Infrastructure</p> <p>The taking of overland flow water under the exemption provided by the Water Resource (Fitzroy Basin) Plan 1999 is to facilitate mining within the Fitzroy Basin and should only be of a volume necessary to facilitate the mining operation including meeting the requirements of their environmental authority and is not about the take of water for further uses post mining.</p>	<p>A Mine Water Management Plan is presented in Appendix A. This report details how the mine will manage water during its operation. It highlights BMA's intentions to limit the volumes of storages to the minimum size necessary to meet the requirements of the operation, whilst at the same time minimising the potential for discharges to the receiving environment.</p> <p>Further details on the <i>Water Resource (Fitzroy Basin) Plan 1999</i>'s application to the Project are discussed under ID 2.01</p>
2.08	<p>A locality plan identifying the location of possible sedimentation dams or environmental dams, and drainage lines should be included to identify how the mine plan will divert the catchment and whether any diversions of the unnamed tributaries are plan</p>	<p>Appendix A includes a site plan, showing the location of dams and drainage paths. Appendix C, Attachment 2 shows the final landform conceptual hydrology.</p>
2.09	<p><i>Relevant Project draft EIS Section:</i> Section 7.1.6 – Legislation Relevant to Groundwater</p> <p>The project lies within the Highlands Declared Sub-Artesian area, as listed in schedule 11 of the Water Regulation 2002 and therefore a water license is required to take groundwater. Further any licence that authorises the extraction of water for dewatering purposes is conditioned to protect all existing users of the resource. This includes stock and domestic bores which do not require a water license for the taking of water.</p>	<p>The coal seam will not be dewatered prior to mining. Sub-artesian water that drains to the pit will be managed in accordance with the EM Plan and Environmental Authority. However, BMA's understanding is that no water license under Schedule 11 of the <i>Water Regulation 2002</i> will be required. Further details are contained in the response to Issue Number 2.01</p>
2.10	<p><i>Relevant Project draft EIS Section:</i> Section 7.2.1.7 - Operational Impact Mitigation</p> <p>NR&W will impose make good conditions on a water license that will require restitution of any water supply affected by the taking of water. The drawing up of individual agreements between the mine owner and affected landholders before mining commences satisfies the make good conditions and establishes a process for dealing with future make good determinations.</p>	<p>While BMA understands that a water licence will not be required (see 2.01) BMA will enter into agreements with landholders whose water supply may be affected by the operation of the mine for the provision of alternative supplies throughout the Project life, and after mine closure. These agreements will include a dispute resolution process to deal with future impacts. Alternative supplies will be put in place before supplies from relevant existing landholder bores are adversely affected, as outlined in the EM Plan attached as Appendix L.</p>

ID	Major issues - Summary	Response
2.11	<p><i>Relevant Project draft EIS Section: Section 7.2.2.3 Impacts on Groundwater Users – Post Mining</i></p> <p>NR&W will impose make good conditions on a water license that will require restitution of any water supply affected by the taking of water after mine closure. The drawing up of individual agreements between the mine owner and affected landholders before mining ceases satisfies the make good conditions and establishes a process for dealing with future make good determinations.</p>	<p>While BMA understands that a water licence will not be required (see 2.01) BMA will undertake further hydrogeological investigations to assess the impacts of the dewatering post mining, including the establishment of a groundwater monitoring network as outlined in Appendix B. BMA will enter into agreements with landholders whose water supply may be affected by the operation of the mine post closure and have not yet already entered into an agreement, for the provision of alternative supplies after mine closure. The agreements will include a dispute resolution process to deal with future impacts, as outlined in the EM Plan attached as Appendix L.</p>
2.12	<p><i>Relevant Project draft EIS Section: Section 7.3.1 - Groundwater Monitoring</i></p> <p>NRW will impose conditions on a water license that will require the monitoring, assessment and reporting of the impacts of mining on groundwater. The license will refer to a specific monitoring report to be compiled by the licensee. The license terms will also allow for the modification of the monitoring program subject to the agreement of NR&W. It will also include a requirement for the provision of quarterly reporting of data, annual reports on the impacts, deviations from predicted impacts and any changes to future predicted impacts.</p>	<p>The proposed monitoring program is outlined in Appendix B. It includes the location of monitoring bores, the aquifers targeted as well as the parameters to be measured, the monitoring plan in Appendix B concerns the first 6 months of monitoring. Subsequent to this BMA will provide quarterly reports to NRW on the results of the monitoring program and a yearly report which include an assessment of the impacts of mining and the need to review the predicted future impacts.</p>
2.13	<p>During the recent water quality monitoring within the Nogoia, Mackenzie and Fitzroy river systems the issue of the monitoring of Selenium and the levels of Selenium within water as a result of the discharge of mine affected water was raised. It is recommended that monitoring of Selenium occurs during event monitoring and during discharges from the mine site.</p> <p>Monitoring and analysis of Selenium should be required for both water samples (total water Selenium) and for sediment samples (total sediment Selenium) collected from bottom mud sediments downstream of discharge points in streams receiving mine water discharge. A monitoring program to assess metals and other chemical parameters should commence "before mining operations begin" to assess background levels so that comparisons can be made after mining commences and discharges and monitoring take place. Without this pre-assessment the results of monitoring after a discharge event will have little meaning.</p>	<p>The EM Plan contained in Appendix L includes commitments to monitor Selenium during discharge events. Background data on Selenium is currently collected by BMA upstream of Daunia for the Poitrel and Goonyella - Riverside Operations.</p>

ID	Major issues - Summary	Response
2.14	<p><i>Relevant Project draft EIS Section:</i> Section 8.3.2 – Queensland Legislation The Project Site is located within the Brigalow Belt and New England Tablelands Bioregions as opposed to the Southeast Queensland Bioregion.</p>	<p>For the purposes of assessing significant projects, the VM Act is supported by the Regional Vegetation Management Code (RVMC) and Policy for Vegetation Offsets (the Offset Policy). The Regional Vegetation Management Code applicable to the Project Site is for the Brigalow Belt and New England Tablelands Bioregions.</p>
2.15	<p>Stock Route issues are adequately covered in the EIS. If however there were changes or oversights in this EIS that would affect stock routes NRW would have the following requirements:</p> <p>Where there are to be disruptions to the stock route network, NRW requires realignment and or replacement of corridors of similar width and suitable country type to allow for the uninterrupted flow of travelling stock.</p> <p>Options for diverting stock that are considered unsafe to travelling stock and drovers, as well as the travelling public will not be supported.</p> <p>The stock route network shall continue to comprise declared stock routes, reserves for travelling stock and other relevant land.</p> <p>The relevant NRW Senior Lands Officer (Stock Routes) and local government stock route officer must be consulted during the early planning stages of any proposed changes to a Stock Route.</p> <p>Current usage classifications of stock routes have no bearing on whether consideration needs to be given to their replacement/realignment – future usage of stock routes by travelling stock is uncertain, but is likely to be influenced by peak oil and rising fuel costs and the effects of climate change.</p> <p>The NRW Minister has publicly stated that the entire stock route network is to be retained, closure is not an option.</p> <p>The provision of adequate watering facilities and other infrastructure may be necessary, particularly where existing infrastructure is to be affected.</p>	<p>The proponent has noted the DRNW's comments in relation to stock routes and should any changes to be made to mine plans that would impact on stock routes, the department will be consulted.</p>

4.3 Department of Primary Industries and Fisheries

ID	Major issues - Summary	Response
3.01	<p><i>Relevant Project draft EIS Section: Section 9 -Aquatic Ecology</i></p> <p>DPI&F accepts that the removal of the two drainage paths will result in only a 0.7% loss of the Isaac River catchment, however a loss of approximately 15km of aquatic habitat should not be considered insignificant. While the current condition of these drainage paths is poor and highly degraded, impacts upon fish assemblage that currently utilise these habitats and are present both within and downstream of the site should be adequately considered. While maintaining and monitoring water quality will help mitigate impacts downstream from the removal, native fish trapped or stranded in the drainage paths, regardless of whether there are considered significant or otherwise should be removed as per the DPI&F's Fish Salvage Guidelines.</p>	<p>BMA plan to undertake construction work during dry periods when there is no flow in the un-named drainage paths. In the event that the planned schedule coincides with unseasonal rain BMA will follow the Fish Salvage Guidelines to catch and release potentially stranded fish.</p>
3.02	<p><i>Relevant Project draft EIS Section: Section 9 -Aquatic Ecology</i></p> <p>The haul road crossing of New Chum Creek should be designed, constructed and operated with due consideration of DPI&F policies and guidelines. A fisheries approval may not be required for construction of the crossing if works are undertaken during a period of no-flow, however the potential for the crossing itself to become a barrier to fish passage should be considered. See DPI&F guideline FHG001 - Fish Passage in Streams, for information on stream crossing designs that provide for fish passage. DPI&F prefers that waterway crossings are bridges as opposed to culverts, as culverts are more likely to impede or prevent fish passage.</p> <p>As a bridge crossing is unlikely to be suitable for the haul road crossing of New Chum Creek, the use of box culverts as opposed to pipe culverts is suggested as pipe culverts can have water velocities that are undesirable for fish passage, particularly if increased flood levels are expected.</p>	<p>The haul road crossing of New Chum Creek has been designed and will be constructed and operated with due consideration of DPI&F policies and guidelines. The details of this design, including flow velocities through the culverts and the options considered are presented in Appendix O. The options considered included a review of a box culvert design.</p> <p>The drainage infrastructure change from pipe culverts to box culverts represents an approximate increase in cost of \$1M, which is around 3 times the cost of the proposed design using pipes and was found to offer no improvement in maximum velocities through the culverts. As a result the design presented in the Project draft EIS will be constructed by BMA.</p>

ID	Major issues - Summary	Response
3.03	<p><i>Relevant Project draft EIS Section: Aquatic Ecology</i></p> <p>Should the construction of the haul road crossing be scheduled during flow period a development application for waterway barrier works will be required under the <i>Integrated Planning Act 1997</i>. DPI&F will assess any application for waterway barrier works and the potential impacts of barriers on fish movement under the <i>Fisheries Act 1994</i> at the time when application is made. Fish stranded between barriers must be removed as per the Fish Salvage Guidelines before construction can proceed. If temporary waterway barriers are required there should be the provision to transfer flows from upstream of the works to the downstream channel without passing through the disturbed construction site.</p>	<p>BMA plan to undertake construction work during dry periods when there is no flow in New Chum Creek. In the event that the planned schedule coincides with unseasonal rain BMA will follow the Fish Salvage Guidelines to catch and release potentially stranded fish.</p>
3.04	<p><i>Relevant Project draft EIS Section: Aquatic Ecology</i></p> <p>DPI&F policy recommends a minimum buffer of 50m of established natural vegetation between developments and freshwater waterways and wetlands, and these policy recommendations are the basis of buffer considerations from a fisheries perspective. A buffer assists in the protection and management of adjacent aquatic features by reducing bordering effects and providing filters for run off etc. Any proposed infrastructure or development should incorporate a buffer to provide an ecological filter between works and New Chum Creek and the Isaac River. It is appreciated that the final buffer determination, by the responsible agencies will also consider a range of other buffer issues including the type of land use and environmental characteristics of the site.</p>	<p>BMA will maintain a minimum buffer of 50 m of established vegetation between New Chum Creek and the anticipated mining operational areas.</p>

4.4 Department of Communities

ID	Major issues - Summary	Response
4.01	<p><i>Relevant Project draft EIS Section: Section 17</i></p> <p>The Department commends BMA on the extent of their community consultations, and the thoroughness and logical framework of the social impact assessment report for this project. The report identifies local and regional study areas which accord with the areas most likely to be impacted by the project, and analyses identified community concerns and likely social impacts against data for those study areas.</p>	No response required.

4.5 Department of Housing

ID	Major issues - Summary	Response
5.01	<p><i>Relevant Project draft EIS Section: Section 17</i></p> <p>It is considered that the proponent has adequately managed and mitigated social impact issues concerning housing issues in the area. For example, the intention of the proponent to accommodate both the construction and operational workforce in the Coppabella accommodation village, as well as the construction of several dwellings within Moranbah, will assist greatly in minimising housing stress in the township of Moranbah. Further, the proposed airstrip for the region will help to reduce the volume of road traffic between Mackay and Moranbah, which is an ongoing concern.</p> <p>The department will continue to be available to the proponent as an advisory agency to provide advice on potential adverse impacts and mitigation strategies that may arise in the future and are consistent with the department's interests and concerns.</p>	No response required.

4.6 Queensland Transport

ID	Major issues - Summary	Response
6.01	<p><i>Relevant Project draft EIS Section: Section 10.4.1</i></p> <p>This section relating to Air Quality provides descriptions of the main sources of dust and fine particle emission from mining operations, but it does not adequately describe and estimate the emissions generated in the rail transport of coal from mine-to-port as a direct regional environmental impact flowing from the project's operations. The improved management of coal dust emissions along all coal transport corridors in Central Qld is a high priority for the Queensland Government. As a reflection of this priority, in 2007 the EPA requested that QR undertake an Environmental <i>Evaluation of the impact of coal dust from trains in Central Qld</i>. This Environmental Evaluation has now been completed and the evaluation report has recommended a number of dust mitigation measures for implementation including;</p> <ul style="list-style-type: none"> ■ the use of spray-on chemical dust suppressants on loaded coal wagons, ■ the installation of improved coal-train loading infrastructure at coal mines and ■ improved load profiling systems to create a more streamlined and consistent surface of coal in each wagon. <p>To ensure that all relevant coal transport related dust mitigation measures are implemented, the proponent should consult with QR.</p>	<p>The air quality impacts associated with particulate emissions from coal trains were discussed in Section 20.7 of the EIS. The <i>Environmental Evaluation of the impact of coal dust from trains in Central Queensland</i> concluded that whilst monitoring indicates that there is a low risk of health impacts from coal dust, either within or outside the rail corridor, there remains the potential for short term nuisance impacts from dust deposition (Connell Hatch, 2008).</p> <p>BMA acknowledges the management of dust from coal trains is a priority for Queensland Rail. BMA will design the train load out facility to incorporate a polymer-based dust suppression unit. However a decision on construction and installation of the dust suppression unit at the train load out will be made once QR and industry confirm arrangements across the coal industry.</p>

ID	Major issues - Summary	Response								
6.02	<p><i>Relevant Project draft EIS Section: Section 10.4.1</i></p> <p>The description of sources of air emissions does not properly recognise the generation of dust emissions during the rail transport of coal to export ports. It is requested that the following sentence be added "<i>During the rail transport of coal product to export ports coal loss to the track and wind generated dust are also sources of dust emissions.</i>" The last sentence in the paragraph should be amended to read: "<i>Detailed estimates of the particulate emissions from mining <u>and transport</u> activities specific to the Project are shown in Section 10.4.2</i>"</p>	<p>The potential impacts of the mine operations were assessed in the air quality assessment in Section 10 of the Project draft EIS. The potential air quality impacts associated with particulate emissions from coal trains were assessed qualitatively in Section 20.7 of the Project draft EIS.</p> <p>The Environmental Evaluation of the impact of coal dust from trains in Central Queensland concluded that whilst monitoring indicates that there is a low risk of health impacts from coal dust, either within or outside the rail corridor, there remains the potential for short term nuisance impacts from dust deposition (Connell Hatch, 2008).</p> <p>However, as outlined above, BMA acknowledges the management of dust from coal trains is a priority for Queensland Rail. BMA will design the train load out facility to incorporate a polymer-based dust suppression unit. However a decision on construction and installation of the dust suppression unit at the train load out will be made once QR and industry confirm arrangements across the coal industry.</p>								
6.03	<p><i>Relevant Project draft EIS Section: Section 10.4.2</i></p> <p>Table 10.6 should be amended to include an additional parameter at the bottom of the table :</p> <table border="1" data-bbox="327 887 1111 954"> <tr> <td data-bbox="327 887 595 954">Rail transport of coal to port</td> <td data-bbox="602 887 864 954">Full return journey (mine-port-mine)</td> <td data-bbox="871 887 1111 954">344km</td> </tr> </table>	Rail transport of coal to port	Full return journey (mine-port-mine)	344km	<p>The greatest potential for dust impacts exists for the sensitive receivers located closest to mining operations. Dust emissions from rail transport are considered insignificant compared to dust from mining operations. The inclusion of these emissions is unlikely to affect the predicted dust impacts presented Section 10 of the EIS.</p> <p>The potential impacts of the mine operations were assessed in the air quality assessment in Section 10 of the EIS. The potential air quality impacts associated with particulate emissions from coal trains were assessed qualitatively in Section 20.7 of the EIS.</p> <p>The Environmental Evaluation of the impact of coal dust from trains in central Queensland concluded that whilst monitoring indicates that there is a low risk of health impacts from coal dust, either within or outside the rail corridor, there remains the potential for short term nuisance impacts from dust deposition (Connell Hatch, 2008).</p>					
Rail transport of coal to port	Full return journey (mine-port-mine)	344km								
6.04	<p><i>Relevant Project draft EIS Section: Section 10.4.2</i></p> <p>Table 10-7 should be amended as follows:</p> <table border="1" data-bbox="327 1185 1111 1350"> <thead> <tr> <th data-bbox="327 1185 595 1254">Mine operation</th> <th data-bbox="602 1185 719 1254">TSP (g/s)</th> <th data-bbox="725 1185 853 1254">PM₁₀ (g/s)</th> <th data-bbox="860 1185 1111 1254">Dust Control</th> </tr> </thead> <tbody> <tr> <td data-bbox="327 1259 595 1350">Rail transport of coal to port</td> <td data-bbox="602 1259 719 1350">X</td> <td data-bbox="725 1259 853 1350">X</td> <td data-bbox="860 1259 1111 1350">X% control with wagon over-load and product controls</td> </tr> </tbody> </table>	Mine operation	TSP (g/s)	PM ₁₀ (g/s)	Dust Control	Rail transport of coal to port	X	X	X% control with wagon over-load and product controls	<p>The greatest potential for dust impacts exists for the sensitive receivers located closest to mining operations. Dust emissions from rail transport are considered insignificant compared to dust from mining operations. The inclusion of these emissions is unlikely to affect the predicted dust impacts presented Section 10 of the EIS.</p> <p>The potential impacts of the mine operations were assessed in the air quality assessment in Section 10 of the EIS. Particulates generated from coal trains are unlikely to have a significant impact of the nearest sensitive receivers to Daunia coal mine. Particulates generated from coal trains are considered a cumulative impact and were assessed qualitatively in Section 20.7 of the Project draft EIS.</p>
Mine operation	TSP (g/s)	PM ₁₀ (g/s)	Dust Control							
Rail transport of coal to port	X	X	X% control with wagon over-load and product controls							

ID	Major issues - Summary	Response
6.05	<p><i>Relevant Project draft EIS Section: Section 10.4.6</i></p> <p>The dust mitigation measures to be implemented should be expanded to include details of the features of the proposal designed to prevent coal-wagon over-loading, and minimise coal loss during transit and coal dust emissions from trains during haulage of coal from the project to export ports. The list of mitigation measures should be expanded to include the measures typically already in place at BMA mines, including existing coal train wagon loading control measures.</p>	<p>BMA will design the train load out facility to incorporate a polymer-based dust suppression unit. However a decision on construction and installation of the dust suppression unit at the train load out will be made once QR and industry confirm arrangements across the coal industry.</p>
6.06	<p><i>Relevant Project draft EIS Section: Section 13.2.2.4</i></p> <p>This section proposes a range of transport operation phase traffic mitigations measures. Dot point 2 contains a typographical error and should read: "Providing buses and encouraging car pooling for transportation of the operational workforce; and"</p>	<p>BMA will provide buses and encourage car pooling for the transportation of the operational workforce.</p>
6.07	<p><i>Relevant Project draft EIS Section: Volume 2 - Draft EMP 3.3.3.1 Dust</i></p> <p>The dot-point list of activities that have the potential to generate particulate emissions should be amended to include the additional activity of: "rail transport of coal to port"</p>	<p>The EM Plan covers the mining operations at Daunia coal mine. Coal transport to port does not occur within the mining lease. However, proposed control strategies from the EM Plan that mitigate dust impacts from "rail transport of coal to port" are discussed under item ID 6.08 below.</p>

ID	Major issues - Summary	Response
6.08	<p><i>Relevant Project draft EIS Section:</i> Volume 2 - Draft EMP 3.3.3.1 Dust</p> <p>Additional dust control strategies requested in comments above in relation to 10.4.6 Mitigation Measures should be included in this Dust control section of the Draft EMP.</p>	<p>The EM Plan has been amended accordingly and is attached as Appendix L. Specifically the following control strategies have been added in Section 3.3.5.1 of the EM Plan:</p> <ul style="list-style-type: none"> • BMA has budgeted for and designed the train load out facility to allow for a polymer-based dust suppression unit. However a decision on construction and installation of the dust suppression unit at the train load out, to reduce dust emissions during rail transport, will be made as QR and industry confirm arrangements across the coal industry. • Install improved coal train loading infrastructure to control overloading and minimise spillage. • Install improved load profiling systems to create a more streamlined and consistent surface of coal in each wagon. • Product coal supplied for rail transport will be washed in the CHPP to remove coal fines and other particulate matter. • Product coal supplied for coal transport will have a coal-surface water content designed to reduce dust emissions during rail transport. <p>QR are currently developing a Coal Dust Management Plan, that will include the mitigation methods identified in the final Environmental Evaluation, on rail corridors connecting coal mines in the Bowen and Callide basins with ports at Dalrymple Bay, Hay Point and Gladstone, in an effort to reduce the impact of environmental, social, and commercial consequences associated with coal loss.</p> <p>QR expects the Coal Dust Management Plan will be completed by December 2009 (see http://www.qrnetwork.com.au/About-us/Environmental-policies/Coal-loss-management.aspx).</p>

4.7 Queensland Rail

ID	Major issues - Summary	Response
7.01	<p><i>Relevant Project draft EIS Section: Section 12 - Noise and Vibration</i></p> <p>In regard to the rail traffic issues during the operational phase QR sees very little detail regarding the potential for nuisance relating to train noise, coal dust, and traffic disruptions at the road/rail interface where there is no grade separation. However, these matters provide very little difference from the typical changes in coal throughput on the rail system which occur from year to year and so processes are already in place to address such potential impacts. These include the Coal Network Master Plan, the Access Undertaking and Access Agreement process for new traffic and the Coal Dust Management Project/Program, all which are currently being managed by QR Network.</p>	<p>BMA acknowledges the processes already in place in regard to rail traffic issues.</p>

4.8 Construction, Forestry, Mining & Energy Union

ID	Major issues - Summary	Response
8.01	<p><i>Relevant Project draft EIS Section: Sections 16 & 17</i></p> <p>Traditionally mines of this scale were not contracted out, but were run by the principal. In our view it is a blatant attempt to deprive the Moranbah community and individual workers employed at Daunia of the proper ability to choose to domicile themselves and their families in a Moranbah community that is attractive, affordable and liveable.</p> <p>For this reason we reject the premise that BMA propose for the Daunia Mine operations to be done with a contract workforce. It should be done by a fulltime workforce</p>	<p>BMA assessed the use of both a fulltime owner-operator and contractor-run workforce for the Daunia Mine project. A business decision has been made at this point, to propose a contractor workforce for the Daunia Mine. This operating model will support more than 400 jobs during construction and more than 300 jobs during operation.</p>

ID	Major issues - Summary	Response
8.02	<p><i>Relevant Project draft EIS Section: Sections 16 & 17</i></p> <p>To assist with workers choosing their place of residence they should all be subject to the conditions contained in the Moranbah Accommodation Agreement 2008.</p> <p>Planning under this scenario would require some 50 to 75% of the workforce to be accommodated in the township of Moranbah. This would require at least 200 additional house blocks and houses.</p> <p>This is well within the existing land stock owned by BMA itself as it has 500 house blocks. The council will have 200 blocks of land for sale once they finish their latest development. Lastly 100 ha of Potters land which the Isaac Shire council sign off can build up to 800. This doesn't take in to count the land on the other side of the cutting of Potters land. There is also land behind the Anglo estate which BMA would be aware of as they party to the MG2 meetings.</p> <p>BMA's stated intention to alleviate the problem by the construction of 10 houses is nothing. This will only be for their management members overseeing the contracting operations at the mine.</p> <p>This problem is immediate and present. With such basic services as education and ambulances struggling due to the accommodation crisis BMA should immediately supply enough house blocks to overcome the existing shortfall in these areas and enough for the added requirements of the Daunia workforce with some multiplier.</p>	<p>The Moranbah Accommodation Agreement 2008 is a private agreement negotiated between private parties. It would be inappropriate for external parties to mandate to bring Daunia into the scope of this privately negotiated agreement.</p> <p>BMA is committed to identifying accommodation for all workers related to the Daunia Mine and to reducing impacts on the local communities. This includes the provision of new accommodation in Moranbah and securing accommodation rooms at Coppabella.</p> <p>In addition to this, BMA is:</p> <ul style="list-style-type: none"> • Working with Isaac Regional Council on concept plans for all BMA landholdings in the townships; • Supporting future development by competitively purchasing Council land and working with other developers; • Working with other companies, Isaac Regional Council and the State Government on Belyando Estate (southwest of Moranbah). <p>Accommodation Affordability</p> <p>BMA has a dedicated Housing Manager who works closely with local councils and development planning committees to work in a commercial way to ease pressure on the housing demand, which has traditionally driven up the costs of housing and rent.</p> <p>BMA helps to relieve pressure on Local Government budgets by funding special rates and paying for headwork charges, thereby freeing up Government funds for investment in affordable housing.</p> <p>BMA plays an advocacy role with government and industry in helping to attract additional funds for affordable housing in the region. Through the \$100 million Sustainable Resource Communities Partnership Fund, BMA is advocating for funds and resources to alleviate housing pressures, including emergency housing.</p>

ID	Major issues - Summary	Response
8.02	<i>Continued from previous page</i>	<p>Accommodation Choice:</p> <p>BMA's Housing Strategy will continue to consider the needs of current and future workforces, and offer a range of accommodation options.</p> <p>BMA has targeted to provide an accommodation unit for every operational employee at the Daunia Mine.</p> <p>At this stage, the primary location for accommodation for Daunia is the Mac Accommodation Village at Coppabella. This location was chosen because of its proximity to the mine site, and as it was considered the best option for attracting and accommodating the currently proposed contractor workforce.</p> <ul style="list-style-type: none"> • Construction employees are expected to peak at 450. • BMA have secured 350 rooms at MAC Coppabella to provide accommodation for the construction workforce. • These rooms are all new rooms that have been constructed to meet the requirements of this contract. • Additional construction numbers during the peak period will be accommodated in available unallocated rooms at Coppabella, Nebo and Moranbah. • Towards the tale end of the project when construction numbers are winding down operational employees will start to take up these rooms. <p>Some housing has also been constructed in Moranbah. Appendix P, contains BMA's Accommodation Update Newsletters,</p> <ul style="list-style-type: none"> • Operational numbers are expected to sit at 350. • These numbers can be accommodated at MAC Coppabella although BMA have constructed 12 houses/duplexes in Moranbah to accommodate BMA employees. • Should employees of the contract operator currently reside in Moranbah they will continue to enjoy their existing arrangements. <p>BMA is working closely with Isaac Regional Council to ensure that proposed development enhances the appeal of Bowen Basin communities and is attractive to our future generation of employees.</p>

ID	Major issues - Summary	Response
8.03	<p><i>Relevant Project draft EIS Section: Sections 16 & 17</i></p> <p>The construction of an additional 300 SPQ rooms at Coppabella does nothing for the social and community infrastructure of the Central Highlands.</p>	<p>Concerns regarding the selection of village style accommodation are addressed in 8.01 and 8.02.</p> <p>Behaviour on-site at the Mac Accommodation Village in Coppabella is monitored, for the safety of those living in the Village, and the wider community. There are a number of measures in place including a restricted wet mess, which opens at midday with last drinks at 9.30pm.</p> <p>There are a range of recreational facilities and activities on offer to mitigate against a 'drinking culture'. For example, lap pool and tennis court currently being developed, walking and running tracks, 24 hour gym, library, BBQ and social areas, and lots of green space. Inappropriate behaviour is not tolerated at the Village - residents are aware that inappropriate behaviour will lead to bans from the tavern and recreational facilities. Mixed sexes at the camp also encourages a culture of mutual respect and socially appropriate behaviour (approximately a 80 per cent male, and 20 percent female split).</p>

ID	Major issues - Summary	Response												
8.04	<p><i>Relevant Project draft EIS Section: 17.2.16 Cumulative Impacts</i></p> <p>The potential social impacts from the Project also need to be considered in the context of other developments in the area. The assessment of cumulative impacts is of particular importance to this assessment due to both the number of mining operations currently operating in the area, and also due to the proposed growth in mining operations predicted for the area. Whatever the eventual make-up of the workforces place of residence BMA must make a contribution to the relevant Council area for the increased infrastructure required.</p>	<p>BMA continues to work with and support government in meeting the increased infrastructure requirements across the region.</p> <p>In the 2008 financial year, BMA supported local councils and governments by way of a \$14.8 million investment in:</p> <ul style="list-style-type: none"> ▪ Council rates ▪ Special levies ▪ Subsidies and allocations, including the maintenance of local roads and airports and for other council infrastructure, facilities and water. <p>During the same period, BMA paid close to \$400 million in coal royalties to the Queensland Government.</p> <p>BMA coal royalties paid to the Queensland Government increased significantly in recent years, as highlighted in the table below.</p> <table border="1" data-bbox="1162 794 1861 887"> <thead> <tr> <th colspan="2">BMA Royalties</th> <th>\$</th> <th>\$/T</th> </tr> </thead> <tbody> <tr> <td>Q1 FY08</td> <td>(Jul-Sep 07)</td> <td>94,712,373</td> <td>6.79</td> </tr> <tr> <td>Q1 FY09</td> <td>(Jul-Sep 08)</td> <td>363,999,848</td> <td>24.46</td> </tr> </tbody> </table> <p>BMA will continue to forge positive relationships with all levels of government, enabling truly effective partnerships through shared responsibilities and benefits.</p> <p>BMA also plays an advocacy role with government and industry in helping to attract additional funds through the \$100 million Sustainable Resource Communities Partnership Fund.</p>	BMA Royalties		\$	\$/T	Q1 FY08	(Jul-Sep 07)	94,712,373	6.79	Q1 FY09	(Jul-Sep 08)	363,999,848	24.46
BMA Royalties		\$	\$/T											
Q1 FY08	(Jul-Sep 07)	94,712,373	6.79											
Q1 FY09	(Jul-Sep 08)	363,999,848	24.46											
8.05	<p><i>Relevant Project draft EIS Section: 10 Air Quality</i></p> <p>While Daunia may lie a little distance from Moranbah, it is still the case that real time monitoring is required to protect the town now and into the future. With other projects you need to have a look at the cumulative effect of current and planned operations.</p> <p>A 24 hr/365 day per year atmospheric, noise and vibration monitoring program established within a 40km zone of Moranbah to gain this vital background information for the good of the community, current and future operation approvals.</p> <p>This cost should be shared by all current and proposed operators of mines within this radius</p>	<p>The potential for air quality, noise and vibration impacts from mining operations is restricted to sensitive receivers located within 5 km of the mine. The proposed Project is located 25 km southeast of Moranbah. BMA will undertake air quality, noise and vibration monitoring at sensitive receivers that may be affected by the Project.</p> <p>Mining operations at the Project will have negligible air quality, noise and vibration impacts at Moranbah either directly from the Project alone, or cumulatively with other mines in the region. The implementation of a comprehensive air quality, noise and vibration monitoring program at Moranbah is not considered appropriate for this Project. However, BMA plans to implement an air quality monitoring program in and around Moranbah as part of other expansion projects.</p>												

ID	Major issues - Summary	Response
8.06	<p><i>Relevant Project draft EIS Section:</i> 13.2.1.6 Impacts on Road Pavement during Construction</p> <p>BMA should therefore put up funding to offset the lower lifespan and immediately contribute 0.4% of the cost of replacing the road in a fund for this purpose. In addition they should immediately fund the next 2 priority overtaking lanes on the Peak Downs Highway</p>	<p>The impacts on road pavements during construction are discussed in Appendix G. Comments regarding contribution to the cost of road replacement are noted. The upgrading of the Peak Downs Highway is outside the scope of the Project draft EIS. It should be noted that BMA will upgrade the intersection of the site access road and the Peak Downs Highway in accordance with the designs presented in Appendix G.</p>
8.07	<p><i>Relevant Project draft EIS Section:</i> 16.3.6 Consultation - CFMEU</p> <p>BMA would not concede any issues in relation providing accommodation other than SPQ's. Any person employed by the contracting workforce would only be able to access houses either on a rental or purchase basis either of his own volition, or if able to access via an arrangement with his contracting employer.</p> <p>Our experience is that a contracted company would not provide such assistance for an employee for several reasons.</p> <p>Contracts are for a finite period so housing schemes would typically run for longer than their contract with BMA</p> <p>Costs associated with such schemes are not included in the agreement between the Contracting Company and BMA</p> <p>Our experience from negotiating Enterprise Agreements with Contracting Companies is that they will not enter such arrangements unless such costs are recouped from BMA.</p>	<p>The primary location for accommodation for Daunia is the Mac Accommodation Village at Coppabella. This location was chosen because of its proximity to the mine site, and as it was considered the best option for attracting and accommodating a contractor workforce.</p> <p>BMA assessed the use of both a fulltime owner-operator and contractor-run workforce for the Daunia Mine project. A business decision has been made at this stage, to propose a contractor workforce for the Daunia Mine.</p> <p>Some housing has also been constructed in Moranbah. Appendix P includes BMA's Accommodation Update Newsletter.</p>



ID	Major issues - Summary	Response
8.08	<p><i>Relevant Project draft EIS Section: 17.2.3 Ability to Participate in Regional and Local Employment and Training Opportunities</i></p> <p>Among the mitigation measures BMA proposes is the provision of funding and technical support for the Engineering Skills Centre at Moranbah State High School (BMA, Community Investment).</p> <p>While this is laudable outcome it becomes irrelevant without having teachers. BMA should commit to providing housing for these people in addition to any current housing available.</p>	<p>BMA invests around \$925,000 per annum in its Skills for Growth Strategy, which supports apprenticeships and scholarships for primary and secondary school students, as well as work experience options.</p> <p>BMA actively supports skills and training opportunities for young people in the region, and invested \$90,000 in establishing the Mining Industry Skills Centre, which is linked to the Moranbah High School.</p> <p>BMA sponsors the Queensland Minerals and Energy Academy (QMEA), which enables Bowen Basin students to access a broad range of minerals and energy-related learning and career opportunities in the skilled-operator, trades and professional areas.</p> <p>Other Skills for Growth initiatives for students include a Cadetship program and an Engineering Extension Program.</p> <p>In addition, BMA actively engages with local schools and has implemented initiatives like 'Adopt a Teacher', to provide students and teachers with practical, real work projects, and mentoring support.</p> <p>BMA corporate and individual BMA sites also support tertiary scholarships for school leavers, and partner with Bowen Basin schools on a range of other projects including recycling, greenhouse and leadership programs.</p> <p>BMA currently provides some accommodation for key community services such as medical services and childcare Directors and workers.</p>

4.9 Queensland Environmental Protection Agency

ID	Major issues - Summary	Response
9.01	<p><i>Relevant Project draft EIS Section:</i> Section 3 Project Description</p> <p>The EIS should address the requirements of Section 1.1, Project Proponent, of the TOR by describing the proponent's environmental record.</p>	<p>All existing BMA operations have Environmental Management Systems certified to ISO14001, which means that they are subject to robust internal and external auditing programs. The Project will also operate under a certified EMS.</p> <p>Information on BMA's environmental performance is provided in Appendix M.1. In addition a copy of the BMA 2008 Sustainable Development Report is provided in Appendix M.2. It provides details of BMA's environmental performance in the financial year ending June 2008. Key environmental performance issues since this time are outlined below.</p> <p>No fines or prosecutions</p> <ul style="list-style-type: none"> ■ Blackwater Mine - Environmental Evaluation for Ramp 72 tailings decant water spill. Requested to move to Transitional Environmental Program to address water management ■ Goonyella-Riverside Mine Transitional Environmental Program for non EA compliant water releases. ■ South-Walker Creek Mine - Tailings line rupture incident. Currently being investigated by the Queensland EPA.
9.02	<p><i>Relevant Project draft EIS Section:</i> Section 3 Project Description</p> <p>A list should be provided of ERAs as defined under the Environmental Protection Regulation 2008, any notifiable activities as defined under the Environmental Protection Act 1994 and any permits under the Nature Conservation Act 1992 applicable to the project have not been provided in the EIS as is required by Section 2.4.1, Operations - Mines, of the TOR.</p>	<p>The Project constitutes a level 1 mining project for mining black coal as listed in Schedule 6 of the <i>Environmental Protection Regulation 2008</i>. As set out in section 155 of the <i>Environmental Protection Act 1994</i> (EP Act), the proponent of the Project will apply for a single environmental authority (mining activity). Section 147 of the EP Act defines a 'mining activity' as an activity mentioned under the <i>Mineral Resources Act</i>, which includes the mining of coal, and includes, amongst other things, activities that are directly associated with, or facilities that support the mining activity and may cause environmental harm.</p> <p>It is noted that the following environmentally relevant activities, listed in Schedule 2, of the <i>Environmental Protection Regulation 2008</i>, will also be directly associated with the mining activity and undertaken as part of the level 1 mining project:</p> <p>8 Chemical storage</p> <p>(1)(c) 10m³ or more of chemicals of class C1 or C2 combustible liquids under AS1940 or dangerous goods class 3</p> <p>31 Mineral processing</p> <p>(1) Mineral processing consists of processing, in a year, a total of 1000t or more of coke or mineral products.</p>

ID	Major issues - Summary	Response
9.03	<p><i>Relevant Project draft EIS Section:</i> Section 3.11</p> <p>The EIS should describe the construction methods associated with containment and disposal of construction spoil and solid and liquid handling as is required by Section 2.3.1.2, Construction, of the TOR</p>	<p>Section 14 Waste Management of the Project draft EIS provides details of the management of construction wastes. Details of construction spoil, solid and liquid handling are provided in Project draft EIS Table 14.1 Waste Management: Construction Phase. The Project draft EIS outlines how BMA manages waste on a waste stream basis, hence whether waste streams will be managed in the same way regardless of the activity that generates it. The Contractor BMA Environmental Management Plan (Appendix K) contains details that will manage contractor activities that affect waste.</p>
9.04	<p>A list including and specific details and quantities of all chemicals, including any hydraulic fluids proposed to be used on the project as required in Section 2.4.1, Mining methods and equipment, of the TOR.</p>	<p>Section 19 of the Project draft EIS provides details of the chemicals required during the construction and operational phases of the Project.</p>
9.05	<p>The EIS and EM plan should address what would constitute an emergency for the release of water from the site, and should provide an assessment of the suitable conditions for discharges.</p>	<p>Appendix A provides information on the emergency release of water from the site. The EM Plan also details management of releases.</p>
9.06	<p>EIS Figure 3-14, Water Management Schematic, should be revised to illustrate water discharges to the environment. The EIS must identify where, and under what circumstances controlled discharges would be made. The EIS should propose auditable measures for the management of dams that would receive pit water and the necessary controls for releases. Those auditable measures should also be included in the project's EM plan.</p>	<p>Appendix A provides details of management of water during the project and provides an updated version of the Project draft EIS Figure 3-14.</p>

ID	Major issues - Summary	Response
9.07	<p>The comments made in the report Review of the Fitzroy River Water Quality Issues (Hart et al, 2008) on the likely impacts of discharges from mine sites should be considered in the assessment.</p> <p>The EIS should address the requirements of the terms of reference with regard to the potential impacts of discharges from the site on surface water quality and ecology during and after mining. A detailed, reasoned, evidenced- based assessment must be provided for all findings.</p>	<p>A report on water quality issues in the Fitzroy River was released in November 2008, subsequent to finalisation of the Project draft EIS. In summary the report reviewed the water quality in the Fitzroy River resulting from the discharge of 138 Gigalitres of mine-affected floodwater from the Ensham Resources Pty Ltd (Ensham) coal mine located near Emerald in Central Queensland. The report found, amongst other things, that the mine affected water caused no short or long term human health problems. However there were un-quantified effects on the riverine biota and most impacts were related to high sodium levels impacting on the early life stages of fish and macroinvertebrates.</p> <p>The key lessons learnt from this experience include the need to ensure effective communication with stakeholders in the event that an emergency discharge of this magnitude is required. The water balance model presented in the Project draft EIS has been refined in this Supplementary EIS (Appendix A) to further minimise the potential for such events. This approach is also consistent with recommendations contained within ‘A study of the cumulative impacts on water quality on mining activities in the Fitzroy Basin’ released in March 2009. Key recommendations of this report centre on reducing the likelihood and consequences of discharges.</p>
9.08	<p>Provide information detailing, demonstrating and justifying how the Project will manage the impacts on water resources.</p> <p>This information should include a Mine Water Management Plan:</p> <ul style="list-style-type: none"> ■ what contaminants are expected; ■ how all water is to be managed onsite and what technology is to be used; ■ how the surrounding water courses will be protected; and ■ a water quality monitoring plan. <p>The minimum requirements that the proponent will impose on contractors relating to the Contractor Environmental Management Plans.</p>	<p>Appendix K contains a copy of the Contractor BMA Environmental Management Plan. All contractors on site will be required to comply with this EMP.</p> <p>Appendix A contains the Mine Water Management Plan which includes the outcomes of additional modelling and improvements in the design of the mine water management system. Appendix L also provides details on the management of water at the Project.</p>
9.09	<p>The EIS should:</p> <p>Identify which dams could receive pit water, and which would be used purely to trap sediment in runoff from disturbed areas; and</p> <p>As necessary, redesign the water management system so that pit water is kept separate from collected runoff in sediment dams.</p>	<p>Appendix A provides details of the water management system for the project. The Mine Water Management Plan makes the purpose of dams clear. All water from undisturbed areas will be diverted around disturbed areas. All water from disturbed sites is considered to be potentially affected by mining and is directed to dams in the mine water management system.</p>

ID	Major issues - Summary	Response
9.10	<p>The EIS should provide an assessment of groundwater resources and quality derived from data obtained at the Daunia site and which should take account of both the intensity of the potential impacts and the context in which they would occur.</p>	<p>The ground water model in the Project draft EIS was limited by the amount of geological and hydrogeological data available as the time the model was set up. The assessment of the groundwater resources for the Project Site was based on the site geology and hydrogeological investigations undertaken on the Poitrel mine.</p> <p>The model covers an area of 50 km east-west by 50 km north-south and is split into 7 layers. The first layer represents the shallow alluvial aquifer along the Isaac River. Layers 2, 4, 6 and 7 represent the same geological unit comprising the Permian sandstone, siltstone and mudstone that underlies the coals seams (represented by layers 3 and 5). Coal seams layers have been assumed to be 10 m in thickness with an extent that covers the whole model area.</p> <p>Two sets of data have become available since the model was constructed:</p> <ul style="list-style-type: none"> ■ lithological bores logs covering the Project Site, and ■ 4 hydrogeological drillings located across the Project Site. <p>A review of this information for the Supplementary EIS has revealed the following points relevant to the validity of the model.</p> <ul style="list-style-type: none"> ■ No evidence of any alluvial aquifer extending over the mining site. The conceptualisation of an alluvial aquifer in the model overestimates pit inflow during mining operations and drawdown of the alluvial aquifer. Nevertheless, the limited extent and depth of the alluvial aquifer modelled suggests that the overestimation does not compromise the accuracy of the model predictions. ■ Lithological logs reveal structural features that have not been incorporated in the model. The 10 m thickness coal layers, and their extension throughout the 250 km² model, constitute a conservative approach. It is likely that the aquifer layers are disconnected within the model, due to these structural features, limiting hydraulic connectivity and impacts on a regional scale. ■ Lithological logs reveal variability in the sandstone, siltstone and mudstone Permian formations. Hydraulic parameters for each of these formations in the model are constant, therefore the model has a more accurate output at a regional scale. <p>In summary, a thorough review of the more recent information has confirmed that the basis upon which the model was built offer a conservative approach by overestimating water fluxes towards the pit mine, and the likely drawdown in the alluvial aquifer along the Isaac River. Furthermore, this site specific information does not support a need to rebuild or modify the model at this stage. Hence the groundwater model is considered to be valid and meets the requirements as stated in the TOR for the EIS.</p>

ID	Major issues - Summary	Response
9.11	<p>The EIS should provide an assessment of the likely drawdown in the alluvial aquifer with sufficient precision for a proper assessment of the likely impacts that would result from the drawdown, particularly impacts on riparian vegetation.</p> <p>If significant impacts would result from the mining activities, the EIS and EM Plan must provide measures to avoid or minimise the impacts. Any residual impacts that could not be mitigated must be described in detail.</p>	<p>There is little information available on the Quaternary aquifer, including depth to water table and hydraulic properties. The information reviewed, and discussed in association with ID 9.10 suggests that while, Quaternary Alluvium sediments are present in the southern half of the Project Site, there is no evidence an alluvial aquifer extending into the Project Site. Based on this, it is considered that the TOR have been sufficiently addressed.</p> <p>Riparian vegetation is situated along the banks of Isaac River. Given the water table of the Alluvial aquifer was observed at 2 metres below bed of river during the site inspection undertaken for the Poitrel site in 2004, the water table is likely to be some 3 metres below the riparian vegetation on the river banks. Because there is limited information available for the Project Site when the groundwater model was built, a range of aquifer properties were applied to the model to highlight the range of possible results. In the proximity of the Isaac River (immediately adjacent to mine), the modelling predicted that a representative groundwater level drawdown of approximately 3 m was estimated with a lower and upper limit of 0 and 9.5 metres. Based on data, described in ID 9.10, drawdown is more likely to be at the lower end of this range, if it occurs at all. These results are considered to address the TOR as accurately as possible.</p> <p>Site-specific hydrogeological investigations commenced at the Project Site in March 2009, as part of the Project groundwater monitoring program. Further assessment of the interaction between groundwater and surface water will be undertaken as part of the groundwater monitoring program outlined in Appendix B, to determine the potential impacts to riparian vegetation. The groundwater level within the Alluvium unit close to the Isaac River will be monitored on a regular basis throughout the duration of the Project's operation. The monitoring will provide an opportunity to (i) determine the nature (or dependency) of riparian vegetation to the groundwater system; and (ii) an early detection of the level of drawdown (if any) and potential impacts to riparian vegetation.</p> <p>In the unlikely event that a detrimental impact is forecast from the monitoring program, preventative measures will be taken to ensure the impacts are mitigated. For instance, the mining schedule could be altered so that the alluvium material situated in the southern corner of the mine site is not excavated or mined. The current groundwater model will be updated based on the data collected during the first 6 months of the Groundwater Sampling and Analysis Plan (Appendix B) to provide a more accurate assessment of drawdown in the alluvial aquifer.</p>

ID	Major issues - Summary	Response
9.12	<p>The EIS should provide a detailed, reasoned, evidence based assessment of the potential for saline, contaminated water in the void to recharge groundwater. The EIS should detail what effects this recharge will have on all aquifers including the alluvial aquifer. The assessment should not simply assume that rainfall runoff into the final void would readily achieve complete mixing as low salinity run off may form a relatively stratified layer above more dense, saline void water.</p>	<p>Appendix C includes an assessment of the final void water quality based on modelled groundwater flows into and out of the pit. The assessment shows that the final void will concentrate salts leading to a decline in groundwater quality. It should be noted that relative to other mines in the Bowen Basin, spoil and overburden is non-saline. This is demonstrated by the data in Appendix G-5 of the Project draft EIS.</p>
9.13	<p>Discuss and demonstrate how the project meets the requirements of the Water Allocation and Management Plan (Fitzroy Basin) 1999 and the Fitzroy Basin Operations Plan 2003.</p>	<p>The purpose of this Water Resource (Fitzroy Basin) Plan (WRP) is to sustainably manage water resources within the Fitzroy Basin and provide frameworks and regulations, administered by DNRW, to manage the taking of water, including overland flow. The WRP is designed to generate outcomes that provide security for water users, and allows future water-related development within the basin.</p> <p>The Water Resource (Fitzroy Basin) Plan 1999 ("the WRP") applies to overland flow water on the Project Site. Section 10 and Section 11 of the WRP outlines the objectives for base flow and environmental flow in the system with reference to Schedule 2 of the WRP. The Project is located in the northern part of the basin and there are no "locations" as listed in Schedule 2 along the Isaac River. Therefore the nearest "location" is the Mackenzie River at Tartrus. As stated in the Project draft EIS, the Project area where overland flow will be affected represents approximately 0.7% of the Isaac River catchment upstream of the Project. Therefore the per cent of catchment represented by the Project at the Mackenzie River at Tartrus is substantially less than this. For this reason the project is expected to have little impact on the objectives of the WRP.</p> <p>Fitzroy Basin Resource Operations Plan ("the ROP") implements the WRP and defines the rules that guide the allocation and management of water in the catchment. As stated above in terms of overland flow the Project will have little impact on the ROP. The Project does not need to make any additional water allocation from this system. The Project average water demand of 600 ML/y comes from existing allocations already provided to BMA from various sources in the region. Therefore the Project will have no impact on the ROP. The on-site storages that are constructed onsite to take overland are exempted from the Water Resource (Fitzroy Basin) Plan 1999. However, as the DNRW note in their submission, the Water Resource (Fitzroy Basin) Plan 1999 is currently under review and may change during the life of the Project. BMA will consult with DNRW directly on the implications of any changes.</p>

ID	Major issues - Summary	Response
9.14	The EIS should amend the design of the proposed crossing of New Chum Creek. The new design should demonstrate that the proposed works will have no significant effect on flooding levels in New Chum Creek or result in changes to flows that could have a significant environmental impact.	Appendix O presents an options analysis of the New Chum Creek crossing. The review demonstrates that while the afflux can be reduced somewhat this is not possible without significant cost. BMA is holding discussions with the upstream landholder affected by this issue.
9.15	<p>For operational phase, the EIS should provide a detailed assessment of the effects of inundation of the proposed project site from a 1:500 year ARI flood event.</p> <p>For the phase after mining ceases, the EIS should also provide a detailed assessment of the protection measures for final voids, uncompacted overburden and workings from the 'probable maximum flood' level based on Bureau of Meteorology's 'probable maximum precipitation' forecast for the locality.</p> <p>If these recommended standards would not be met, the EIS needs to present a detailed argument of the reasons, and provide measures to be adopted that would ensure that Fitzroy Basin water quality would not be compromised in the long-term.</p>	<p>The 500 year ARI flood extent from the regional flooding of the Isaac River has been predicted for the operational phase of the mine excluding the mine catchments. This is presented in Figure A3-1. This figure shows that the Daunia Mining Lease only experiences very minor flooding from the 500 year ARI event from the Isaac River. Works will be undertaken on the lower area of the Mining Lease to protect the project from 500 year ARI flood event from the Isaac River.</p> <p>It is believed that the PMF requirement for protection of the final void is not necessary. Based on the terrain in the area, the flooding mechanism which would likely cause water from the PMF from the Isaac River to flood the final void would be from a backwater effect. This would mean the floodwater would enter the final void as the water backing up from the River. Therefore the water within the final void would have very limited opportunity to be released in the event of regional flooding, as the final void would not drain below the level of the top of the final void.</p>
9.16	The EIS should provide more detailed information on, and illustrations of, the proposed size and shape of the final voids.	Appendix C (Attachment 2) shows the Final Landform Hydrology and includes a discussion explaining the final void location and size.
9.17	The EIS should reassess the mine plan and consider alternative ways of extracting the resource that would leave a much smaller final void. Reasoned arguments should be presented for selecting a preferred alternative.	A discussion on the methods used to design the final landform is provided in Appendix J . These BMA guidelines are used for all BMA Projects. Further information specific to the Project is provided in Appendix C demonstrating the logic and behind moving from the final stage of mining to an environmentally effective final void design.
9.18	The EIS should provide more detail on the equilibrium water levels in the final void in relation to the proposed final landform and illustrate the likely size of the residual lake during both drought and wet climatic conditions. Assess, under what conditions, if ever, including under Probable Maximum Precipitation, water in the final void would discharge to the surrounding environment. If discharge from the final void could occur, assess the potential impacts of the discharge.	Preliminary final void modelling suggests that in the worst case the final void equilibrium water level would be approximately 25 m of below the surface. With this freeboard the final void will not overtop in the PMP.

ID	Major issues - Summary	Response
9.19	The EIS should model the water quality in final voids as a prelude to providing a reasoned, evidence based assessment of the potential impacts of hyper-saline water in the void on both surface and groundwater resources.	Appendix C documents the final void hydrology and water quality.
9.20	The EIS should provide details on the final landform and include figures that illustrate contours and include cross sections at appropriate intervals. The EIS should also provide details on: Final drainage and seepage control systems Measures to ensure stability of the waste dumps.	Appendix C shows the Final Landform Hydrology.
9.21	The EIS and EM Plan should provide measures for the chemical and physical characterisation of overburden and interburden that would be adequate for the selective management of those waste materials.	The overburden and interburden for the Project have been characterised through analysis of 21 drill holes and sampling from all major lithological units in these holes. As mining proceeds characterisation of spoil and waste material will continue consistent with Appendix J "BMA Sustainable Landform Guideline".
9.22	The EIS and EM Plan should provide: <ul style="list-style-type: none"> ■ Details of how the sites and materials for co-disposal cells will be chosen, constructed and managed; ■ As assessment of how the risk of failure will be addressed in the design of co-disposal cells; and ■ An assessment of the long-term stability of spoil dumps in relation to the co-disposal cells. 	<p>The Project will make no use of co-disposal cells. The following protocols will be put in place to manage tailings and rejects:</p> <ul style="list-style-type: none"> ■ All coarse reject and dewatered tailings material will be trucked to either the out-pit or in-pit waste dumps. ■ No reject material will be placed any closer than 10m to the final landform slope. This will be managed by survey limit pegs. <p>There will be no concentrated dumping of reject materials:</p> <ul style="list-style-type: none"> ■ All reject material will be dumped and mixed, either over a tiphead or paddock dumped, alongside dry waste material in order to minimise areas of geotechnical instability; ■ No reject material will be used to form any part of tiphead safety bunds, haul roads or ramps; ■ No reject material will be dumped below the pre-mining groundwater table; and ■ All dumps will be design and constructed to be free-draining. <p>A Tailings and Rejects Management Plan is presented in Appendix F. The Plan discusses the proposed management strategy for disposing coal rejects and dewatered tailings into the spoil. The stated strategies will not impact on dump stability.</p>

ID	Major issues - Summary	Response
9.23	<p>The EIS and EM Plan should provide details of the criteria to be used to select sodic or dispersive spoil for special handling and disposal, and the measures to be taken that will ensure selected material will be suitable placed and encapsulated or covered. The EIS and EM plan should similarly discuss the selection and disposal of acid generating material.</p>	<p>Appendix J contains the "BMA Sustainable Landform Guideline". This document has been used to derive the control strategies that will be put in place at the Project to manage sodic and dispersive spoil. Spoil with high exchangeable sodium percentage (ESP) - generally > 15% - is dispersive and erodible. Appendix G-5 of the Project draft EIS summarises that average ESP for spoil at the Project is likely to be 11-12%. The 75th percentile of the 199 samples analysed was 16%. Appendix G-5 also indicates that sufficient benign spoil is likely to be available. The 25th Percentile value for ESP of the 199 samples was 7%. Soils with ESP below 7% are generally considered non sodic. Extrapolating these results suggests that approximately 1/4 of the spoil is unsuitable for direct rehabilitation. In accordance with the guidelines in Appendix J, BMA will manage this material through the following measures:</p> <p>Soil surveys will be conducted ahead of mining to confirm soil material suited for reuse in rehabilitation.</p> <p>Dispersive spoil (> 15% ESP) will be covered by at least 1 m of benign spoil.</p> <p>Topsoil will be used extensively to provide quick vegetative cover.</p> <p>A mixture of grass, shrub and tree species will be used in the species mix.</p> <p>Topsoil material will be replaced strategically to maximise its benefits in rehabilitation, and where practical every attempt will also be made to re-spread topsoil immediately after it is stripped.</p> <p>Previous experience at Norwich Park Mine has shown that the range of soils on site can be successfully rehabilitated to produce a stable landform. It should also be noted that relevant to other tertiary spoils at BMA mines, the Project spoil is not highly saline, with a maximum EC of 2520 $\mu\text{S}/\text{cm}$, and average EC of 700-800 $\mu\text{S}/\text{cm}$. This is well below the vegetation tolerance limits (4000 $\mu\text{S}/\text{cm}$) and suggest that the salinity of runoff water will also be lower relative to other BMA mines in the Bowen Basin.</p> <p>The rehabilitation design will focus on mitigation of erosion and use, where appropriate, graded banks and contour ripping, to minimise initiation of erosion.</p>
9.24	<p>Consider the likelihood of species listed within WILDNET records (within 50km of the mine location) occurring in the mine footprint as well as the likely impact on the species and methods for avoiding or mitigating impacts. additional species under the Nature Conservation Act (WildNet)</p>	<p>Appendix N discusses the WILDNET records, the likely impact of the project on species and mitigations measures.</p>

ID	Major issues - Summary	Response
9.25	Clearly state which AusRivAS models were used to compare with sites sampled for macro-invertebrates and provide a comparison of how well the attributes of the sampled sites correspond with the model(s).	The EPA's John Platten was contacted on 26 February and confirmed that the information supplied in Apendix J.2 and the body of the Project draft EIS, specifically Table 9-7 is sufficient.
9.26	The EIS should in detail, propose offsets, viable in the long-term and in accordance with the Queensland Government's Environmental Offsets Policy, for the loss of ecological values.	Appendix N provides a summary of the Vegetation Offset options for the project. The proposed environmental offset area at Norwich Park Mine has been surveyed on several occasions since 2004. In summary the site contains a mix of remnant and regrowth Brigalow and Dawson Gum on dark cracking clays, with an extensive network of gilgai present. Most recently, the site was inspected by officers from the Queensland EPA Nature Refuge Branch, specifically to assess the suitability of the area as a nature refuge. The EPA officers were very supportive of a nature refuge agreement being negotiated for the area and were also informed that this area of approximately 710 hectares would be used to offset disturbance to Endangered Regional Ecosystems at other BMA projects in the Central Highlands area. No specific discussions about the proposed Daunia offset at Norwich Park Mine have been held with the EPA, however given the reasonably close proximity of the two sites to each other, the similar vegetation types at both sites, and most importantly the improved size, habitat value and connectivity that the Norwich Park site offers, the proposed offset should be looked upon favourably. Additionally, the fact that BMA is negotiating a Nature Refuge Agreement further adds weight to the value of the proposed offset.
9.27	The EIS should significantly expand the scope and detail of practical measures that would be undertaken to avoid or mitigate the impacts of both construction and operation on flora and fauna.	Appendix N discusses the mitigation of impacts to flora and fauna.

ID	Major issues - Summary	Response
9.28	<p>The EIS should use the current EPP (Air) 2008 guideline for analysing the potential impacts of the project against the 24 hour averaged mass concentration of PM₁₀. Also provide clarification on the source of the nuisance guideline for dust deposition and explain the proposed use of the standard given the recent commencement of the EPP (Air) 2008.</p>	<p>It is acknowledged the <i>Environmental Protection (Air) Policy 1997</i> has now been superseded by the <i>Environmental Protection (Air) Policy 2008</i> (EPP(Air) 2008). The ambient air quality goal for 24 hour average PM₁₀ concentration has been amended in line with the National Environment Protection Measure (NEPM) for Ambient Air Quality. The ambient air quality goal for 24 hour average PM₁₀ concentration in the EPP(Air) 2008 is 50 µg/m³ with five allowable exceedances per year.</p> <p>The maximum predicted 24 hour average PM₁₀ concentrations at nearest sensitive receivers for Year 20 operations of the Project are presented in Table 10-8 of the EIS. The maximum 24 hour average PM₁₀ concentration is 79 µg/m³ at Olive Downs (including a background of 20 µg/m³). This is greater than the PM₁₀ goal of 50 µg/m³ (with five allowable exceedances per year) in the EPP(Air) 2008.</p> <p>The air quality assessment determined there is the potential for exceedance of air quality goals in the EPP(Air) 2008 at Olive Downs. The proponent has committed to implementing an appropriate monitoring program to determine if the mine is generating air quality impacts at this receiver.</p> <p>The source of the reference for the dust deposition nuisance guideline of 120 mg/m²/day is:</p> <ul style="list-style-type: none"> ■ EPA, 2003, Environmental management of mining activities: Preparing an environmental management overview strategy (EMOS) for non-standard mining projects, version 1.1, Environmental Protection Agency, Ecoaccess Guideline 8, 03/2003. ■ The standard has been adopted because neither the Environmental Protection (Air) Policy 1997 nor the EPP(Air) 2008 specify a guideline for dust deposition rates.

ID	Major issues - Summary	Response
9.29	<p>The PM₁₀ results presented in Figure 10-3, recorded at Olive Downs and Winchester Downs for previous PM₁₀ monitoring do not detail the method used nor do they explain the circumstances that led to particulate concentrations being above current guideline values for substantial periods of time.</p> <p>The EIS should examine the meteorological conditions that lead to high PM₁₀ concentrations at sensitive receptors and undertake additional modelling of the potential for concentrations to be exacerbated by the proposed development under these circumstances.</p>	<p>BMA commissioned Ecotech to install and operate DustTrak monitors at Olive Downs and Winchester Downs. The DustTrak is an unattended instrument and meteorological data was not collected at these locations. Therefore the circumstances or sources that resulted in PM₁₀ concentrations above the ambient air quality guidelines in the EPP(Air) 2008 have not been identified.</p> <p>The 95th percentile 24 hour average PM₁₀ concentration (20 µg/m³) recorded at Winchester Downs has been selected as the background concentration for the purposes of the assessment. The long term average PM₁₀ concentration recorded at both locations only 10 µg/m³.</p> <p>The EIS identified the potential for localised dust sources at both Olive Downs and Winchester Downs to contribute to elevated dust deposition rates at these locations.</p> <p>The background 24 hour PM₁₀ concentrations and dust deposition rates adopted for the purposes of the assessment do not contradict each other. PM₁₀ concentrations represent the mass of particulate matter less than 10 µm suspended in a given volume of air. Dust deposition rates represent the mass of particulate matter (including all size fractions) to deposit (or fall out) over a given area and time. Air quality monitoring in environments with a high proportion of TSP compared to PM₁₀ will result in low PM₁₀ concentrations and high dust deposition rates.</p> <p>As stated the circumstances or sources that resulted in PM₁₀ concentrations above the ambient air quality guidelines have not been identified.</p> <p>The air assessment methodology of estimating air emissions using NPI emission factors and modelling with Ausplume generally results in conservative predictions for 24 hour PM₁₀ concentrations. One year of meteorological data has been used for air quality modelling which contains a range of conditions that may affect the dispersion of dust from mining operations. It is not considered there is any need for additional modelling of 24 hour PM₁₀ concentrations.</p> <p>The EIS has identified there is the potential for exceedance of the 24 hour PM₁₀ goal in the EPP(Air) 2008 at Olive Downs. The proponent has committed to implementing an appropriate monitoring program to determine if the mine is generating air quality impacts at this receiver.</p>

ID	Major issues - Summary	Response
9.30	Provide verification that Year 20 of the project would be the worst case scenario for potential impacts to air quality. Also, provide estimates of dust deposition rates on a monthly rather than annual average basis.	<p>The potential impacts on air quality were considered for Year 20 operations as this was considered the worst case scenario. The justification for adopting Year 20 operations was presented in Section 10.4 of the EIS. The Year 20 operating scenario was selected as it was considered to have the highest potential for air quality impacts as the mining operations will be closest to sensitive receivers, and the haul distances from the pit to the coal handling and processing plant (CHPP) will be greatest.</p> <p>The monthly average dust deposition rates nearest sensitive receivers for Year 20 operations of the Project are presented in Appendix R. The predicted dust deposition rates at all sensitive receivers were more than the guideline of 120 mg/m²/day because the average background dust deposition rate (145 mg/m²/day) is already above the guideline level. The maximum predicted dust deposition rate occurred at Olive Downs. The predicted increase in dust deposition rate at Olive Downs due to mining is less than a quarter of the existing average background level.</p>
9.31	Provide the calculations carried out to obtain values for L _r ,1 hour dB(A) in Table 12-8, Planning Noise Levels for the Daunia Mine Project.	The appendices have been amended to include calculations carried out to obtain values for L _r ,1hour dB(A) in Table 12-8, Planning Noise Levels for the Daunia Project.
9.32	Express the noise limits in the EM plan's Table 3-5 Noise Limits (Noise Sensitive Place) in terms of the L _A r values as shown in Table 12-8 Planning Noise Levels for the Daunia Coal Mine Project.	The EM plan's Table 3-5, Noise Limits (Noise Sensitive Place) have been updated with actual values of noise limits. The updated values represent the minimum noise limits derived from noise monitoring at Daunia Station, Olive Downs homestead, and Mavis Downs homestead.
9.33	It is recommended that the proponent give a commitment to modify operations so that acceptable noise and vibration levels are not exceeded or introduced appropriate mitigation measures.	The Proponent will commit to appropriate mitigation measures at Olive Downs in years 15 to 20 to ensure that acceptable noise and vibration levels are not exceeded. These mitigation measures will include control strategies outlined in the EM Plan (Appendix L). Additional control strategies are likely to be required to achieve compliance under worst case meteorological conditions. These control strategies will be specific to the detailed mine planning and operations in year 15-20 and detailed noise and vibration management plans will be developed in response.

4.10 Queensland Police Service

ID	Major issues - Summary	Response
10.01	<p><i>Relevant Project draft EIS Section: Section 13</i> Road safety is expected to be impacted by the increase in construction and contractor vehicles together with wide loads travelling on the Peak Downs Highway, and also a number of bus routes in the area. There is a need to develop a Traffic Management Plan.</p>	<p>Appendix H contains a Traffic Management Plan that provides details on how the project will:</p> <ul style="list-style-type: none"> ■ manage the movement of vehicles in transit and the interaction of vehicles with pedestrians on site. ■ minimise delays to road users associated with the movement of vehicles to and from the Daunia Mine Project; ■ minimise delays to road users associated with construction of the Daunia Mine and associated works; and ■ maximise the safety of all road users during the construction and operation of the Daunia Mine Project.
10.02	<p><i>Relevant Project draft EIS Section: Section 13</i> Traffic management plan for towns en-route (Emerald, Coppabella, Clermont, Nebo etc).</p>	<p>See Appendix H Traffic Management Plan.</p>
10.03	<p><i>Relevant Project draft EIS Section: Section 13</i> Fatigue Management Plan. The increased numbers of employees and contractors that will be housed at Coppabella Workers Village and driving on the Peak Downs Highway on a rotational shift basis.</p>	<p>Appendix I contains the BMA Hours of Work Standard that will be applied during the project. It outlines prepared outlining the policies and procedures for managing fatigue that will be used.</p>
10.04	<p><i>Relevant Project draft EIS Section: Section 13</i> Disaster Management Plans. The increased transportation by heavy vehicles of dangerous goods may impact on community safety in the pass through towns. Consideration should be given to the location of 'park up' areas and their proximity to populated and or refuelling stations / roadhouses. A review should be considered of allowable access times through Emerald townships to minimise park up times.</p>	<p>Dangerous goods being transported to site and on site must be according to the Australian Dangerous Goods Code and Queensland Dangerous Goods Regulation. No dangerous goods and hazardous substances are to be transported unless approved by the site management. Prior to transporting Dangerous Goods to site, a risk assessment will be done and a specific traffic management plan will be developed.</p>

ID	Major issues - Summary	Response
10.05	<p><i>Relevant Project draft EIS Section: Section 13</i></p> <p>Determine the number and size of wide loads as a part of a project schedule to enable the coordination of marked police vehicles allocated for operational deployment for core policing responsibilities. This will permit a better understanding of the number of additional vehicles and equipment required to meet increased demand for police escorts of wide loads.</p>	<p>The construction of the mine infrastructure is expected to generate 65 wide loads, of which 36 will require police escort. These loads will be delivered from April to June 2009.</p> <p>The transport of the mining fleet will generate 82 wide loads, of which 35 will require police escort. The loads will commence in July 2009, with the majority of loads occurring in August (26 total loads, 10 police escorted) and September 2009 (32 total loads, 14 police escorted). The delivers will be complete by April 2010.</p> <p>A risk assessment for oversize and wide loads to be transported to and from site must be completed prior to the load coming or leaving site. The risk assessment shall include control measures to protect pedestrians and the public. These controls are to be implemented as per the risk management procedures.</p> <p>A specific traffic plan which covers route, escort, park up areas and loads must be provided to the Project Manager for approval prior to transportation of the load.</p>

ID	Major issues - Summary	Response
10.06	<p><i>Relevant Project draft EIS Section: Section 17</i></p> <p>Consultative process with all mining, Local and State Government Agencies as to the implications of the affordability and availability of housing and accommodation for Police Officers required to meet increased calls for service as a result of the Mining Industry in general and the Daunia Mine project in particular.</p>	<p>Access to affordable housing has been identified as an issue for a range of service providers in the Bowen Basin. Through the Sustainable Resource Communities Fund BMA has advocated the need for upgraded Government service accommodation and affordable housing provision.</p> <p>BMA acknowledges that it is the role of government and its agencies to manage and mitigate these impacts, but as the proponent, will continue to contribute information and forecasts as appropriate, to assist government in appropriately allocating resources and funds.</p> <p>BMA has a dedicated Housing Manager who works closely with local councils and development planning committees to share responsibility in easing pressure on housing demand, which has traditionally driven up the costs of housing and rent.</p> <p>BMA also helps to relieve pressure on local government budgets by funding special rates and paying for headwork charges, thereby freeing up Government funds for investment in affordable housing.</p> <p>BMA also works closely with third party providers and local government to ensure supply of developed land to the community. BMA will continue to engage in commercially realistic agreements to assist investors in developing rental accommodation.</p> <p>BMA has requested membership on the Sustainable Resource Communities Leadership Group so that it can further support Government in its planning for social infrastructure and service provision in addressing the cumulative impacts of growth.</p> <p>BMA is currently advocating the need for a Northern Bowen Basin and Mackay Regional Planning exercise to ensure that the cumulative impacts of growth are also considered and addressed at a regional level. The aim of this proposed planning exercise is also help prepare the region for the strong medium and long-term coal industry growth outlook.</p> <p>Behaviour on-site at the Mac Accommodation Village in Coppabella is monitored, for the safety of those living in the Village, and the wider community. Because there are a number of measures in place to ensure a positive living environment at the Accommodation Village, the quality of facilities and monitored supervision, it is expected that travel outside the Village for Daunia Mine workers while on shift will be minimal, thereby reducing the need for additional Police resources. Further detail relating to how BMA is responding to housing affordability and the need for additional police services is provided in Appendix Q.</p>

ID	Major issues - Summary	Response
10.07	<p><i>Relevant Project draft EIS Section: Sections 3 & 13</i> More detailed advice as to the numbers of workers, the locations of those workers, housing and accommodation and traffic impact to assist in determining future increases in calls for service</p>	<p>Daunia is a proposed contractor-operating model, and the primary accommodation location for the workforce is the Mac Accommodation Village at Coppabella. At least 90 per cent of the construction workforce, and 70 per cent of the operational workforce, will be housed at the Village and BMA will build houses and units in Moranbah to accommodate the operational management team.</p> <p>Travel outside the Village for Daunia Mine workers while on shift is expected to be minimal, thereby reducing the need for additional Police resources.</p>
10.08	<p><i>Relevant Project draft EIS Section: Section 19</i> The development of appropriate response plans, consultation processes and resourcing for disasters and incidents.</p>	<p>BMA is committed to developing appropriate emergency response plans in consultation with the appropriate agencies and contacts.</p>
10.09	<p><i>Relevant Project draft EIS Section: Section 17</i> Scope the requirement for additional police resources including staffing increase to the Central Police Region, new police stations, specialist resources and other equipment required.</p>	<p>BMA acknowledges that it is the role of government and its agencies to manage police force resourcing requirements, but as the proponent, BMA will continue to contribute information and forecasts as appropriate, to assist government in appropriately allocating resources and funds.</p> <p>Through the \$100 million Sustainable Resource Communities Fund, BMA is also advocating for the need for affordable accommodation for all government services, including Police services, and the upgrade of Police stations and emergency services facilities.</p> <p>Behaviour on-site at the Mac Accommodation Village in Coppabella (where the majority of the proposed contractor workforce will reside) is monitored, for the safety of those living in the Village, and the wider community. There are a number of measures in place including a restricted wet mess, which opens at midday and with last drinks at 9.30pm.</p> <p>There are a range of recreational facilities and activities on offer to mitigate against a 'drinking culture'. For example, lap pool and tennis court currently being developed, walking and running tracks, 24 hour gym, library, BBQ and social areas, and lots of green space. Inappropriate behaviour is not tolerated at the Village - residents are aware that inappropriate behaviour will lead to bans from the tavern and recreational facilities. Mixed sexes at the camp also encourages a culture of mutual respect and socially appropriate behaviour (approximately a 80 per cent male, and 20 percent female split).</p> <p>Because there are a number of measures in place to ensure a positive living environment at the Accommodation Village, the quality of facilities and monitored supervision, it is expected that travel outside the Village for Daunia Mine workers while on shift will be minimal, thereby reducing the need for additional Police resources.</p>

4.11 Queensland Health

ID	Major issues - Summary	Response
11.01	<p><i>Relevant Project draft EIS Section: Section 5</i></p> <p>Releases of waste water from natural (i.e rainfall) and operational activities to local surface waters may occur. Such releases have the potential to impact downstream uses including drinking water. Recommends the Coordinator General include conditions to ensure the appropriate management of waste water discharges and protect drinking water sources.</p>	<p>Appendix A - Mine Water Management Plan discusses the impacts to local surface waters.</p>
11.02	<p><i>Relevant Project draft EIS Section: Sections 10 & 12</i></p> <p>Predicted 24 hour average PM₁₀ concentrations and evening noise emissions exceed current air quality goals in the EPP (Air) 2008, at the Olive Downs residence. Recommends the Coordinator-General include conditions to ensure the impacts of air and noise emissions are appropriately mitigated. QH reinforces the importance of air and noise monitoring to ensure the effectiveness of the mitigation strategies.</p>	<p>BMA acknowledge operations in Years 15 to 20 of the Daunia coal mine has the potential to generate air quality and noise impacts at the Olive Downs residence. The EM Plan details mitigation measures to reduce the potential for both air quality and noise impacts at sensitive receivers. BMA propose an air quality and noise monitoring program to determine if mining operations at Daunia are generating air quality and noise impacts. Consultation with the landholder should also assist in reducing the potential for air quality and noise impacts.</p>
11.03	<p><i>Relevant Project draft EIS Section: Section 5</i></p> <p>The project's activities, such as screening, sizing and analysis may result the concentration of naturally occurring radioactive materials, e.g. uranium and thorium series radionuclides. QH seeks an assessment of naturally occurring radioactive materials, their potential impacts and any proposed mitigation strategies.</p>	<p>Coal processing does not concentrate radionuclides as clays are separated from coal during the process. The radionuclides are contained in the clays in the same ratios as the host rocks (ie Earth's Crust) and are not concentrated during processing, as they are passed through the plant unchanged in mineral composition.</p> <p>The treated coal is lower in radionuclide concentration after the removal of the clays. So overall there is a slight increase in actual level of radionuclides due to removal of coal from the mine but not above natural rocks in earth's crust. With coal in the host rocks the natural levels of radionuclides are lower.</p> <p>Concentration of remaining radionuclides in coal will occur during combustion of the coal at the customer's site but will still only be in the ratio of the minerals in the ash content of the coal.</p>

4.12 Department of Environment, Heritage and Water

ID	Major issues - Summary	Response
12.01	<i>Relevant Project draft EIS Section: Sections 8 & 9</i> Request that the April 2008 targeted surveys carried out by SKM be included in the Appendices.	A Survey Report is presented in Appendix D detailing the methods used during the 2008 Survey.

4.13 Department of Mines and Energy

ID	Major issues - Summary	Response
13.01	<i>Relevant Project draft EIS Section: Section 8</i> Detailed estimates of the identified coal resources within the project area have not been provided on a seam by seam basis as required by the ToR - nor has the proponent provided any clarification of the limiting parameters used when preparing the resource estimates stated.	Appendix E contains detailed estimates of the coal resources on a seam by seam basis. The model constraints are also detailed.
13.02	<i>Relevant Project draft EIS Section: Section 4</i> The EIS states 'No resources were computed for the small areas that overlap into ML 70115 Daunia East, ML 70116 Red Mountain or north of ML 1781 Daunia'. This suggests that there are coal seams in areas outside the main Daunia mining lease that will either not be mined or sterilised through the placement of spoil. The proponent should provide estimates for the coal in these seams, together with reasons justifying the decision not to mine this coal and to place spoil on top of this coal.	Appendix E provides details of the coal seams that will either not be mined or potentially sterilised by the project.
13.03	<i>Relevant Project draft EIS Section: Section 4</i> Provide an analysis of those parts of the coal deposit that will not be mined, also comment on the identified coal resources and/or other coal seams in the Rangal Coal Measures within the project area, will not be mined and why. Justify placing out of pit spoil dumps over coal seams. Provide info on coal seams.	Appendix E provides an analysis of the sections of the coal deposit that will not be mined.

ID	Major issues - Summary	Response
13.04	<p><i>Relevant Project draft EIS Section: Section 4</i></p> <p>Provide estimates (seam by seam basis) for the coal in the central area of the deposit and comment on whether the intention is to allow for this coal to remain accessible for future extraction. Provide comment on whether or not as the mine advances there are plans to progressively extract coal from exposed end walls of the pits prior to spoil backfilling operations.</p>	<p>Appendix E includes further details of coal resources in the central area of the deposit. Appendix E also includes constraints associated with the resource model. Based on these constraints and proposed mining methods all of the Daunia deposit is viable to open-cut mining with the exception of the area of deep coal in the central area of the deposit.</p>
13.05	<p><i>Relevant Project draft EIS Section: Section 4</i></p> <p>Figure 4-2 shows very little detail at a project scale, units shown on the map are incorrectly represented in the legend, Geological structures mentioned in the text are not shown on any maps. The EIS does not present a typical stratigraphical section or any geological cross sections for the project area. The EIS should show in some measure of detail both the surface geology as well as the solid geology in the project area. Redraft Figure 4-2 at an appropriate project scale.</p>	<p>Figure 4-2 is updated and included in Appendix E as Figure E-1. A typical stratigraphical section is also included in as Figure E-5 This figure includes both solid geology and geologic structures. A further figure E-2 has been provided to show the coal extent and structure in a greater level of detail at a scale of 1:150,000.</p>

4.14 Department of Infrastructure and Planning

ID	Major issues - Summary	Response
14.01	<p><i>Relevant Project draft EIS Section: Section 17 Social</i></p> <p>A description of the community engagement strategy should be included in this section including engagement with Indigenous members of the population. This is required to demonstrate the adequacy of the engagement process and to inform the development of future engagement strategies over the life of the project.</p>	<p>BMA has conducted an extensive community engagement program for the BMA Growth Project focussed on preparing the community for the overall growth of BMA interests in the region. This growth includes the Daunia Coal Mine, Caval Ridge Coal Mine and the Goonyella Riverside Expansion. It also considers the relocation and upgrade of the Moranbah Airport.</p> <p>BMA's community engagement strategy is to undertake an extensive process of engagement and consultation on the Growth Project, during the EIS phase, construction and operation of the new and expanded mines. Please refer to Chapter 16 of the Daunia EIS, which details the community consultation and engagement activities carried out for the Daunia Project.</p> <p>Further detail of BMA's community engagement strategy is contained in Appendix Q.</p>

ID	Major issues - Summary	Response
14.02	<p><i>Relevant Project draft EIS Section: Section 17 Social</i></p> <p>Social baseline information collected should include a focus on vulnerable groups in the population including Indigenous people, children, women, and the elderly given that a key objective of social impact assessment is to either avoid or prevent negative impacts and where this is not possible, identify mitigation measures and actions that ensure that vulnerable groups are not disproportionately impacted by the proposed project. The social baseline information should also include the SEIFA score and relative ranking of the area (Social and Economic Index for Areas, Index of Disadvantage).</p>	<p>While the SIA studies and extensive consultation activities showed no indication that the Project would disproportionately impact any vulnerable groups in the community, BMA notes the request for additional information on these groups in the EIS.</p> <p>Information included in the SIA was provided to:</p> <ul style="list-style-type: none"> - present an overall understanding of the affected community's existing demographic characteristics, as well as to - identify groups that may be adversely impacted by the Project. <p>Given that the Project focuses on a new mine in a purpose-built mining town, and that the bulk of the workforce would be accommodated in a village in Coppabella, the studies and extensive consultation process did not indicate that the Daunia Mine would adversely impact any vulnerable community group.</p> <p>Moranbah is ranked 1576 out of 1897 suburbs in Queensland indicating a relative lack of disadvantage in the area.</p> <p>Further detail of BMA's social impact assessment is contained in Appendix Q.</p>
14.03	<p><i>Relevant Project draft EIS Section: Section 17 Social</i></p> <p>To improve readability and analysis, it would be useful, where possible, to separately identify expected local study area impacts and regional impacts in a table. This approach could also be adopted in presenting trend information. It is noted that this approach has been adopted for demographic information.</p> <p>This section would also benefit from an overall snapshot/executive summary at the beginning of the document so that the social impact assessment section can operate as a standalone document if required. The snapshot could summarise the key social issues and net benefits of the projects, list the proposed benefits of the project to the local study area, identify the possible negative impacts (and their size and significance) and proposed measures and actions to mitigate those impacts, and highlight any outstanding issues which require further investigation, consultation or negotiation with stakeholders.</p>	<p>BMA notes this feedback on preferred style for future reference.</p> <p>As the SIA is a chapter of the EIS, and not a stand-alone technical report, a summary of information is provided in the Executive Summary of the EIS.</p> <p>BMA has also produced a Community Overview booklet, providing easy-to-read summaries of each chapter in the EIS, designed in a more accessible format for the community.</p>

ID	Major issues - Summary	Response
14.04	<p><i>Relevant Project draft EIS Section:</i> Section 17.1.2.2 Ethnicity; Table 17.1.2.2</p> <p>It would be useful to incorporate the age structure of the Indigenous population in either this table or table 17-6 (population by age in Moranbah, 2001-2006), given the highly skewed nature of this population to younger age groups i.e often up to 70% under 30 yrs of age. This may assist/highlight significant opportunities for future training and employment strategies for this vulnerable and under-employed sector of the local population. Indigenous labour force status should also be included in Table 17-11 or an additional table added to include this information.</p>	<p>Appendix Q contains an updated table incorporating age structure. Further details of BMA's approach to identifying opportunities for Indigenous groups are also provided.</p>
14.05	<p><i>Relevant Project draft EIS Section:</i> Section 17.1.4</p> <p>Provide further information on any discussions with the Department of Communities about child care training issues including whether the TAFE in Moranbah delivers/could deliver this training. The size and significance of this issue to the local study area is not clear.</p>	<p>The SIA identified a general childcare skills shortage across the community. However, it also indicated that there was a new facility that was currently running well below capacity. In terms of childcare training opportunities, the local TAFE campus (developed primarily for high school students) and the larger regional TAFE currently provide access to training in childcare services.</p> <p>As Daunia is a currently proposed as contractor-operating model, with the majority of employees to be accommodated in an accommodation village. It is unlikely to impact the provision of child care services in the community.</p> <p>Further detail on BMA's support for community infrastructure and services is provided in Appendix Q.</p>
14.06	<p><i>Relevant Project draft EIS Section:</i> Section 17.1.4.2 Health Facilities and Services</p> <p>Was there adequate consultation with local health staff and did the community engagement include discussions about the adequacy of health services in including the availability of doctors, nurses and allied health staff? Does not give any analysis or assessment of the adequacy of health services in the local study area. No description of the Indigenous-specific health services/needs or whether the mainstream services cater adequately to the specialized health needs of the Indigenous population.</p>	<p>BMA acknowledges that it is the role of government and its agencies to ensure that the community has access to adequate health services, but as the proponent, BMA will continue to contribute information and forecasts as appropriate, to assist government in appropriately allocating resources and funds.</p> <p>The role of the SIA is to outline the existing provision of services to the area and to determine whether there would be an impact on those services by the Project.</p> <p>Discussions with service providers indicated that the Daunia Project alone was unlikely to impact on access to, and the adequacy of, health care but would add to the cumulative impacts felt across the region, and the broader issues with health care provision around Queensland.</p> <p>Further detail about BMA's support for local health facilities and services is provided in Appendix Q.</p>

ID	Major issues - Summary	Response
14.07	<p><i>Relevant Project draft EIS Section: Section 17.1.4.2 Health Facilities and Services</i></p> <p>Addressing the needs of the elderly is a major stressor on families. The large reduction in the number of older people living in the local study area in recent years is a significant social issue. There is no assessment of the significance of this issue to the existing/future wellbeing of community members or any general analysis as to whether current levels of care are adequate or what impacts the loss of older persons to the local study area has on demographic characteristics. This issue would be of particular concern to longer term residents of the local study area and to families living in the region.</p>	<p>The largest age group represented are those aged 25 to 29 years (5.6%). The average age of the population is 35. The proportion of those aged over 65 decreases dramatically leaving very few older people in the community of either gender. This would be attributed to the number of people who leave the area for retirement.</p> <p>BMA plays an advocacy role in helping the community obtain vital Government services, many of which will better support the elderly across the region.</p> <p>BMA, through its monthly meeting with the Isaac Regional Council, is also aware of and supports the development of sites in the Moranbah region that are being considered to cater for seniors.</p> <p>BMA's involvement in the Sustainable Resource Communities Leadership Group will see us working more closely with government and other industry groups to consider innovative projects to further support the elderly and infirmed.</p>
14.08	<p><i>Relevant Project draft EIS Section: Section 17.1.4.3 Emergency Services</i></p> <p>Given the importance of emergency services to the safety and wellbeing of the general and mining populations, this section should assessment the significance of this issue to the local study area rather than just highlighting recruitment issues due to housing availability and affordability. The section on the Fire Service states that mining companies are bound by their own legislation but does not describe these legislative requirements or identify any issues.</p>	<p>BMA is bound by the Coal Mining Safety and Health Act & Regulation. This requires BMA to have emergency capabilities based on site and a fire standard operating procedure.</p> <p>With relation to the Daunia Mine, BMA will have a Fire Tender that is fully equipped with fire fighting equipment, foam injection and on board rescue equipment. The site will also be equipped with a Self Contained Breathing Apparatus and other equipment required for vertical rescue, and general rescue and emergency management. A paramedic service will be on site during construction and operation.</p> <p>Further detail on BMA's support for emergency services is provided in Appendix Q.</p>
14.09	<p><i>Relevant Project draft EIS Section: Section 17</i></p> <p>This section is out of date – the department's name is incorrect. As domestic violence is a significant social issue in Australia, a discussion of whether domestic violence rates in Moranbah are a concern should be included. This information could be sourced from relevant local authorities including the Queensland Police and/or contact with the regional office of Department of Communities.</p>	<p>BMA notes the change of name for the Department and the request for further information on local domestic violence data.</p> <p>Domestic violence support groups were contacted directly (telephone interviews) to discuss the Daunia project and any additional strain the project might place on these services. It was not considered that the Daunia project alone would place additional strain on these support services.</p> <p>Further detail on domestic violence and support groups is provided in Appendix Q.</p>

ID	Major issues - Summary	Response
14.10	<p><i>Relevant Project draft EIS Section:</i> Section 17.1.4.4 Community Services</p> <p>This section should clearly define and describe the objectives and practical measures for protecting or enhancing social values, describe how these would be achieved, managed, monitored, and evaluated. Mitigation measures should reflect detailed community engagement on these issues, a detailed analysis of the baseline information gathered and, where appropriate, an understanding, knowledge, and awareness of relevant government policies, programs, and services which impact on these issues. It is agreed that collaboration between stakeholders is required to address the housing supply and affordability issues. The section would be improved by a discussion and analysis of mitigation strategies that may have been adopted in other areas/jurisdictions to address this issue. The section would benefit from a description of existing work undertaken to address this issue including work/consultation with stakeholders undertaken by the Planning Division of the Department of Infrastructure and Planning and the Department of Housing.</p>	<p>BMA is updating its community investment strategy to ensure that the organisation's community investment is well targeted to address the key short, medium and long term needs of our host communities. This strategy is being updated by BMA's Community Investment Manager, in partnership with the community and government. The strategy will address cumulative impacts of growth and will provide a framework for identifying priority projects.</p> <p>Further detail on potential social impacts and mitigations measures is provided in Appendix Q.</p>
14.11	<p><i>Relevant Project draft EIS Section:</i> Section 17.1.4.4 Community Services</p> <p>An increase in demand for short-term accommodation and the reduction in the availability of supply for other non-mining related sectors i.e tourists could be identified as a possible local business opportunity.</p>	<p>BMA notes the need to detail the potential local business opportunities stemming from an increased demand for short-term accommodation in the region.</p>

ID	Major issues - Summary	Response
14.12	<p><i>Relevant Project draft EIS Section: Section 17.2.3.</i></p> <p>This section only identifies Indigenous people as being approached for employment in relation to cultural heritage clearance. While this is an important issue, many parties including Construction Skills Queensland are undertaking initiatives to increase the engagement of Indigenous people with the mining industry to increase construction opportunities. A framework for these initiatives exists in an MoU between the Queensland Government and the Queensland Resources Council. This should be listed in the mitigation measures section on page 40.</p>	<p>At the 2006 Census, the Indigenous population in the study area was 139 persons or 1.9% of the total population. Only 12 Indigenous people in Belyando Shire were identified as unemployed at the 2006 Census.</p> <p>The mining industry surrounding Moranbah has brought about proactive recruitment programs for Indigenous candidates. A small growth in the Indigenous community over time suggests that these strategies and genuine employment opportunities have been encouraged.</p> <p>A formalised engagement strategy focused on training, education and business development opportunities for Indigenous people is in its formative stages of development at BMA.</p> <p>BMA has a good working relationship with Indigenous groups associated with the Daunia project. As BMA grows, so too does the need for cultural heritage studies, for which we engage the local Traditional Owners. There is only a small pool of specialists to carry out this work, and rather than BMA drawing from these resources to employ Indigenous personnel at BMA mine sites, feedback from the Traditional Owners indicates that they would rather BMA keep them employed through cultural heritage studies, which supports their individual business growth, rather than employing them directly at BMA mine sites.</p> <p>BMA also has representation of the Queensland Resource Council's Indigenous Affairs Committee, to better advocate for the needs of Indigenous communities across the Bowen Basin. Through its involvement in the QRC's Indigenous Affairs Committee, BMA is part of an industry-wide effort to increase Indigenous employment in the resources sector (QRC and State Government memorandum of understanding).</p> <p>BMA considers employment opportunities for all groups in the community, including Indigenous groups, which is outlined within this SIA.</p>

4.15 Department of Emergency Services

ID	Major issues - Summary	Response
15.01	<p><i>Relevant Project draft EIS Section:</i> Section 6.1.1.4 Existing Flood Characteristics - Mining Areas</p> <p>Figure 6-5 demonstrates the 100 year ARI inundating in the Southern section of the site, DES recommends the proponent consider whether the project complies with the Specific Outcomes and Solutions within SPP 1/03 Guideline/Appendix 5 1</p>	The project complies with the outcomes of the SPP 1/03 Guideline/Appendix 5 1.
15.02	<p><i>Relevant Project draft EIS Section:</i> Section 19 Health, Safety and Risk</p> <p>Appropriate regional contact details provided in regards to further consultation about fire issues.</p>	The EIS commits BMA to further consultation with the DES and QFRS on emergency response and planning requirements, including bushfire. This will include prior to and during both construction and operation.
15.03	<p><i>Relevant Project draft EIS Section:</i> Volume 2/3.3</p> <p>Comment - DES requires no further information regarding landslide hazard mitigation treatments at this stage.</p>	No response required.

ID	Major issues - Summary	Response
15.0	<p><i>Relevant Project draft EIS Section:</i> Section 19.10 Emergency Planning</p> <p>This section includes a commitment to consult with QFRS, QAS and EMQ regarding emergency response planning;</p> <p>Issues of concern as follows:</p> <ul style="list-style-type: none"> ■ site access and egress; ■ construction/operation staging; ■ road closures and traffic hazards; ■ storage and location of hazardous goods on-site; and ■ other concerns as identified. 	<p>The EIS commits BMA to further consultation with the DES, QFRS, QAS and EMQ on emergency response and planning requirements.</p> <p>To address the raised issues of concern, the following details are provided.</p> <p>Site Access and Egress - Any external emergency personnel called to an emergency would be met at the Poitrel, Daunia and Millennium Mine intersection with the Peak Downs Highway and escorted to the mine site. This is as per the Daunia Emergency Management Plan.</p> <p>Construction/Operation Staging - This is provided in the Project Description of EIS. The Emergency Management Plan and all associated procedures and equipment including the Emergency Response Vehicle and trailer will be transferred from Construction across to Operations.</p> <p>Road closures and traffic hazards - Public road hazards or closures will be managed in coordination with relevant agencies.</p> <p>Storage and location of hazardous goods on site - These substances will be managed in accordance with SOP250 - Management of Hazardous Substances and have been referred to in section 19 of the EIS. Storage of chemicals is also done in accordance with the relevant Australian standards. Storage facilities for flammable substances have been designed in accordance with the relevant standards and the designs reviewed.</p> <p>The storage of chemicals during construction is also being done to avoid any storage compatibility issues and meet safety and environmental requirements with many of the substances being stored in flame containers with integrated bunding. Emergency equipment in accordance with the manufacturer's Material Safety Data Sheet is also held on site. Quantities are also kept to a minimum to minimise the risks. In addition all chemicals being brought to site must be approved for use on site and if the chemical poses an unacceptable risk during use or storage it is substituted for a safer or more environmentally friendly product.</p>

4.16 Department of Employment and Industrial Relations

ID	Major issues - Summary	Response
16.01	<p><i>Relevant Project draft EIS Section: Section 17</i> DEIR notes that the Environmental Impact Statement has a comprehensive analysis of the impact of the proposed project on the local, regional and national labour market.</p>	No response required.
16.02	<p><i>Relevant Project draft EIS Section: Section 17</i> DEIR is keen to assist the proponents of the project maximise employment opportunities for local people, including local Indigenous people. The latter is in line with the MOU between the Queensland Government and the Queensland Resources Council of and its member companies, to increase Indigenous employment in the resources sector in Queensland.</p>	BMA welcomes opportunities to work collaboratively with local and state government, as well as local communities, in identifying employment opportunities for local people, including Indigenous people.

4.17 Disability Services Queensland

ID	Major issues - Summary	Response
17.01	<p><i>Relevant Project draft EIS Section: Sections 17.2.5 Impacts on Local Enterprise & 18.2.5.4 Workforce Impacts</i></p> <p>People with a disability living in Queensland constitute 22.1% of Queensland's total population and this percentage is mirrored in each region's population. Disability Services Queensland has an interest in the impacts that major projects have for people with disabilities based on the Queensland Government's commitment to principles of social inclusion. Disability Services Queensland notes that the EIS does not include information on people with a disability, a stakeholder group for this project with a unique set of needs. The EIS could be expanded to make specific reference to disability (including Indigenous people with a disability) in the following sections:</p> <ul style="list-style-type: none"> ■ Impacts on Local Enterprise – The section could consider whether people with disabilities could constitute part of the labour force in both the construction and operational phases of the project. ■ Workforce Impacts - The Environmental Impact Statement could include people with a disability in its considerations for an alternative labour reserve. This section could also refer to strategies that will assist to ensure that the work environment allows people with a disability to have equitable access to employment. 	<p>BMA considers employment opportunities for all groups in the community, including people with disabilities.</p> <p>Listed below is the state and federal legislation with which BMA must comply.</p> <ul style="list-style-type: none"> ■ Queensland Anti Discrimination Act 1991 ■ The Human Rights And Equal Opportunity Act 1986 (Cth) ■ The Racial Discrimination Act 1975 (Cth) ■ The Racial Hatred Act 1995 (Cth) ■ The Disability Discrimination Act 1992 (Cth) ■ The Sex Discrimination Act 1984 (Cth) ■ The Privacy Act 1988 (Cth) ■ BHP Coal Pty Ltd Enterprise Agreement 2004 (<i>wages only</i>) ■ Coal Mining Safety & Health Act 1999 (<i>all mine-site personnel</i>) ■ Worker's Compensation & Rehabilitation Act 2003 ■ Workplace Health & Safety Act 1995 (<i>other than mine-site personnel</i>) <p>BMA must also adhere to its obligations under the CMS&H Act regarding the need to be declared fit to work on site by a nominated medical advisor.</p> <p>In BMA Village Accommodation, rooms are provided for, and the central facilities meet, legislative requirements for people with disabilities.</p> <p>BMA is committed to workforce diversity. BMA has engaged a dedicated Senior Advisor Women's Employment, to develop strategies and workforce flexibility options to increase BMA's representation of women and other underrepresented groups such as Indigenous and disabled workers.</p>

4.18 Department of Tourism, Regional Development and Industry

ID	Major issues - Summary	Response
18.01	<p><i>Relevant Project draft EIS Section: 17.2.2.2 Permanent Housing</i></p> <p>The EIS has identified that a proportion of the construction and operation workforce will not be located at the accommodation village and will choose to live possibly in the larger regional coastal communities. This would indicate an increased level of drive/fly in / drive/fly out activity, with the workforce residing in areas such as Mackay, Rockhampton, Brisbane, Townsville and Cairns. The EIS would benefit from further consideration of the impact on housing in the regional centres such as Mackay and Rockhampton, where workforce may choose to live.</p> <p>Detail should be provided about how the proponent will monitor and share this information.</p>	<p>The Project draft EIS addressed the housing impacts on Moranbah, the area immediately affected by the mine.</p> <p>As Daunia is currently proposed as contractor-operating model, the primary accommodation location for the workforce is the Mac Accommodation Village at Coppabella. At least 90 per cent of the construction workforce, and 70 per cent of the operational workforce, will be housed at the Village and BMA will build houses and units in Moranbah to accommodate the operational management team.</p> <p>The impact on local housing was not considered to be significant.</p> <p>An assessment of the impact to regional areas was not conducted, however BMA considers that the impact to housing demand in regional areas will not be significant based on the following:</p> <ul style="list-style-type: none"> ■ the workforce (400 jobs during construction and 300 during operation) is comparatively small compared to the population of these regional centres; and ■ a large proportion of the workforce is likely to already be residing in these regional areas prior to the commencement of the Daunia Coal Project, and hence will not create an increase in housing demand. <p>The Project draft EIS provides details of the workforce arrangements in Section 3. Appendix P, contains BMA's Accommodation Update Newsletters, these newsletters provide regular updates on housing initiatives undertaken by BMA. BMA will look to form a closer working relationship with the Planning Information and Forecasting Unit of the DIP, to provide confidential forecasting and workforce number projections to allow for more informed planning. Effective workforce planning aligned to staged or tiered growth projects, enables non-resident workers to transition from one project to another. This ensures, as much as is practical, that workplace and community impacts from the non-resident workforce are minimised.</p>

<p>18.02</p>	<p><i>Relevant Project draft EIS Section: 17.2.3 Ability to Participate in Regional and Local Employment and Training Opportunities</i></p> <p>The EIS has identified a number of programs they currently support and would continue to do so that are relevant to address the skills / workforce issues. In view of current volatility of the coal industry and the recent retrenchments, greater emphasis could be placed on employing permanent and long term residents of the region so as to mitigate the impact on the region. This may include the requirement for prime contractors on the project agreeing to any umbrella workforce recruitment arrangements that are put in place by BMA.</p>	<p>The makeup of the contractor workforce will be the contractor's decision.</p> <p>Current and future workforce requirements are assessed, documented and forecast for the longer term outlook. Consistent with the approach, BMA would not seek to be bound solely by recruitment practices that are potentially a reaction to short term market conditions. This recruitment approach ensures that BMA understands our existing and future human resource requirements, and uses effective strategies to attract and retain the best people, appropriately communicate opportunities, and results in the right people being available at the right time, in the right location.</p> <p>In recruiting the right people at the right time, in the right location, BMA proactively helps to build capacity in its host communities, by supporting a range of cadetships, engineering programs and other skills development initiatives. Each year BMA invests \$925,000 plus wages and salaries in the Bowen Basin communities, through its <i>Skills for Growth</i> program. This investment supports engineering partnerships with the University of Queensland and Central Queensland University, graduate scholarships, a cadetship program and engineering extension programs, as well as industry initiatives such as the Queensland Minerals and Energy Academy, the Mining Industry Skills Centre and the Coalfields Engineering Skills Centre (which is joined to Moranbah High School).</p>
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<p>18.03</p>	<p><i>Relevant Project draft EIS Section: 17.2.4 Impacts on the Economic Profile of the Region</i></p> <p>The EIS states that in consultation with the Isaac Regional Council and local businesses, BMA will establish a process to advise them of the contract packages available during the construction and operation phases of the Project and of the issue of tenders for work.</p> <p>DTRDI recommends that the process of consultation be wider than Isaac Regional Council and to include Mackay Regional Council area as there is a significant mining services and technology capability located at Paget Mackay which has the potential to supply good and services during the construction and operational phase. The Mackay area also is the base for a significant number of the workforce operating in the Bowen Basin area.</p> <p>The EIS states that contractors would be encouraged to use local goods and services as much as possible and those tendering for work and contracts would be required to identify the component of their proposal to be sourced locally. The proportion of local content would be considered by the Proponent when selecting contractors. This would ensure that any potential benefits and flow-on effects to the Local Study Area would be identified and maximised. There is the potential for small parcels of work to be awarded to local contractors, such as equipment hire and fencing contractors.</p> <p>A suggested approach would be the requirement for BMA and its prime contractors to develop and implement a policy similar in nature to the Queensland Government's Local Industry Policy(LIP).</p> <p><i>The Queensland Government's Local Industry Policy was established in 1999 with the objective of giving full, fair, and reasonable opportunity for Queensland business to participate in major projects. The Policy applies to all projects valued at over \$5 million (over \$2.5 million for projects located in Regional Queensland) which attract significant Government funding.</i></p> <p>While the LIP is not applicable to the project as such, it could be used as a template for BMA and its prime contractors to report against as there is no formal reporting requirements to benchmark to the success or otherwise of the EIS.</p>	<p>Key representatives from BMA's community investment, housing and growth projects, meet monthly with the Isaac Regional Council to discuss operational activities, and proposed growth projects. This forum provides opportunities to discuss contract packages available during the construction and operation phases of the Project.</p> <p>BMA's growth project community contact points – the 1800 telephone number and the enquiries@bmacoal.com email address, receive regular queries from supply and service companies wishing to register their interest in tendering opportunities for work related to the growth projects. One third of the queries received to date have been to offer business supply or services to BMA's growth projects. All queries were responded to, and business details passed on to BMA's Mackay Supply Group, which manages the procurement of goods and services for BMA operations.</p> <p>BMA Mackay Supply holds meetings with businesses across the Mackay and Bowen Basin regions, to detail BMA compliance requirements for prospective contractors and vendors. Local, State-based and national suppliers are involved in tenders for BMA contracts. BMA's Mackay Supply Group operates from Mackay, and is well informed of the supply and business services capability within Mackay Regional Council and the broader Mackay Whitsunday region.</p> <p>BMA also engages regularly with the Central Highlands Regional Council, and presents information on BMA's growth projects to keep key representatives from the Southern Bowen Basin updated on growth plans, and employment and business opportunities.</p> <p>BMA met with the Mackay Regional Council to introduce the Project in June 2008. Key representatives from the Mackay Regional Council are regularly updated on progress of the growth projects via mailouts. Key areas of interest registered by the Mackay Regional Council included rostering, services available in Mackay, skills shortages and sourcing workforces, and DIDO/FIFO arrangements. BMA also liaises closely with the Mackay Whitsunday Regional Economic Development Corporation, updating the corporation on growth plans.</p> <p>BMA is currently auditing its operational sites and the accommodation village that house BMA contractors and staff, to determine existing practices with regard to buying local and investing in local businesses. The audit outcomes are expected to highlight key areas for improvement with regard to local procurement, as well as facilitate discussions with local business owners about preferred supplier opportunities.</p>
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<p>18.04</p>	<p><i>Relevant Project draft EIS Section: 18 Economy</i></p> <p>In view of the current reduction in demand for Bowen Basin coal brought about by the world financial crisis, the economic benefits delivered by the project will be important in offsetting the loss of jobs and export revenue and in helping to sustain the growth of the region.</p> <p>The Queensland Government has established six regions as Centres of Enterprise in key areas of industry strength. Under this initiative, the area where the proposed Daunia Mine will be located is part of the Mackay Whitsunday Centres of Enterprise region.</p> <p>The region is focussing on Mining Services and Technologies as one of the initial areas of focus under the Centres of Enterprise initiative. The expansion of coal mining developments in the Bowen Basin has fuelled business development in the sector across this region. Further, the Fitzroy and Central West Queensland Centre of Enterprise initiative is targeting Manufacturing, Engineering and Industrial Services, and the coal mines and infrastructure developments of the Bowen Basin form a major market for this sector. Action Plans have been developed in conjunction with regional stakeholders and provides a course of action for capitalising on the Bowen Basin opportunities. Over the coming months, actions will focus on developing local supply chains, addressing industrial land issues, technology diffusion and business attraction.</p> <p>Section 18.1.1.1 of the EIS states that the Daunia Mine, is primarily serviced by businesses in Mackay. It is also stated that industrial land is either available or potentially available in Clermont, Moranbah and investigations are underway regarding further land developments in Middlemount and Dysart. An element of the Action Plan is preparing local businesses to link in with significant projects, such as the proposed Daunia Coal Project will encourage contractors to use local suppliers and sub-contractors, providing information packages to Isaac Council and local businesses. The Department of Tourism, Regional Development and Industry is supportive of such a measure and where appropriate, may be available to provide advice or assistance in preparing and linking local businesses to these opportunities.</p>	<p>The comments from the Department are noted. BMA welcomes opportunities for the Department to provide advice or assistance in preparing and linking local businesses to link in with its growth.</p>
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<p>18.05</p>	<p><i>Relevant Project draft EIS Section: 20 Cumulative Impacts</i></p> <p>The EIS would benefit from the proponent committing to the following:</p> <ul style="list-style-type: none"> • The proponent to showing leadership in the community by addressing the local Leadership Group as identified under the Sustainable Resource Communities Policy. • The proponent to support local government with timely and accurate information about the impact of operation on local roads. • The proponent to provide accurate and timely predictive information on the workforce numbers, workforce location and workforce housing data on a regular basis. 	<p>BMA has requested membership on the Sustainable Resource Communities Leadership Group so that it can further support Government in its planning for social infrastructure and service provision in addressing the cumulative impacts of growth.</p> <p>There has also been increased government support for the management of cumulative impacts of mining on the Bowen Basin. In January 2009, Premier Anna Bligh announced \$27 million funding for projects within resource communities, including 15 projects in the Bowen Basin that will receive state government funding under the Sustainable Resource Communities Policy. In the study BMA is advocating that funding be provided for the expansion of childcare capacity and health staff accommodation and an upgrade of the Moranbah Emergency Services Centre.</p> <p>The Queensland Government has also set ambitious targets through its <i>Toward Q2, Tomorrow's Queensland Plan</i>, which is to be achieved in partnership with industry and the community. BMA intends to play a part, along with other mining companies, in the Northern Bowen Basin and Mackay region, assisting the Queensland Government reaching its target of <i>Queensland being Australia's strongest economy, with infrastructure that anticipates growth</i>.</p> <p>The Queensland Government's <i>Coal Infrastructure Program of Actions 2008</i> also identified the need to undertake industry-wide strategic planning for future growth in coal demand and production. In response, the Coal Infrastructure Taskforce is developing the Queensland Coal Infrastructure Strategic Plan for the provision of infrastructure to meet the coal industry's need to 2028. In line with this, BMA is lobbying for a Government funded regional economic and social infrastructure master planning exercise encompassing the Northern Bowen Basin and Mackay, taking into account the strong medium and long-term coal industry growth outlook. The aim of the exercise is to ensure that industry growth opportunities across the Northern Bowen Basin and Mackay are taken advantage of in a timely manner in a way that effectively facilitates growth and allows it to be managed in terms of its impacts. BMA will continue to play a part in industry and government initiatives aimed at monitoring and managing the cumulative impacts of growth across the region.</p> <p>Appendix H provides details of how the Project will manage traffic impacts. It contains commitments to work closely with local government to minimise any disruption to traffic.</p>
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18.05	<i>Continued from previous page</i>	<p>The Project draft EIS provides details of the workforce arrangements in Section 3. Appendix P, contains BMA's Accommodation Update Newsletters, these newsletters provide regular updates on housing initiatives undertaken by BMA. BMA will look to form a closer working relationship with PIFU, to provide confidential forecasting and workforce number projections to allow for more informed planning. Effective workforce planning aligned to staged or tiered growth projects, enables non-resident workers to transition from one project to another. This ensures, as much as is practical, that workplace and community impacts from the non-resident workforce are minimised.</p>
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5 Submissions and Responses - EIS Table of Contents

This section of the Supplementary EIS presents the information contained in **Section 4**, in a format that allows the reader to review updated Project information and environmental assessments grouped sequentially under the section headings of the Project draft EIS.

This section summarises the submissions and BMA's responses relevant to each section of the Project draft EIS. The more detailed responses to specific submissions by agencies on the Project draft EIS are provided in **Section 4**.

5.1 Introduction

5.1.1 Summary of Submissions

The following submission was received in relation to **Section 1 - Introduction** of the Project draft EIS:

- DNRW commented that a water license is required to take groundwater because the project lies within the Highlands Declared Sub-Artesian area, a listed in Schedule 11 of the *Water Regulation 2002*.

5.1.2 Summary of Responses

The Project lies within the Central Highlands declared groundwater area. Therefore, a water licence and a development permit are required for all bores that take from groundwater unless it is for stock or domestic purposes. However, the coal seam aquifer will not be dewatered prior to mining. While mining will generate groundwater inflows to the pit that will be managed in the mine water management system, these groundwater activities will be licensed in accordance with the *Environmental Protection Act 1994* through the preparation of an Environmental Authority.

BMA's understanding therefore is that a license to take groundwater will not be required under the *Water Regulation 2002*.



5.2 Project Justification and Sustainability

No submissions were received relating to **Section 2 - Project Justification and Sustainability** of the Project draft EIS.

5.3 Project Description

5.3.1 Summary of Submissions

The following submissions were received in relation to **Section 3 - Project Description** of the Project draft EIS.

- DNRW raised legislative issues relating to the taking of overland flow.
- In relation to final voids, DNRW requested that the size of the final void should be of the minimum volume possible. The EPA requested more detailed information on, and illustrations of, the proposed size and shape of the final voids. Additionally the EPA suggested the mine plan should be reassessed to leave a much smaller void.
- EPA requested that the EIS describe BMA's environmental record.
- EPA required a list of ERAs as defined under the *Environmental Protection Regulation 2008*.
- EPA commented that the EIS should describe the construction methods associated with the containment and disposal of construction spoil and solid and liquid waste handling.
- EPA requested a list including specific details and quantities of all chemicals, including any hydraulic fluids proposed to be used on the project.
- CFMEU raised the issue that the Daunia operations should be undertaken by a fulltime workforce instead of a contract workforce.

5.3.2 Summary of Responses

Water management infrastructure will be removed post mining. If other arrangements are planned, i.e retaining dams for local farmer use, this will be done in consultation with DNRW.

A Mine Landform and Final Void Management Plan is presented in **Appendix C**. The report highlights BMA's intention to minimise the size of the final void. It shows the Final Landform Hydrology and includes a discussion explaining the final void location and size. A discussion on the methods used to design the final landform is provided in **Appendix J**. These BMA guidelines are used for all BMA Projects.

All existing BMA operations have Environmental Management Systems certified to ISO14001, which means that they are subject to robust internal and external auditing programs. The Project will also operate under a certified EMS. Information on BMA's environmental performance is provided in **Appendix M.1**. In addition, a copy of the BMA 2008 Sustainable Development Report is provided in **Appendix M.2**. It provides details of BMA's environmental performance in the financial year ending June 2008.

The Project constitutes a level 1 mining project for mining black coal as listed in Schedule 6 of the *Environmental Protection Regulation 2008*. BMA will apply for a single environmental authority (mining activity). It is noted that the following environmentally relevant activities will also be directly associated with the mining activity and undertaken as part of the level 1 mining project:

- Chemical storage - 10m³ or more of chemicals of class C1 or C2 combustible liquids under AS1940 or dangerous goods class
- Mineral processing - Mineral processing consists of processing, in a year, a total of 1000t or more of coke or mineral products



Section 14 Waste Management of the Project draft EIS provides details of the management of construction spoil, solid and liquid waste handling. The Project draft EIS outlines how BMA manages waste on a waste stream basis, hence waste streams will be managed in the same way regardless of the activity that generates it. The Contractor BMA Environmental Management Plan (**Appendix K**) contains details that will manage contractor activities that affect waste.

Section 19 of the Project draft EIS provides details of the chemicals required during the construction and operational phases of the Project.

BMA assessed the use of both a fulltime owner-operator and contractor-run workforce for the Daunia Mine project. A business decision has been made at this point, to propose a contractor workforce for the Daunia Mine. This operating model will support more than 400 jobs during construction and more than 300 jobs during operation.

5.4 Land Resources

5.4.1 Summary of Submissions

The following submission was received in relation to **Section 4 - Land Resources** of the Project draft EIS;

- The EIS stated 'No resources were computed for the small areas that overlap into ML 70115 Daunia East, ML 70116 Red Mountain or north of ML 1781 Daunia'. This suggested that there are coal seams in areas outside the main Daunia mining lease that will either not be mined or sterilised through the placement of spoil. DME requested BMA provide estimates for the coal in these seams, together with reasons justifying the decision not to mine this coal and to place spoil on top of this coal.
- DME requested an analysis of those parts of the coal deposit that will not be mined, also comment on the identified coal resources and/or other coal seams in the Rangal Coal Measures within the project area that will not be mined and why. Justify placing out of pit spoil dumps over coal seams.
- DME requested estimates (on a seam by seam basis) for the coal in the central area of the deposit and comment on whether the intention is to allow for this coal to remain accessible for future extraction.
- DME requested comment on whether or not, as the mine advances, there are plans to progressively extract coal from exposed end walls of the pits prior to spoil backfilling operations.
- DME suggested that the EIS should show in some measure of detail both the surface geology as well as the solid geology in the project area and requested that Figure 4-2 be redrafted at an appropriate project scale.
- DME noted that detailed estimates of the identified coal resources within the project area have not been provided on a seam by seam basis, as required by the ToR - nor had the proponent provided any clarification of the limiting parameters used when preparing the resource estimates stated.
- The EPA commented that the EIS should provide details on the final landform and include figures that illustrate contours and include cross sections at appropriate intervals.

5.4.2 Summary of Responses

Appendix E has been prepared to address the issues raised in relation to Land Resources, and specifically the Resource Description. **Appendix E** includes the following:

- details of the coal seams that will either not be mined or potentially sterilised by the project;
- an analysis of the sections of the coal deposit that will not be mined;
- further details of coal resources in the central area of the deposit;
- constraints associated with the resource model;
- figures including a typical stratigraphical section, geology of the area and the coal extent and structure in a greater detail; and
- detailed estimates of the coal resources on a seam by seam basis.

The greatest single challenge for provision of progressive rehabilitation into the future involves effective planning of prestrip operations and spoil placement. This is well recognised by BMA and all of its operations are conducting substantial investigations involving spoil fit, final landform and residual void treatment. Mine



planning is an ongoing process and is progressively refined during the life of the operation. Changes in technology, operational costs and product demand require revisions to the mine plan, including the final landform plan.

Long term mine feasibility planning for the Daunia project suggests that truck and shovel will be the primary method for creating the final rehabilitation surface. The final landform concept illustrated in **Appendix C** (Attachment 2) in the Project draft EIS represents an outcome which has resulted from the initial mine plan schedule. Mine planning and scheduling has focussed on the first 5-10 years of mining (all in the North), with only preliminary long term planning having been completed for the Southern Pits.

The planning which has been completed for the first 10 years shows that considerable void backfill is undertaken. For that matter, work to date shows that all of the final void created in the first 15 years can be eliminated by progressive backfill. However, planning for the latter years has yet to be optimized. Nonetheless, BMA recognises that the size and extent of the final void can be reduced by cost effective spoil placement programs in the latter years of the mine life and as already indicated, all BMA operations are currently in the process of developing spoil placement strategies which are aimed at cost effective reduction of the final void footprint. This is an extremely complex and time consuming task which commenced some two years ago and studies to date show that there are cost and environmental advantages available when final voids are progressively backfilled during operation. Mine planning for the Daunia Project is now also developing optimised longer term mine plans which aim to reduce the final void footprint.

Appendix C contains details of the final landform.

5.5 Mineral Waste

5.5.1 Summary of Submissions

The following submissions were received in relation to **Section 5 - Mineral Waste** of the Project draft EIS;

- EPA required that the EIS and EM Plan should provide measures for the chemical and physical characterisation of overburden and interburden that would be adequate for the selective management of those waste materials. The EIS and EM Plan should also provide:
 - details of how the sites and materials for co-disposal cells will be chosen, constructed and managed;
 - as assessment of how the risk of failure will be addressed in the design of co-disposal cells; and
 - an assessment of the long-term stability of spoil dumps in relation to the co-disposal cells.
- The EPA required that the EIS and EM Plan should provide details of the criteria to be used to select sodic or dispersive spoil for special handling and disposal, and the measures to be taken that will ensure selected material will be suitable placed and encapsulated or covered. The EIS and EM plan should similarly discuss the selection and disposal of acid generating material.
- QH commented that the project's activities, such as screening, sizing and analysis may result the concentration of naturally occurring radioactive materials, e.g. uranium and thorium series radionuclides. QH seeks an assessment of naturally occurring radioactive materials, their potential impacts and any proposed mitigation strategies.

5.5.2 Summary of Responses

The overburden and interburden for the Project have been characterised through analysis of 21 drill holes and sampling from all major lithological units in these holes. As mining proceeds characterisation of spoil and waste material will continue consistent with **Appendix J** "BMA Sustainable Landform Guideline" This document contains the control strategies that will be put in place at the Project to manage sodic and dispersive spoil. Soil surveys have been presented in Section 4 of the Project draft EIS and further soil surveys will be conducted ahead of mining to confirm soil material suited for reuse in rehabilitation.

The Project will make no use of co-disposal cells. A Tailings and Rejects Management Plan is presented in **Appendix F**. The Plan discusses the proposed management strategy for disposing coal rejects and dewatered tailings into the spoil. The stated strategies will not impact on dump stability.

Coal processing does not concentrate radionuclides as clays are separated from coal during the process. The radionuclides are contained in the clays in the same ratios as the host rocks (ie Earth's Crust) and are not concentrated during processing, as they are passed through the plant unchanged in mineral composition. The treated coal is lower in radionuclide concentration after the removal of the clays. Overall there is a slight increase in actual level of radionuclides due to removal of coal from the mine but not above natural rocks in earth's crust. With coal in the host rocks the natural levels of radionuclides are lower. Concentration of remaining radionuclides in coal will occur during combustion of the coal at the customer's site but will still only be in the ratio of the minerals in the ash content of the coal.

5.6 Surface Water Resources

5.6.1 Summary of Submissions

The following submissions were received in relation to **Section 6 – Surface Water Resources** of the Project draft EIS.

- DNRW required that BMA liaises with any affected landholders regarding any increase in inundation. It should also be noted that the crossing must not store water. EPA suggested that the design of the proposed crossing of New Chum Creek should be amended. The new design should demonstrate that the proposed works will have no significant effect on flooding levels in New Chum Creek or result in changes to flows that could have a significant environmental impact.
- DNRW highlighted the need for an assessment of the two unnamed tributaries of the Isaac River to determine whether these features are watercourses under the provisions of the *Water Act 2000*.
- DNRW raised legislative issues in relation to the taking of overland flow.
- DNRW requested a locality plan identifying the location of possible sedimentation dams or environmental dams, and drainage lines should be included to identify how the mine plan will divert the catchment and whether any diversions of the unnamed tributaries are plan.
- DNRW requested that monitoring and analysis of Selenium should be required for both water samples and for sediment samples downstream of discharge points in streams receiving mine water. A monitoring program to assess metals and other chemical parameters should commence "before mining operations begin" to assess background levels so that comparisons can be made after mining commences and discharges and monitoring take place.
- EPA required that the EIS and EM plan address what would constitute an emergency for the release of water from the site, and should provide an assessment of the suitable conditions for discharges.
- EPA noted that the EIS Figure 3-14, Water Management Schematic, should be revised to illustrate water discharges to the environment. The EIS must identify where, and under what circumstances controlled discharges would be made. The EIS should propose auditable measures for the management of dams that would receive pit water and the necessary controls for releases.
- EPA stated that the EIS should address the requirements of the terms of reference with regard to the potential impacts of discharges from the site on surface water quality and ecology during and after mining. A detailed, reasoned, evidenced- based assessment must be provided for all findings.
- EPA required information detailing, demonstrating and justifying how the Project will manage the impacts on water resources. This information should include a Mine Water Management Plan.
- EPA commented that the EIS should:
 - identify which dams could receive pit water, and which would be used purely to trap sediment in runoff from disturbed areas; and
 - as necessary, redesign the water management system so that pit water is kept separate from collected runoff in sediment dams.
- For the operational phase, the EPA required a detailed assessment of the effects of inundation of the proposed project site from a 1:500 year ARI flood event and for the phase after mining ceases, a detailed assessment of the protection measures for final voids, uncompacted overburden and workings from the 'probable maximum flood' level based on Bureau of Meteorology's 'probable maximum precipitation' forecast for the locality.

- DES recommended the proponent consider whether the project complies with the Specific Outcomes and Solutions within SPP 1/03 Guideline/Appendix 5 1.

5.6.2 Summary of Responses

Appendix O contains further details and a hydraulic analysis of the New Chum Creek crossing. This analysis confirms that while there are minor increases in flood levels upstream, the crossing does not store water.

BMA has commenced discussions with upstream landholders over these minor increases in flood level.

Appendix O also presents an options analysis of the New Chum Creek crossing. The review demonstrates that while the afflux can be reduced somewhat this is not possible without significant cost.

BMA has consulted with the DNRW Rockhampton and Biloela offices. The process for completing a watercourse determination assessment is now underway. If either or both unnamed drainage paths are watercourses then authorisation from DNRW will be required.

A Mine Water Management Plan is presented in **Appendix A**. The contents of the plan are outlined below.

- Details of how the mine will manage water during its operation, highlighting BMA's intentions to limit the volumes of storages to the minimum size necessary to meet the requirements of the operation, whilst at the same time minimising the potential for discharges to the receiving environment.
- A site plan showing the location of dams and drainage paths.
- Information on the emergency release of water from the site. The EM Plan also details the management of releases.
- An updated version of the Project draft EIS Figure 3-14.
- The outcomes of additional modelling and improvements in the design of the mine water management system.
- The purpose of each dam.

The EM Plan contained in **Appendix L** includes commitments to monitor Selenium during discharge events. Background data on Selenium is currently collected by BMA upstream of Daunia for the Poitrel and Goonyella - Riverside Operations.

Appendix K contains a copy of the Contractor BMA Environmental Management Plan. All contractors on site will be required to comply with this EMP.

The 500 year ARI flood extent from the regional flooding of the Isaac River has been predicted for the operational phase of the mine excluding the mine catchments. The Daunia Mining Lease only experiences very minor flooding from the 500 year ARI event from the Isaac River. Works will be undertaken on the lower area of the Mining Lease to protect the project from 500 year ARI flood event from the Isaac River.

Based on the terrain in the area, the flooding mechanism which would likely cause water from the PMF from the Isaac River to flood the final void would be from a backwater effect. This would mean the floodwater would enter the final void as the water backing up from the river. Therefore the water within the final void would have very limited opportunity to be released in the event of regional flooding, as the final void would not drain below the level of the top of the final void.

The project complies with the outcomes of the SPP 1/03 Guideline/Appendix 5 1.

5.7 Groundwater

5.7.1 Summary of Submissions

The following submissions were received in relation to **Section 7 – Groundwater** of the Project draft EIS;

- DNRW raised legislative issues regarding licensing for taking groundwater. The EPA requires that the EIS discusses and demonstrates and meets the requirements of the *Water Allocation and Management Plan (Fitzroy Basin) 1999* and the *Fitzroy Basin Operations Plan 2003*.
- DNRW related they will impose make good conditions on a water license that will require restitution of any water supply affected by the taking of water. The drawing up of individual agreements between the mine owner and affected landholders before mining commences satisfies the make good conditions and establishes a process for dealing with future make good determinations.
- DNRW related they will impose conditions on a water license that will require the monitoring, assessment and reporting of the impacts of mining on groundwater. The license will refer to a specific monitoring report to be complied by the licensee. The license terms will also allow for the modification of the monitoring program subject to the agreement of DNRW. It will also include a requirement for the provision of quarterly reporting of data, annual reports on the impacts, deviations from predicted impacts and any changes to future predicted impacts.
- EPA requested an assessment of groundwater resources and quality derived from data obtained at the Daunia site and which should take account of both the intensity of the potential impacts and the context in which they would occur.
- EPA stated that the EIS should provide an assessment of the likely drawdown in the alluvial aquifer with sufficient precision for a proper assessment of the likely impacts that would result from the drawdown, particularly impacts on riparian vegetation. If significant impacts would result from the mining activities, the EIS and EM Plan must provide measures to avoid or minimise the impacts. Any residual impacts that could not be mitigated must be described in detail.
- EPA required that the EIS should provide a detailed, reasoned, evidence based assessment of the potential for saline, contaminated water in the void to recharge groundwater. The EIS should detail what effects this recharge will have on all aquifers including the alluvial aquifer.
- EPA requested more detail on the equilibrium water levels in the final void in relation to the proposed final landform and illustrate the likely size of the residual lake during both drought and wet climatic conditions. Assess, under what conditions, if ever, including under Probable Maximum Precipitation, water in the final void would discharge to the surrounding environment. If discharge from the final void could occur, assess the potential impacts of the discharge.
- EPA stated the EIS should model the water quality in final voids as a prelude to providing a reasoned, evidence based assessment of the potential impacts of hyper-saline water in the void on both surface and groundwater resources.

5.7.2 Summary of Responses

The coal seam will not be dewatered prior to mining. Sub-artesian water that drains to the pit will be managed in accordance with the EM Plan and Environmental Authority. However, BMA's understanding is that no water license under Schedule 11 of the *Water Regulation 2002* will be required. The purpose of this *Water Resource (Fitzroy Basin) Plan (WRP)* is to sustainably manage water resources within the Fitzroy Basin and provide frameworks and regulations, administered by DNRW, to manage the taking of water, including overland flow. The WRP is designed to generate outcomes that provide security for water users, and allows future water-related development within the basin.

The Water Resource (Fitzroy Basin) Plan 1999 ("the WRP") applies to overland flow water on the Project Site. Section 10 and Section 11 of the WRP outlines the objectives for base flow and environmental flow in the system with reference to Schedule 2 of the WRP. The Project is located in the northern part of the basin and there are no "locations" as listed in Schedule 2 along the Isaac River. Therefore the nearest "location" is the Mackenzie River at Tartrus. As stated in the Project draft EIS, the Project area where overland flow will be affected represents approximately 0.7% of the Isaac River catchment upstream of the Project. Therefore the per cent of catchment represented by the Project at the Mackenzie River at Tartrus is substantially less than this. For this reason the project is expected to have little impact on the objectives of the WRP.

Fitzroy Basin Resource Operations Plan ("the ROP") implements the WRP and defines the rules that guide the allocation and management of water in the catchment. As stated above in terms of overland flow the Project will have little impact on the ROP. The Project does not need to make any additional water allocation from this system. The Project average water demand of 600 ML/y comes from existing allocations already provided to BMA from various sources in the region. Therefore the Project will have no impact on the ROP.

The on-site storages that are constructed onsite to take overland are exempt from the *Water Resource (Fitzroy Basin) Plan 1999*.

BMA will enter into agreements with landholders whose water supply may be affected by the operation of the mine for the provision of alternative supplies throughout the Project life, and after mine closure. These agreements will include a dispute resolution process to deal with future impacts. Alternative supplies will be put in place before supplies from relevant existing landholder bores are adversely affected.

Site-specific hydrogeological investigations commenced at the Project Site in March 2009. The proposed monitoring program is outlined in **Appendix B**. It includes the location of monitoring bores, the aquifers targeted as well as the parameters to be measured. The initial monitoring plan concerns the first 6 months of monitoring. Subsequent to this BMA will provide quarterly reports to DNRW on the results of the monitoring program and a yearly report which include an assessment of the impacts of mining and the need to review the predicted future impacts.

The ground water model in the Project draft EIS was limited by the amount of geological and hydrogeological data available as the time the model was set up. The assessment of the groundwater resources for the Project Site was based on the site geology and hydrogeological investigations undertaken on the Poitrel mine.

The model covers an area of 50 km east-west by 50 km north-south and is split into 7 layers. The first layer represents the shallow alluvial aquifer along the Isaac River. Layers 2, 4, 6 and 7 represent the same geological unit comprising the Permian sandstone, siltstone and mudstone that underlies the coals seams (represented by layers 3 and 5). Coal seams layers have been assumed to be 10 m in thickness with an extent that covers the whole model area.

Two sets of data have become available since the model was constructed:

- lithological bores logs covering the Project Site, and
- 4 hydrogeological drillings located across the Project Site.

A review of this information for the Supplementary EIS has revealed the following points relevant to the validity of the model.

- No evidence of any alluvial aquifer extending over the mining site. The conceptualisation of an alluvial aquifer in the model overestimates pit inflow during mining operations and drawdown of the alluvial aquifer. Nevertheless, the limited extent and depth of the alluvial aquifer modelled suggests that the overestimation does not compromise the accuracy of the model predictions.
- Lithological logs reveal structural features that have not been incorporated in the model. The 10 m thickness coal layers, and their extension throughout the 250 km² model, constitute a conservative approach. It is likely that the aquifer layers are disconnected within the model, due to these structural features, limiting hydraulic connectivity and impacts on a regional scale.
- Lithological logs reveal variability in the sandstone, siltstone and mudstone Permian formations. Hydraulic parameters for each of these formations in the model are constant, therefore the model has a more accurate output at a regional scale.

In summary, a thorough review of the more recent information has confirmed that the basis upon which the model was built offer a conservative approach by overestimating water fluxes towards the pit mine, and the likely drawdown in the alluvial aquifer along the Isaac River. Furthermore, this site specific information does not support a need to rebuild or modify the model at this stage. Hence the groundwater model is considered to be valid and meets the requirements as stated in the TOR for the EIS.

Riparian vegetation is situated along the banks of Isaac River. Further assessment of the interaction between groundwater and surface water will be undertaken as part of the groundwater monitoring program outlined in **Appendix B**, to determine the potential impacts to riparian vegetation. The groundwater level within the Alluvium unit close to the Isaac River will be monitored on a regular basis throughout the duration of the Project's operation, however the most recent information reviewed, found no evidence of any alluvial aquifer extending into the Project Site. In the unlikely event that a detrimental impact is forecast from the monitoring program, preventative measures will be taken to ensure the impacts are mitigated. For instance, the mining schedule could be altered so that the alluvium material situated in the southern corner of the mine site is not excavated or mined. The current groundwater model will be updated based on the data collected during the first 6 months of the Groundwater Sampling and Analysis Plan to provide a more accurate assessment of drawdown in the alluvial aquifer.

Appendix C includes an assessment of the final void water quality based on modelled groundwater flows into and out of the pit. The assessment shows that the final void will concentrate salts leading to a decline in groundwater quality. It should be noted that relative to other mines in the Bowen Basin, spoil and overburden are less saline.

Preliminary final void modelling suggests that in the worst case the final void equilibrium water level would be approximately 25 m of below the surface. With this freeboard the final void will not overtop in the PMP.

5.8 Terrestrial Ecology

5.8.1 Summary of Submissions

The following submissions were received in relation to **Section 8 – Terrestrial Ecology** of the Project draft EIS.

- DEHWA requested that the April 2008 targeted surveys carried out by SKM be included in the Appendices.
- EPA requested that the EIS consider the likelihood of species listed within WILDNET records (within 50km of the mine location) occurring in the mine footprint as well as the likely impact on the species and methods for avoiding or mitigating impacts.
- EPA requested that the EIS significantly expands the scope and detail of practical measures that would be undertaken to avoid or mitigate the impacts of both construction and operation on flora and fauna.
- EPA requested that the EIS should in detail propose offsets, viable in the long-term and in accordance with the Queensland Government's Environmental Offsets Policy, for the loss of ecological values.

5.8.2 Summary of Responses

A Survey Report is presented in **Appendix D** detailing the methods used and results of the 2008 Survey **Appendix N** contains further details in relation to terrestrial fauna. It discusses;

- the WILDNET records, the likely impact of the project on species and mitigations measures;
- the mitigation of impacts to flora and fauna; and
- provides a summary of the Vegetation Offset options for the project.

The proposed environmental offset area at Norwich Park Mine has been surveyed on several occasions since 2004. In summary the site contains a mix of remnant and regrowth Brigalow and Dawson Gum on dark cracking clays, with an extensive network of gilgai present. Most recently, the site was inspected by officers from the Queensland EPA Nature Refuge Branch, specifically to assess the suitability of the area as a nature refuge. The EPA officers were very supportive of a nature refuge agreement being negotiated for the area and were also informed that this area of approximately 710 hectares would be used to offset disturbance to Endangered Regional Ecosystems at other BMA projects in the Central Highlands area. No specific discussions about the proposed Daunia offset at Norwich Park Mine have been held with the EPA, however given the reasonably close proximity of the two sites to each other, the similar vegetation types at both sites, and most importantly the improved size, habitat value and connectivity that the Norwich Park site offers, the proposed offset should be looked upon favourably. Additionally, the fact that BMA is negotiating a Nature Refuge Agreement further adds weight to the value of the proposed offset.

5.9 Aquatic Ecology

The following submissions were received in relation to **Section 9 – Aquatic Ecology** of the Project draft EIS.

- DPI&F commented that a loss of approximately 15km of aquatic habitat should not be considered insignificant and impacts upon fish assemblage that currently utilise these habitats should be adequately considered. Native fish trapped or stranded in the drainage paths, regardless of whether they are considered significant or otherwise should be removed as per the DPI&F's Fish Salvage Guidelines.
- DPI&F commented that the haul road crossing of New Chum Creek should be designed, constructed and operated with due consideration of DPI&F policies and guidelines. The use of box culverts as opposed to pipe culverts is suggested as pipe culverts can have water velocities that are undesirable for fish passage, particularly if increased flood levels are expected.
- DPI&F commented that should the construction of the haul road crossing be scheduled during flow period a development application for waterway barrier works will be required under the *Integrated Planning Act 1997*.
- DPI&F recommended a minimum buffer of 50m of established natural vegetation between developments and freshwater waterways and wetlands consistent with their policy.
- EPA requested the EIS clearly state which AusRivAS models were used to compare with sites sampled for macro-invertebrates and provide a comparison of how well the attributes of the sampled sites correspond with the model(s).

5.9.1 Summary of Responses

BMA plan to undertake construction work during dry periods when there is no flow in the un-named drainage paths. In the event that the planned schedule coincides with unseasonal rain BMA will follow the Fish Salvage Guidelines to catch and release potentially stranded fish.

The haul road crossing of New Chum Creek has been designed and will be constructed and operated with due consideration of DPI&F policies and guidelines. The details of this design, including flow velocities through the culverts and the options considered are presented in **Appendix O**. The options considered included a review of a box culvert design.

The suggested drainage infrastructure change from pipe culverts to box culverts represents an approximate increase in cost of \$1M, which is around 3 times the cost of the proposed design using pipes and was found to offer no improvement in maximum velocities through the culverts. As a result the design presented in the Project draft EIS will be constructed by BMA.

BMA will maintain a minimum buffer of 50m of established vegetation between New Chum Creek and the anticipated mining operational areas.

The EPA's John Platten was contacted on 26 February in relation to the AusRivAS model. It was confirmed that the information supplied in Appendix J.2 and the body of the Project draft EIS, is sufficient.

5.10 Air Quality

5.10.1 Summary of Submissions

The following submissions were received in relation to **Section 10 – Air Quality** of the Project draft EIS.

- QT noted that the EIS does not adequately describe and estimate the emissions of dust generated in the rail transport of coal from mine-to-port as a direct regional environmental impact flowing from the project's operations.
- QT noted that the description of sources of air emissions does not properly recognise the generation of dust emissions during the rail transport of coal to export ports.
- QT recommended that the dust mitigation measures to be implemented should be expanded to include details of the features of the proposal designed to prevent coal-wagon over-loading, and minimise coal loss during transit and coal dust emissions from trains during haulage of coal from the project to export ports.
- CFMEU suggested that a 24 hr/365 day per year atmospheric, noise and vibration monitoring program established within a 40km zone of Moranbah.
- EPA required that the EIS uses the current EPP (Air) 2008 guideline for analysing the potential impacts of the project against the 24 hour averaged mass concentration of PM₁₀. Also provide clarification on the source of the nuisance guideline for dust deposition and explain the proposed use of the standard given the recent commencement of the EPP (Air) 2008.
- EPA requested clarification of the PM₁₀ results presented in Figure 10-3, recorded at Olive Downs and Winchester Downs for previous PM₁₀ monitoring.
- EPA required confirmation that Year 20 of the project would be the worst case scenario for potential impacts to air quality. Also, provide estimates of dust deposition rates on a monthly rather than annual average basis.
- QH noted the predicted 24 hour average PM₁₀ concentrations and evening noise emissions exceed current air quality goals in the EPP (Air) 2008, at the Olive Downs residence. QH recommends the Coordinator-General include conditions to ensure the impacts of air and noise emissions are appropriately mitigated.

5.10.2 Summary of Responses

BMA acknowledges the management of dust from coal trains is a priority for Queensland Rail. BMA will design the train load out facility to incorporate a polymer-based dust suppression unit. However a decision on construction and installation of the dust suppression unit at the train load out will be made once QR and industry confirm arrangements across the coal industry.

The greatest potential for dust impacts exists for the sensitive receivers located closest to mining operations. Dust emissions from rail transport are considered insignificant compared to dust from mining operations. The inclusion of these emissions is unlikely to affect the predicted dust impacts presented Section 10 of the Project draft EIS.

The potential for air quality, noise and vibration impacts from mining operations is restricted to sensitive receivers located within 5 km of the mine. The proposed Project is located 25 km southeast of Moranbah. BMA will undertake air quality, noise and vibration monitoring at sensitive receivers that may be directly affected by the Project. Mining operations at the Project will have negligible air quality, noise and vibration impacts at Moranbah either directly from the Project alone, or cumulatively with other mines in the region.



It is acknowledged the *Environmental Protection (Air) Policy 1997* has now been superseded by the *Environmental Protection (Air) Policy 2008* (EPP(Air) 2008). The ambient air quality goal for 24 hour average PM₁₀ concentration has been amended in line with the National Environment Protection Measure (NEPM) for Ambient Air Quality. The ambient air quality goal for 24 hour average PM₁₀ concentration in the EPP(Air) 2008 is 50 µg/m³ with five allowable exceedances per year.

BMA commissioned Ecotech to install and operate DustTrak monitors at Olive Downs and Winchester Downs. The DustTrak is an unattended instrument and meteorological data was not collected at these locations. Therefore the circumstances or sources that resulted in PM₁₀ concentrations above the ambient air quality guidelines in the EPP(Air) 2008 have not been identified.

The potential impacts on air quality were considered for Year 20 operations as this was considered the worst case scenario. The justification for adopting Year 20 operations was presented in Section 10.4 of the EIS. The Year 20 operating scenario was selected as it was considered to have the highest potential for air quality impacts as the mining operations will be closest to sensitive receivers, and the haul distances from the pit to the coal handling and processing plant (CHPP) will be greatest.

The monthly average dust deposition rates nearest sensitive receivers for Year 20 operations of the Project are presented in **Appendix R**.

BMA acknowledge operations in Years 15 to 20 of the Daunia coal mine has the potential to generate air quality and noise impacts at the Olive Downs residence. The EM Plan details mitigation measures to reduce the potential for both air quality and noise impacts at sensitive receivers. BMA propose an air quality and noise monitoring program to determine if mining operations at Daunia are generating air quality and noise impacts. Consultation with the landholder should also assist in reducing the potential for air quality and noise impacts.



5.11 Greenhouse Gases and Climate Change

No submissions relating to were received in relation to **Section 11 – Greenhouse Gases and Climate Change** of the Project draft EIS.



5.12 Noise and Vibration

5.12.1 Summary of Submissions

The following submissions were received in relation to **Section 12 – Noise and Vibration** of the Project draft EIS.

- EPA requested details of the calculations carried for the Planning Noise Levels for the Project and that the noise limits in the EM Plan in terms of the Planning Noise Levels for the Project.
- EPA required a commitment to modify operations so that acceptable noise and vibration levels are not exceeded or introduce appropriate mitigation measures.

5.12.2 Response to Submissions

To address the issues raised in the submissions the EM Plan was updated to reflect the changes to the Planning Noise Levels and to include commitments to ensure that acceptable noise and vibration levels are not exceeded. The amended EM Plan is attached as **Appendix L**.

Appendix R details the calculations carried out to develop the Planning Noise Levels for the Project.

5.13 Infrastructure and Traffic

5.13.1 Summary of Submissions

The following submissions were received in relation to **Section 13 – Infrastructure and Traffic** of the Project draft EIS.

- DMR requested a Traffic Management Plan that provides details on impacts to local bus routes and the management of impacts to towns en-route. The DMR and QPS also requested further details on the number and size of wide loads.
- DMR requested further analysis of the adequacy of the site access road intersection taking into consideration adequate provision for both deceleration length, plus vehicle stoppage.
- DMR requested that the EIS should provide brief details of the actual ESA's generated, particularly during the construction phase.
- QPS commented that the increased transport of dangerous goods may impact on the community safety of towns en-route to the project and requested consideration should be given to the location of 'park-up' areas and their proximity to populated areas.
- QPS requested to see a fatigue management plan for contractors driving on the Peak Downs Highway and working on a rotational shift basis.
- CFMEU suggested that due to a 0.4% reduction in the life span of roads in the vicinity of the project, BMA should contribute 0.4% to the funding of replacement roads and immediately fund the next 2 priority overtaking lanes on the Peak Downs Highway.

5.13.2 Response to Submissions

To address the issues raised in the submissions, a Traffic Management Plan has been developed and is attached as **Appendix H**. It provides details on how the project will:

- manage the movement of vehicles in transit and the interaction of vehicles with pedestrians on site;
- minimise delays to road users associated with the movement of vehicles to and from the Daunia Mine Project;
- manage the transport of dangerous goods;
- minimise delays to road users associated with construction of the Daunia Mine and associated works; and maximise the safety of all road users during the construction and operation of the Daunia Mine Project; and
- the number and timings of Wide Loads transported.

Fatigue during commuting to and from the site will be managed in accordance with BMA's Hours of Work Standard. It is attached as **Appendix I** and outlines the policies and procedures for managing fatigue that will be used.

Dangerous goods being transported to site and on site must be according to the Australian Dangerous Goods Code and Queensland Dangerous Goods Regulation. No dangerous goods and hazardous substances are to be transported unless approved by the site management. Prior to transporting Dangerous Goods to site, a risk assessment will be done and a specific traffic management plan will be developed.



Appendix G has been prepared to address the submissions relating to road and intersection impacts. It provides detail on:

- an analysis of the intersection design. While the analysis demonstrates the adequacy of the current intersection, BMA will implement an upgrade of the intersection;
- plans detailing the design of the upgrade;
- impacts on road pavement;
- updated Table 13-1; and
- details of the ESA generated.



5.14 Waste Management

The following submission was received in relation to **Section 14 - Waste Management** of the Project draft EIS.

5.14.1 Summary of Submissions

- EPA commented that the EIS should describe the construction methods associated with the containment and disposal of construction spoil and solid and liquid waste handling.

5.14.2 Response to Submissions

Section 14 Waste Management of the Project draft EIS provides details of the management of construction spoil, solid and liquid handling. The BMA manages waste on a waste stream basis; hence waste streams will be managed in the same way regardless of the activity that generates it. The Contractor BMA Environmental Management Plan (**Appendix K**) contains details that will manage contractor activities that affect waste.



5.15 Cultural Heritage

No submissions were received in relation to **Section 15 – Cultural Heritage** of the Project draft EIS.



5.16 Community Consultation

5.16.1 Summary of Submissions

The following submissions were received in relation to **Section 16 - Community Consultation** of the Project draft EIS.

- CFMEU raised that during consultation BMA would not concede any issues in relation providing accommodation other than village type accommodation. They intimated that any person employed by the contracting workforce would only be able to access houses either on a rental or purchase basis either of his own volition, or if able to access via an arrangement with his contracting employer.

5.16.2 Response to Submissions

The primary location for accommodation for Daunia is the Mac Accommodation Village at Coppabella. This location was chosen because of its proximity to the mine site, and as it was considered the best option for attracting and accommodating a contractor workforce.

BMA assessed the use of both a fulltime owner-operator and contractor-run workforce for the Daunia Mine project. A business decision has been made at this stage, to propose a contractor workforce for the Daunia Mine.

Some housing has also been constructed in Moranbah. **Appendix P** includes BMA's Accommodation Update Newsletter.

5.17 Social

5.17.1 Summary of Submissions

The following comments were received in relation to **Section 17 - Social** of the Project draft EIS.

- DSQ suggested the EIS could be expanded to make specific reference to disability (including Indigenous people with a disability in relation to the impacts on local enterprise and the workforce impacts).
- DIP suggested including a discussion and analysis of mitigation strategies that may have been adopted in relation to community services.
- DIP suggested incorporating the age structure of the Indigenous populations into the SIA and including indigenous labour force information.
- DIP suggested further assessment of the emergency service requirements of the project and providing more information on legislative requirements.
- DIP requested more discussion of domestic violence rates in Moranbah.
- DIP required further information on child care training issues.
- DIP required further information of consultation with local health staff and detail of Indigenous-specific health services/needs.
- DIP requested a discussion of the loss of older persons in recent years from the community and the social impact this has.
- DIP requested the social baseline information include the SEIFA score and relative ranking of the area.
- DIP required a description of the community engagement strategy, including engagement with Indigenous members of the population.
- QPS requested a consultative process with all mining, Local and State Government Agencies as to the implications of the affordability and availability of housing and accommodation for Police Officers.
- QPS requested the Project scope the requirement for additional police resources including staffing increase to the Central Police Region, new police stations, specialist resources and other equipment required.
- CFMEU raised the issue that the Daunia operations should be undertaken by a fulltime workforce instead of a contract workforce. Additionally CFMEU suggested that the workforce be subject to the conditions of the Moranbah Accommodation Agreement, requiring 50% - 75% of the workforce to be accommodated in Moranbah, with BMA providing enough housing blocks for the requirements of the workforce.
- CFMEU commented that the provision of 300 single person quarters did not contribute to the social and community infrastructure of the Central Highlands.
- CFMEU suggested that BMA make a contribution to the relevant local Council for the increased infrastructure required. Additionally they suggested BMA should commit to providing housing for teachers in addition to any current housing available.
- DTRDI commented that the EIS has identified that a proportion of the construction and operation workforce will not be located at the accommodation village and will choose to live possibly in the larger regional coastal communities. This would indicate an increased level of drive/fly in / drive/fly out activity,

with the workforce residing in areas such as Mackay, Rockhampton, Brisbane, Townsville and Cairns. The EIS would benefit from further consideration of the impact on housing in the regional centres such as Mackay and Rockhampton, where workforce may choose to live. Detail should be provided about how the proponent will monitor and share this information.

- DTRDI commented that the EIS has identified a number of programs they currently support and would continue to do so that are relevant to address the skills / workforce issues. In view of current volatility of the coal industry and the recent retrenchments, greater emphasis could be placed on employing permanent and long term residents of the region so as to mitigate the impact on the region. This may include the requirement for prime contactors on the project agreeing to any umbrella workforce recruitment arrangements that are put in place by BMA.
- DTRDI noted that the EIS states that in consultation with the Isaac Regional Council and local businesses, BMA will establish a process to advise them of the contract packages available during the construction and operation phases of the Project and of the issue of tenders for work. DTRDI recommends that the process of consultation be wider than Isaac Regional Council and to include Mackay Regional Council area as there is a significant mining services and technology capability located at Paget Mackay which has the potential to supply good and services during the construction and operational phase.

5.17.2 Response to Submissions

BMA is committed to identifying accommodation for all workers related to the Daunia Mine and to reducing impacts on the local communities. This includes the provision of new accommodation in Moranbah and securing accommodation rooms at Coppabella. In addition to this, BMA is:

- working with Isaac Regional Council on concept plans for all BMA landholdings in the townships;
- supporting future development by competitively purchasing Council land and working with other developers; and
- working with other companies, Isaac Regional Council and the State Government on Belyando Estate.

BMA has a dedicated Housing Manager who works closely with local councils and development planning committees to work in a commercial way to ease pressure on the housing demand, which has traditionally driven up the costs of housing and rent.

BMA is working closely with Isaac Regional Council to ensure that proposed development enhances the appeal of Bowen Basin communities and is attractive to our future generation of employees.

Through the Sustainable Resource Communities Fund BMA has advocated the need for upgraded Government service accommodation and affordable housing provision.

BMA considers employment opportunities for all groups in the community, including people with disabilities. BMA is committed to workforce diversity. BMA has engaged a dedicated Senior Advisor Women's Employment, to develop strategies and workforce flexibility options to increase BMA's representation of women and other underrepresented groups such as Indigenous and disabled workers.

BMA continues to work with and support government in meeting the increased infrastructure requirements across the region.



In the 2008 financial year, BMA supported local councils and governments by way of a \$14.8 million investment in:

- council rates;
- special levies; and
- subsidies and allocations, including the maintenance of local roads and airports and for other council infrastructure, facilities and water.

The SIA identified a general childcare skills shortage across the community. However, it also indicated that there was a new facility that was currently running well below capacity.

Discussions with service providers indicated that the Daunia Project alone was unlikely to impact on access to, and the adequacy of, health care but would add to the cumulative impacts felt across the region, and the broader issues with health care provision around Queensland.

Moranbah is ranked 1576 out of 1897 suburbs in Queensland indicating a relative lack of disadvantage in the area.

There are a number of measures in place to ensure a positive living environment at the Mac Accommodation Village, the quality of facilities and monitored supervision, it is expected that travel outside the Village for Daunia Mine workers while on shift will be minimal, thereby reducing the need for additional Police resources.

Appendix Q has been prepared to provide additional information in relation to social issues. It includes the following;

- an updated table incorporating age structure of the Indigenous population and further details of BMA's approach to identifying opportunities for Indigenous groups are provided;
- detail on BMA's support for community infrastructure and services;
- detail relating to how BMA is responding to housing affordability and the need for additional police services;
- detail of BMA's support for emergency services;
- detail on domestic violence and support groups; and
- detail about BMA's support for local health facilities and services.

BMA has conducted an extensive community engagement program for the BMA Growth Project focussed on preparing the community for the overall growth of BMA interests in the region. This growth includes the Daunia Coal Mine, Caval Ridge Coal Mine and the Goonyella Riverside Expansion. It also considers the relocation and upgrade of the Moranbah Airport. BMA's community engagement strategy is to undertake an extensive process of engagement and consultation on the Growth Project, during the EIS phase, construction and operation of the new and expanded mines. Please refer to **Chapter 16** of the Project draft EIS, which details the community consultation and engagement activities carried out for the Daunia Project.

An assessment of the impact to regional areas was not conducted, however BMA considers that the impact to housing demand in regional areas will not be significant based on the following:

- the workforce (400 jobs during construction and 300 during operation) is comparatively small compared to the population of these regional centres; and



- a large proportion of the workforce is likely to already be residing in these regional areas prior to the commencement of the Daunia Coal Project, and hence will not create an increase in housing demand.

The Project draft EIS provides details of the workforce arrangements in Section 3. **Appendix P**, contains BMA's Accommodation Update Newsletters, these newsletters provide regular updates on housing initiatives undertaken by BMA.

In recruiting the right people at the right time, in the right location, BMA proactively helps to build capacity in its host communities, by supporting a range of cadetships, engineering programs and other skills development initiatives. Each year BMA invests \$925,000 plus wages and salaries in the Bowen Basin communities, through its Skills for Growth program. This investment supports engineering partnerships with the University of Queensland and Central Queensland University, graduate scholarships, a cadetship program and engineering extension programs, as well as industry initiatives such as the Queensland Minerals and Energy Academy, the Mining Industry Skills Centre and the Coalfields Engineering Skills Centre (which is joined to Moranbah High School).

BMA Mackay Supply holds meetings with businesses across the Mackay and Bowen Basin regions, to detail BMA compliance requirements for prospective contractors and vendors. Local, State-based and national suppliers are involved in tenders for BMA contracts. BMA's Mackay Supply Group operates from Mackay, and is well informed of the supply and business services capability within Mackay Regional Council and the broader Mackay Whitsunday region.

BMA also engages regularly with the Central Highlands Regional Council, and presents information on BMA's growth projects to keep key representatives from the Southern Bowen Basin updated on growth plans, and employment and business opportunities.

Key representatives from BMA's community investment, housing and growth projects, meet monthly with the Isaac Regional Council to discuss operational activities, and proposed growth projects. This forum provides opportunities to discuss contract packages available during the construction and operation phases of the Project.



5.18 Economy

5.18.1 Summary of Submissions

The following comments were received in relation to **Section 18 - Economy** of the Project draft EIS.

- DTRDI commented that they may be available to provide advice or assistance in preparing and linking local businesses to these opportunities.
- DTRDI commented that in view of the current reduction in demand for Bowen Basin coal brought about by the world financial crisis, the economic benefits delivered by the project will be important in offsetting the loss of jobs and export revenue and in helping to sustain the growth of the region.

5.18.2 Response to Submissions

BMA welcomes opportunities for the Department to provide advice or assistance in preparing and linking local businesses to link in with its growth.

BMA Mackay Supply holds meetings with businesses across the Mackay and Bowen Basin regions, to detail BMA compliance requirements for prospective contractors and vendors. Local, State-based and national suppliers are involved in tenders for BMA contracts. BMA's Mackay Supply Group operates from Mackay, and is well informed of the supply and business services capability within Mackay Regional Council and the broader Mackay Whitsunday region.

In recruiting the right people at the right time, in the right location, BMA proactively helps to build capacity in its host communities, by supporting a range of cadetships, engineering programs and other skills development initiatives. Each year BMA invests \$925,000 plus wages and salaries in the Bowen Basin communities, through its Skills for Growth program. This investment supports engineering partnerships with the University of Queensland and Central Queensland University, graduate scholarships, a cadetship program and engineering extension programs, as well as industry initiatives such as the Queensland Minerals and Energy Academy, the Mining Industry Skills Centre and the Coalfields Engineering Skills Centre (which is joined to Moranbah High School).

5.19 Health, Safety and Risk

5.19.1 Summary of Submissions

The following comments were received in relation to **Section 19 - Health, Safety and Risk** of the Project draft EIS.

- DES commented that the EIS included a commitment to consult with QFRS, QAS and EMQ regarding emergency response planning. The following issues of concern were identified:
 - site access and egress;
 - construction/operation staging;
 - road closures and traffic hazards;
 - storage and location of hazardous goods on-site;
 - other concerns as identified; and
 - the development of appropriate response plans, consultation processes and resourcing for disasters and incidents.

5.19.2 Summary of Responses

BMA is committed to further consultation with DES, QFRS, QAS and EMQ on emergency response and planning requirements. BMA has developed emergency response plans for the Project.

BMA is committed to developing appropriate emergency response plans in consultation with the appropriate agencies and contacts.

5.20 Cumulative Impacts

5.20.1 Summary of Submissions

The following comments were received in relation to **Section 20 - Cumulative Impacts** of the Project draft EIS.

- The EPA requested that the comments made in the report Review of the Fitzroy River Water Quality Issues (Hart et al, 2008) on the likely impacts of discharges from mine sites should be considered in the assessment. The EIS should address the requirements of the terms of reference with regard to the potential impacts of discharges from the site on surface water quality and ecology during and after mining. A detailed, reasoned, evidenced- based assessment must be provided for all findings.
- DTRDI suggested that BMA should commit to addressing the local Leadership Group as identified under the Sustainable Resource Communities Policy and support local government with timely and accurate information about the impact of operation on local roads. Additionally the proponent should commit to providing accurate and timely predictive information on the workforce numbers, workforce location and workforce housing data on a regular basis.
- CFMEU suggested that the potential social impacts from the Project also need to be considered in the context of other developments in the area. The assessment of cumulative impacts is of particular importance to this assessment due to both the number of mining operations currently operating in the area, and also due to the proposed growth in mining operations predicted for the area. Whatever the eventual make-up of the workforces place of residence BMA must make a contribution to the relevant Council area for the increased infrastructure required.

5.20.2 Summary of Responses

A report on water quality issues in the Fitzroy River was released in November 2008, subsequent to finalisation of the Project draft EIS. In summary the report reviewed the water quality in the Fitzroy River resulting from the discharge of 138 Gigalitres of mine-affected floodwater from the Ensham Resources Pty Ltd (Ensham) coal mine located near Emerald in Central Queensland. The report found, amongst other things, that the mine affected water caused no short or long term human health problems. However there were un-quantified effects on the riverine biota and most impacts were related to high sodium levels impacting on the early life stages of fish and macroinvertebrates.

The key lessons learnt from this experience include the need to ensure effective communication with stakeholders in the event that an emergency discharge of this magnitude is required. The water balance model presented in the draft EIS has been refined in this Supplementary EIS (**Appendix A**) to further minimise the potential for such events. This approach is also consistent with recommendations contained within 'A study of the cumulative impacts on water quality on mining activities in the Fitzroy Basin' released in March 2009. Key recommendations of this report centre on reducing the likelihood and consequences of discharges. BMA has requested membership on the Sustainable Resource Communities Leadership Group so that it can further support Government in its planning for social infrastructure and service provision in addressing the cumulative impacts of growth.



There has also been increased government support for the management of cumulative impacts of mining on the Bowen Basin. In January 2009, Premier Anna Bligh announced \$27 million funding for projects within resource communities, including 15 projects in the Bowen Basin that will receive state government funding under the Sustainable Resource Communities Policy. In the study BMA is advocating that funding be provided for the expansion of childcare capacity and health staff accommodation and an upgrade of the Moranbah Emergency Services Centre.

The Queensland Government has also set ambitious targets through its *Toward Q2, Tomorrow's Queensland Plan*, which is to be achieved in partnership with industry and the community. BMA intends to play a part, along with other mining companies, in the Northern Bowen Basin and Mackay region, assisting the Queensland Government reaching its target of *Queensland being Australia's strongest economy, with infrastructure that anticipates growth*.

The Queensland Government's *Coal Infrastructure Program of Actions 2008* also identified the need to undertake industry-wide strategic planning for future growth in coal demand and production. In response, the Coal Infrastructure Taskforce is developing the Queensland Coal Infrastructure Strategic Plan for the provision of infrastructure to meet the coal industry's need to 2028. In line with this, BMA is lobbying for a Government funded regional economic and social infrastructure master planning exercise encompassing the Northern Bowen Basin and Mackay, taking into account the strong medium and long-term coal industry growth outlook. The aim of the exercise is to ensure that industry growth opportunities across the Northern Bowen Basin and Mackay are taken advantage of in a timely manner in a way that effectively facilitates growth and allows it to be managed in terms of its impacts. BMA will continue to play a part in industry and government initiatives aimed at monitoring and managing the cumulative impacts of growth across the region.

Appendix H provides details of how the Project will manage traffic impacts. It contains commitments to work closely with local government to minimise any disruption to traffic.

The Project draft EIS provides details of the workforce arrangements in Section 3. **Appendix P**, contains BMA's Accommodation Update Newsletters, these newsletters provide regular updates on housing initiatives undertaken by BMA. BMA will look to form a closer working relationship with PIFU, to provide confidential forecasting and workforce number projections to allow for more informed planning. Effective workforce planning aligned to staged or tiered growth projects, enables non-resident workers to transition from one project to another. This ensures, as much as is practical, that workplace and community impacts from the non-resident workforce are minimised.

BMA continues to work with and support government in meeting the increased infrastructure requirements across the region.

In the 2008 financial year, BMA supported local councils and governments by way of a \$14.8 million investment in:

- council rates;
- special levies; and
- subsidies and allocations, including the maintenance of local roads and airports and for other council infrastructure, facilities and water.

5.21 Draft Environmental Management Plan

5.21.1 Summary of Submissions

The following comments were received in relation to **Section 20 - Draft Environmental Management Plan** of the Project draft EIS.

- QT suggested that the list of activities with the potential to generate particulate emissions should be amended to include the additional activity of 'rail transport of coal to port'.
- QT suggested additional mitigation measures should be included in the dust control section .

5.21.2 Response to Submissions

The EM Plan covers the mining operations at Daunia coal mine. Coal transport to port does not occur within the mining lease. The EM Plan has been amended to include the following additional dust control and mitigation measures in Section 3.3.5.1 (**Appendix L**).

- BMA has budgeted for and designed the train load out facility to allow for a polymer-based dust suppression unit. However a decision on construction and installation of the dust suppression unit at the train load out, to reduce dust emissions during rail transport, will be made as QR and industry confirm arrangements across the coal industry.
- Install improved coal train loading infrastructure to control overloading and minimise spillage.
- Install improved load profiling systems to create a more streamlined and consistent surface of coal in each wagon.
- Product coal supplied for rail transport will be washed in the CHPP to remove coal fines and other particulate matter.
- Product coal supplied for coal transport will have a coal-surface water content designed to reduce dust emissions during rail transport.

QR are currently developing a Coal Dust Management Plan, that will include the mitigation methods identified in the final Environmental Evaluation, on rail corridors connecting coal mines in the Bowen and Callide basins with ports at Dalrymple Bay, Hay Point and Gladstone, in an effort to reduce the impact of environmental, social, and commercial consequences associated with coal loss.

QR expects the Coal Dust Management Plan will be completed by December 2009 (see <http://www.qrnetwork.com.au/About-us/Environmental-policies/Coal-loss-management.aspx>).

The EM Plan has been updated to generally account for the revised mitigations measures and control strategies. This includes recommendations in the Project draft EIS that were not originally captured in the initial EM Plan.