





BHP Billiton Mitsubishi Alliance

# newsletter

## GROWING BMA - COMMUNITY ENGAGEMENT

Contact details  
**1800 078 797**  
**enquiries@bmacoal.com**  
**www.bmacoal.com**

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA owns and operates seven mines – Broadmeadow, Blackwater, Goonyella Riverside, Gregory Crinum, Peak Downs, Saraji, Norwich Park, and the Hay Point Coal Terminal near Mackay. In addition, BMA manages the operations of BHP Mitsui Coal; South Walker Creek and Poitrel. The company employs over 8,900 people, including contractors.**

### Note from John:

This is the first in a series of regular newsletters to inform you and keep you updated on our plans to grow our business, and on how we are working to meet the needs of the whole community.

This newsletter will outline two potential new development projects - Caval Ridge Mine and Daunia Mine - as well as our approach to future growth.

We are long term members of the Bowen Basin community and these potential projects will strengthen our future in the region.

We are committed to conducting an open and transparent engagement process with our community and stakeholders so that we can understand the effects our growth may have and work with you to address these in our planning and design processes.

Operational growth aside, we recognise that the Bowen Basin and the industry as a whole is currently overheated, placing pressure on our towns and community facilities. We are working with Government and independent groups to look at addressing these issues in a sustainable way. We are also completing the Environmental Impact Statement (EIS) process for our projects.

We will keep you fully informed of our activities, and give you opportunities to provide input and feedback. In addition to feedback mechanisms listed overleaf, we encourage you to discuss our plans through our informative mobile displays and through EIS support processes we will be holding throughout the year.

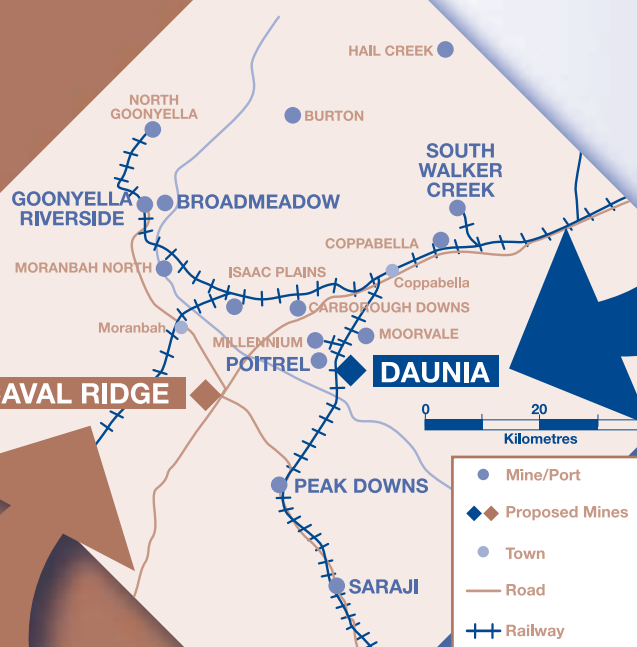
Regards,  
 John Smith  
 BMA CEO

### Daunia Mine

- Expected to produce approximately 4 million tonnes per annum
- Located on the eastern side of the existing Poitrel Mine
- Estimated construction workforce of 350; estimated operational workforce of 200
- Mining will be by truck and excavator, and a new coal handling and preparation plant will be developed
- First coal expected in 2010

### Caval Ridge Mine

- Expected to produce approximately 5.5 million tonnes per annum
- Located north of the existing Peak Downs Mine, on the northern and southern sides of the Peak Downs Highway
- Estimated construction workforce of 1200; estimated operational workforce of 340
- Mining will be by dragline and truck and shovel, with a new coal handling and preparation plant to be built
- First coal expected in 2011



## Growing BMA

In addition to the Daunia and Caval Ridge operations, BMA is considering a range of further growth options.

These include the potential expansion of existing operations and developing new mines, to ensure we maximise the current demand for our product. Current options include expansions at our existing Peak Downs Mine, adding 2.5 million tonnes per annum and 260 jobs, and Goonyella Riverside Mine, adding up to 9 million tonnes per annum and up to 700 jobs. Longer term we have a number of attractive deposits that may move toward feasibility.

In light of current world wide high demand for mining and processing equipment we are considering options to streamline our approach to accelerate delivery of items with longer long lead times and ensure we can take advantage of current strong demand for our product.

## EIS flowchart

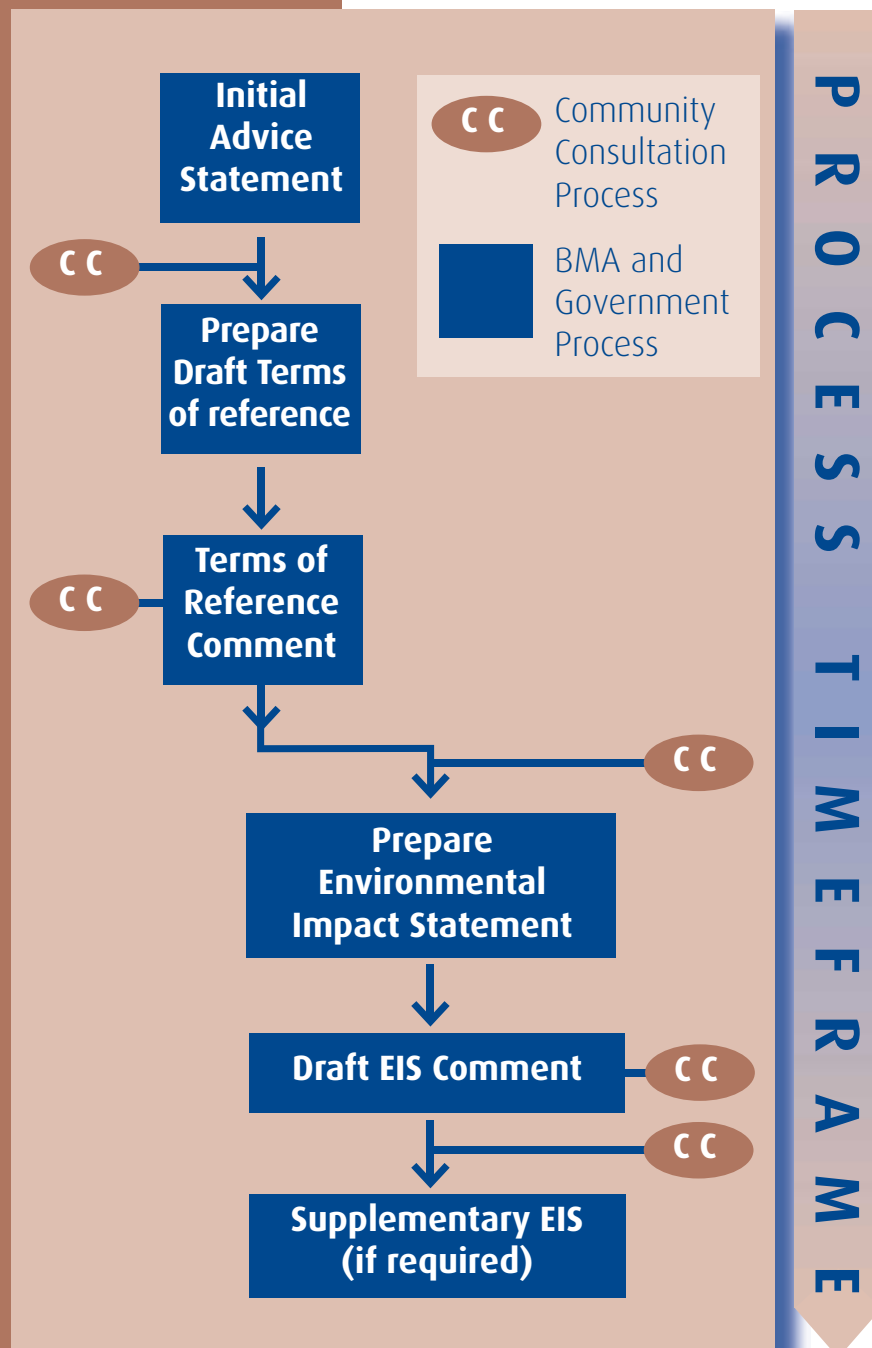
## Community Consultation

BMA will conduct a two-way engagement process with our local community and our stakeholders throughout the EIS process for Daunia and Caval Ridge and beyond, as shown in the flowchart. Through this process we aim to inform you of our plans and gather your views on impacts and opportunities. A mobile display will be visiting centres throughout the local region with specific dates and times advertised in the local media. These displays will include information about the projects, feedback opportunities and the chance to talk to members of our team. Separate information displays will also be available for you to view at a central location in Moranbah.

As the EIS process continues we will provide an opportunity for you to discuss key components of the EIS and to find out more on the EIS submission and how to provide comments.

BMA will establish a Community Reference Group, that will include a range of organisations such as community groups, government agencies, environment groups and local businesses, to work with BMA to determine potential impacts and mitigation strategies; assist BMA to understand community views on the projects; and act as a two-way information source for the project team and community stakeholders.

Information about our planned activities and the projects will also be available on our website at [www.bmacoal.com](http://www.bmacoal.com) and we welcome your questions on our plans by contacting us on 1800 078 797 or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com).







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### Note from John:

This is the second in a series of regular newsletters to inform you and keep you updated on our plans to grow our business, and on how we are working to understand and address the needs of the whole community.

The first newsletter outlined our two earliest development projects – Caval Ridge Mine and Daunia Mine – as well as our approach to growth. This second newsletter provides an update on how these new developments are progressing, especially in light of the community engagement sessions we have had with the people of Moranbah, Nebo and Mackay.

BMA has conducted nine community information displays over the past two months, with about 760 people having the opportunity to raise questions and provide comments about the new projects and potential regional impacts. Key areas of interest included employment opportunities, accommodation for new employees, environmental concerns such as air quality and noise, and the standard of town facilities and impacts on local lifestyle.

For those of you who were able to attend, thank you for your time. All of your comments and BMA's proposed mitigation methods will be submitted to the Queensland Government as part of the Environmental Impact Statement (EIS) approvals process. This will ensure that your issues will be addressed.

While the Government approvals process is continuing, within BMA we are working on mine planning and other key issues such as the attraction and retention of people, the possible use of emerging automation technology and the ways we can mitigate any impacts from the projects.

Although the initial phase of community displays is now complete, we still welcome feedback and I encourage you to contact our community engagement team through the details provided in this newsletter.

Regards,  
 John Smith  
 BMA CEO



## Community input - what you said about BMA's projects:

You asked	BMA's response
<b>Can BMA ease the housing issues and provide more family housing in Moranbah?</b>	<p>We recognise that housing is one of the biggest issues facing our employees and our communities, and steps are in place to address it. These include:</p> <ul style="list-style-type: none"> <li>- Working with Isaac Regional Council on ways to alleviate this issue</li> <li>- Offering flexible options for our employees such as assistance to rent, buy or build in the local area</li> <li>- Having a suite of work arrangements to meet the expectations of our employees</li> <li>- Providing a range of flexible options including fly in fly out, drive in drive out, and bus in bus out to meet the needs of those employees who prefer to reside in coastal or larger regional centres</li> <li>- Considering additional options due to the current strain on housing, including accommodation villages (along the lines of the BMA village in Dysart).</li> </ul>
<b>How will BMA support community atmosphere, services and lifestyle?</b>	<p>BMA is actively involved in supporting the townships that many of our employees and their families live in. Our Community Investment commitment includes investing in significant or 'landmark' projects to further improve the priority needs of each community. Our Community Partnership Program addresses social needs and sustainable initiatives, and are supported by our regional infrastructure contributions and local site initiatives.</p>
<b>Where will the new workforce come from?</b>	<p>BMA will be seeking skilled people to operate our new projects through a number of traditional and innovative methods. We are committed to advertising jobs locally as well as nationally, and internationally in some cases. While the current skills shortage is recognised as an industry-wide issue, we are investing in a 'Skills for Growth' program to improve education and training in mining related fields.</p>
<b>How can I get a job at the proposed Mines?</b>	<p>BMA is a number of months away from recruiting for the new projects, however all job opportunities will be advertised through our careers website <a href="http://www.careers.bmacoal.com">www.careers.bmacoal.com</a>.</p>
<b>Do these projects mean more wide loads and increased traffic on the Peak Downs Highway?</b>	<p>While a certain level of increased traffic is unavoidable, BMA understands that road safety is an area of particular concern, especially on the frequented Peak Downs Highway. Our commitment to road safety and fatigue management is underlined by:</p> <ul style="list-style-type: none"> <li>- Adopting a proactive approach to managing fatigue, based on adequate hours of rest</li> <li>- Ensuring our roster and shift structure allows our employees plenty of opportunity for sleep and rest between shifts and on their days off</li> <li>- Being a significant sponsor and foundation member of the Mining Industry Road Safety Alliance</li> <li>- Considering the impacts and mitigation methods of increased traffic from new projects.</li> </ul>
<b>How will BMA manage potential dust impacts from the proposed Caval Ridge Mine?</b>	<p>As part of the EIS process, BMA will be carefully looking at air quality surrounding Caval Ridge Mine. Comprehensive monitoring and modelling will allow appropriate methods of mitigation to be developed. Strategies to be reviewed include a combination of the following measures:</p> <ul style="list-style-type: none"> <li>- Considering weather conditions such as wind direction when conducting certain activities</li> <li>- Using water trucks on exposed areas</li> <li>- Ensuring complaints are investigated and actioned promptly</li> <li>- Restricting land disturbance and rehabilitating land progressively to reduce dust generation.</li> </ul>
<b>Will noise be mitigated at the Caval Ridge Mine?</b>	<p>As with dust issues, noise will also be monitored and mitigated in a similar way, with noise strategies potentially including:</p> <ul style="list-style-type: none"> <li>- Restricting the hours and duration of certain activities that generate excessive noise</li> <li>- Using appropriate or modified plant and equipment</li> <li>- Using landforms such as hills to shield the operations</li> <li>- Limiting the speed of vehicles on site.</li> </ul>
<b>How will vibration be managed?</b>	<p>As part of the EIS process, BMA is undertaking studies into vibration issues that may arise from the new projects. Following these studies, mitigation methods will be proposed and vibration management will follow.</p>

**“The impacts will largely depend on the contributions of BMA to a range of issues facing Moranbah”**

**“BMA, thank you for the opportunity to have my input”**

**“Please encourage more families to embrace Moranbah as their home”**



## Community information displays

Significant numbers of community members were involved at each of the mobile community information display locations:

Date	Display location	Attendees
8 May	Moranbah Fair Shopping Centre	85
10 May	Black Nugget Carpark, Moranbah	57
24 May	Nebo Rodeo	20
25 May	Lions Markets, Moranbah Town Square	141
5 June	Moranbah Fair Shopping Centre	50
6 June	Caneland Central, Mackay	117
7 June	Mackay Showground Markets	55
28 June	Moranbah Fair Shopping Centre	93
29 June	Lions Markets, Moranbah Town Square	140
Total		758

## Environment

BMA's growth projects have been progressing through the EIS process.

The Initial Advice Statement (IAS) for the first projects in our growth phase has been submitted to the Department of Infrastructure and Planning outlining BMA's proposed projects and related infrastructure. Following this, Significant Project status was declared during July, and the draft Terms of Reference were released for public review (as per Fig 1). Both the Terms of Reference and IAS are available on [www.bmacoal.com](http://www.bmacoal.com).

Study updates on each of the projects are as follows.

### Daunia Mine:

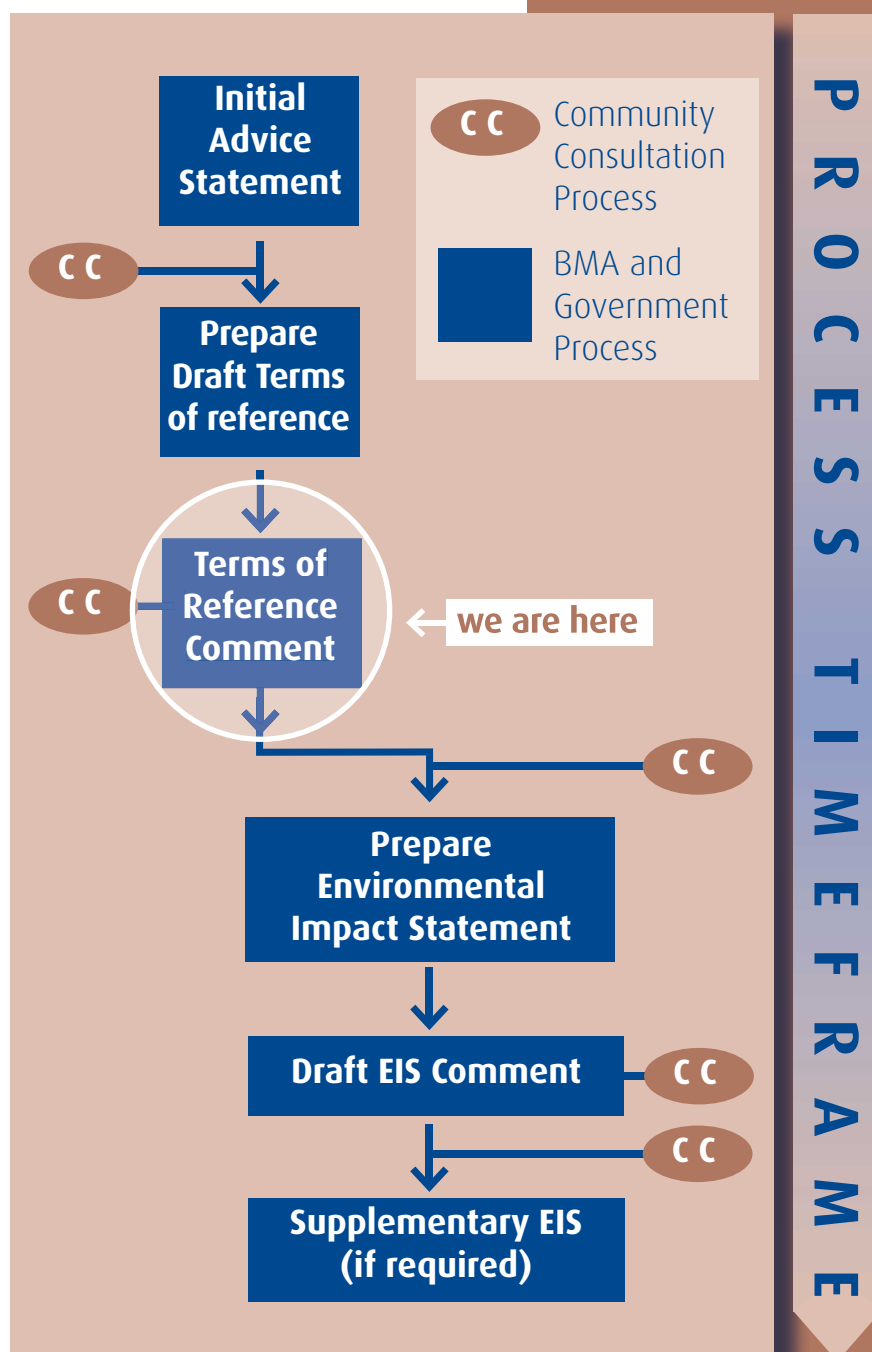
- Baseline environmental studies on the Daunia site have been finalised
- Impact Assessment activities are well advanced
- EIS chapters are currently being drafted
- It is expected that the EIS will be available for public comment in November 2008.

### Caval Ridge Mine:

- Baseline environmental studies on the Caval Ridge site are nearing completion
- Impact Assessment activities are commencing now that sufficient clarity around the project has been achieved
- Drafting of EIS chapters will commence soon
- It is expected that the EIS will be available for public comment in early 2009.

If you have any questions relating to the environmental management of these projects, please contact our enquiry line on 1800 078 797. You can also view recent additions to our website, including an environmental monitoring fact sheet, and 'visualisations' depicting Caval Ridge Mine from the Moranbah access road, over the life of the mine.

Fig 1





## Community Reference Group

BMA established a Community Reference Group (CRG) to discuss key issues associated with each project as well as the overall growth plans. The key role of this group is to assist BMA to understand community views, work with BMA to determine potential impacts and mitigation strategies, and to act as a two-way information source for the project team and stakeholders.

The CRG is made up of a range of organisations, with membership including representatives from:

- Isaac Regional Council
- Isaac/Connors Catchment Landcare
- Moranbah Traders Association
- Emergency Long Term Accommodation Moranbah
- Moranbah District and Support Services
- Dysart Community Support Group
- Department of Infrastructure and Planning
- Department of Mines and Energy
- Department of Communities
- Environmental Protection Agency
- Moranbah Hospital
- Queensland Ambulance Service – Moranbah Station
- Queensland Fire and Rescue Service – Moranbah Station
- Queensland Police Service

Two CRG meetings have now been held, with key issues discussed including:

- The EIS and approvals process
- Construction workforce accommodation
- Impacts of increased population on town services
- The importance of housing, and encouraging families to move to the area
- Impacts relating to the airport
- Potential impacts on Peak Downs Highway
- A coordinated approach from local mining companies to manage issues
- Management strategies for environmental issues.

### Where to from here?

The next phase of our growth plans will include providing an opportunity for the public to review and comment on the release of the BMA Growth Terms of Reference. During these next steps BMA will continue to engage with the community, and any questions can be directed to the community engagement team on 1800 078 797 or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com).







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### Note from Marcelo:

This is the third in a series of regular newsletters to keep you updated on BMA's growth plans in the Bowen Basin. It is also my first opportunity to introduce myself to you as BMA's newly appointed CEO.

Since joining BMA in early September, I have sought to quickly bring myself up to speed on the company's growth projects and I am committed to keeping you regularly updated via newsletters and our ongoing community activities.

Our team is continuing to work hard to understand the needs of the communities in which we live and work, and we are committed to ensuring you have the opportunity to have your say.

The level of interest in BMA's projects and the quality of feedback received from the people of Moranbah, Nebo and Mackay has been encouraging. Around 760 people visited our community information displays during May, June and July. Since the release of the draft Terms of Reference in August for the proposed Daunia and Caval Ridge Mine projects, Goonyella Riverside Mine expansion and Moranbah Airport project, we have also continued to receive feedback, either through questions or suggestions about the new projects and potential impacts on the region.

Thank you to those who took the time to provide input. Your comments will assist the Environmental Impact Statement (EIS) process for each project and provide BMA with a framework to appropriately address community concerns.

For those of you who have not yet been involved, a draft EIS for the proposed Daunia Mine is due for publication this month and our team will be hosting information displays across the region to assist your feedback. The information displays will also provide an opportunity to further discuss the proposed Caval Ridge Mine and Goonyella Riverside Mine expansion projects. Please see the details provided inside on dates and venues.

In the meantime, feel free to contact our community engagement team via the details provided in this newsletter, or visit the BMA website.

Regards

**Marcelo Bastos**

BMA CEO



## The Daunia Mine draft Environmental Impact Statement – what to expect:

The Daunia Mine draft Environmental Impact Statement (EIS) will be released for public comment this month. As part of the Queensland Government's approval process for significant projects, the EIS will focus on the environmental, economic and social impacts which BMA needs to address during construction, operation and rehabilitation of the proposed Daunia Mine.

The Daunia Mine draft EIS follows on from feedback gathered during the Initial Advice Statement and draft Terms of Reference phases of the approval process, and will provide more detailed information from the baseline environmental and social impact studies BMA and its consultants have conducted.

EIS chapter	Summary
<b>Executive summary</b>	A stand alone summary of the EIS.
<b>Introduction</b>	Explains why the document has been prepared, the methodology and what it sets out to achieve.
<b>Project description</b>	An overview of the project, describing key phases of the project including pre-construction, construction, commissioning and operation, rehabilitation of disturbed lands and decommissioning.
<b>Environmental values and management of impacts</b>	<p>Addresses all elements of potential environmental impacts and BMA's proposed mitigation strategies. This section will address:</p> <ul style="list-style-type: none"><li>• Climate change considerations</li><li>• Land management</li><li>• Water resources</li><li>• Nature conservation</li><li>• Air quality</li><li>• Noise and vibration</li><li>• Transport</li><li>• Waste</li><li>• Cultural heritage</li><li>• Social impacts (including housing and community consultation)</li><li>• Health and safety</li><li>• Hazards and risks</li><li>• Sustainable development</li><li>• Cumulative impacts associated with the project.</li></ul>
<b>Environmental management plan</b>	A detailed commitment from BMA outlining practical and achievable strategies which address each element in the previous section. This section will also outline performance criteria for environmental management and reporting requirements.
<b>References</b>	A list of sources referred to throughout the EIS.
<b>Appendices</b>	Technical reports and other sources of the EIS analysis, maps, diagrams and illustrative material, as well as a list of people, interest groups and agencies consulted during the EIS.

- **A full copy of the proposed Daunia Mine draft EIS will be available in November at [www.bmacoal.com](http://www.bmacoal.com) or [www.dip.qld.gov.au](http://www.dip.qld.gov.au) (Department of Infrastructure and Planning).**
- **Don't have time to read the draft EIS? Ask for a copy of the overview document.**
- **BMA is preparing an overview document - a shorter, quicker, yet comprehensive summary of the project, prepared in plain English, with relevant detail.**
- **To get your copy of the proposed Daunia Mine draft EIS overview document email: [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com) or call 1800 078 797.**
- **Check local advertising or contact the community engagement team to find out about the EIS submission closing date.**



## Diary dates – get involved

The BMA community engagement team will be on the road this month providing project information, answering questions and collecting feedback.

Date	Display location	Times
Thursday 20 November	Moranbah Fair Shopping Centre	2pm -6pm
Saturday 22 November	Black Nugget car park, Moranbah	8.30am – 11am
Saturday 29 November	Moranbah Fair Shopping Centre	10am – 2pm
Sunday 30 November	Lions Markets, Moranbah Town Square	7.30am – 12noon
Friday 5 December	Mount Pleasant Greenfields Shopping Centre, Mackay	1pm - 5pm
Saturday 6 December	Mount Pleasant Greenfields Shopping Centre, Mackay	9am - 1pm

## The proposed Daunia Mine draft EIS – how to have your say

BMA encourages you to provide feedback on the Daunia Mine draft EIS.

If you would like assistance in preparing your written submission, please drop by any time during our support session:

Date	Support session location	Times
Thursday 27 November	Moranbah Community Centre	2pm – 7pm

Fig 1



For more information on how to have your say visit [www.bmacoal.com](http://www.bmacoal.com) or [www.dip.qld.gov.au](http://www.dip.qld.gov.au), or contact the community engagement team on 1800 078 797.





Cultural heritage studies at proposed mine site.

## Growth projects update

### Daunia Mine

- Feedback period for draft Terms of Reference now closed.
- Baseline environmental studies complete.
- Impact assessments complete.
- Daunia Mine draft EIS due for public comment in November.
- Community information displays in Moranbah and Mackay in November.
- Call for written submissions regarding the Daunia Mine draft EIS in November and December.

### Caval Ridge Mine

- Feedback period for draft Terms of Reference now closed.
- Baseline environmental studies nearing completion.
- Impact assessments underway.
- Caval Ridge Mine draft EIS expected to be released for public comment in early 2009.
- Call for written submissions regarding the Caval Ridge Mine draft EIS to follow.

### Goonyella Riverside Mine Expansion

- Feedback period for draft Terms of Reference now closed.
- BMA will conduct an EIS for this project and follow a community consultation process similar to the Daunia and Caval Ridge Mine projects.
- Visit the information displays in Moranbah and Mackay during November to find out more about the proposed Goonyella Riverside Expansion.
- Proposed Goonyella Riverside Mine Expansion draft EIS expected to be released for public comment mid-2009.

### Moranbah Airport Project

- Feedback period for the draft Terms of Reference now closed.
- Site selection study underway.
- Baseline environmental studies to commence following selection of the airport location.

## Key contacts:

BMA's community engagement team:

Phone: 1800 078 797

Email: [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)

Web: [www.bmacoal.com](http://www.bmacoal.com)

Department of Infrastructure and Planning:

Phone: +61 7 3237 7472

Email: [iedg@dip.qld.gov.au](mailto:iedg@dip.qld.gov.au)

Web: [www.dip.qld.gov.au](http://www.dip.qld.gov.au)

**New environmental monitoring fact sheet available.**  
**Visit [www.bmacoal.com](http://www.bmacoal.com) or phone 1800 078 797.**



E4C2 – 1 – BMA Community Announcement 1\_Nov



**BMA radio ads**

**For Radio Week 17 November:** Approx 45 seconds.

Earlier this year BMA introduced the proposed Caval Ridge and Daunia Mines to the community.

BMA's draft Environmental Impact Statement for the Daunia Mine is now available for public comment.

BMA welcomes your feedback.

If you'd like to talk to BMA about the Daunia Mine, or you'd like assistance when preparing your written submission in response to the draft Environmental Impact Statement, drop into the Moranbah Community Centre any time between 2pm and 7pm on Thursday the 27<sup>th</sup> of November.

You can also visit information displays about the Daunia Mine and other BMA growth projects, at the Moranbah Fair Shopping Centre between 2pm and 6pm on Thursday the 20<sup>th</sup> of November, or the Black Nugget Car Park from 8.30am to 11am on Saturday the 22<sup>nd</sup> of November.

For more information visit [bmacoal.com](http://bmacoal.com) or call 1800 078 797.



BMA invites you to visit one of its mobile displays currently travelling throughout the local region.

The project team and display will be visiting the Nebo Rodeo on Saturday 24 May from 1pm to 4.30pm and the Lions Markets at the Moranbah Town Square on Sunday 25 May from 7.30am to 12pm.

The displays will include information about BMA projects including the possible expansion of existing operations and new projects such as the proposed Caval Ridge and Daunia Mines. This is an important opportunity to provide your feedback and thoughts.

Further displays will also be held during June.

If you would like further information please contact the project team on 1800 078 797.



BMA is currently undertaking community engagement in the Moranbah region on the possible expansion of existing operations and the development of new mines.

As part of its commitment to the local community, BMA invites you to attend one of its mobile displays to be held during May. These displays will include information about BMA projects and the opportunity to meet the project team and provide feedback.

The first mobile display will be held at the Moranbah Fair Shopping Centre on Thursday 8 May from 10am to 3.30pm. The display will then visit the Black Nugget Carpark on Saturday 10 May from 8.30am to 11am.

Further displays will be held in late May, with dates for June to be announced shortly.

If you would like further information please contact the project team on 1800 078 797.





As part of its commitment to the local community, BMA invites you to attend its mobile displays.

The first round of mobile displays are almost over and you are encouraged to provide your feedback on BMA projects, such as the proposed Caval Ridge and Daunia Mines.

The project team and mobile display will be visiting the Moranbah Fair Shopping Centre on Saturday 28 June from 10am to 2pm and the Lions Markets at the Moranbah Town Square on Sunday 29 June from 7.30am to 12pm.

More information about BMA's growth and projects will also be provided throughout the year, along with opportunities to talk to the project team.

If you would like to talk to a project team member please call 1800 078 797.





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## COMMUNITY ENGAGEMENT

### Growing BMA – Daunia Mine draft Environmental Impact Statement

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter.**

In response to expected long term strong demand for our product, we are strengthening our growth options through the expansion of existing operations and the development of new mines.

Earlier this year members of the community visited information displays about the proposed Daunia and Caval Ridge Mines.

Information displays will be located in your area soon to explain the Daunia Mine draft Environmental Impact Statement (EIS). Information will also be available about the Caval Ridge Mine, expansion of the Goonyella Riverside Mine and the Moranbah Airport relocation and upgrade.

These displays will provide information about BMA projects and opportunities will be available to talk to members of our team and offer feedback.

Please note submissions on the Daunia Mine draft EIS close 5pm, Monday 2 February 2009.

Location	Date	Time
Moranbah Fair Shopping Centre	Saturday 29 November	10.00am - 2.00pm
Lions Markets, Moranbah Town Square	Sunday 30 November	7.30am - 12.00pm
Mount Pleasant Greenfields Shopping Centre, Mackay	Friday 5 December	1.00pm - 5.00pm
Mount Pleasant Greenfields Shopping Centre, Mackay	Saturday 6 December	9.00am - 1.00pm

For more information  
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These displays will provide information about BMA projects and opportunities will be available to talk to members of our team and offer feedback.

Please note submissions on the Daunia Mine draft EIS close 5pm, Monday 2 February 2009.

Location	Date	Time
Mount Pleasant Greenfields Shopping Centre, Mackay	Friday 5 December	1.00pm - 5.00pm
Mount Pleasant Greenfields Shopping Centre, Mackay	Saturday 6 December	9.00am - 1.00pm

For more information  
please contact us on

**1800 078 797**

or enquiries@bmacoal.com



E4C2 — 7 — BMA Press Ad 7





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Late last year members of the community visited information displays about the Daunia Mine draft Environmental Impact Statement (EIS). These displays are continuing in January and will provide further opportunities for local communities to talk to members of the BMA team and offer feedback.

Information will also be available on the proposed Caval Ridge Mine, expansion of the Goonyella Riverside Mine and the proposed Moranbah Airport relocation and upgrade.

A submission support workshop will also provide information about the Daunia Mine draft EIS and the submission process. If you would like assistance in preparing your written submission, drop by any time during the workshop.

Please note submissions on the Daunia Mine draft EIS close at 5pm, on Monday 2 February 2009.

Location	Date	Time
Moranbah Fair Shopping Centre	Saturday 17 January	10.00am – 2.00pm
Moranbah Town Square	Sunday 18 January	7.30am – 12.00pm
Submission Support Workshop Moranbah Community Centre	Monday 19 January	2.00pm – 7.00pm

**Sunday's information display will include a sausage sizzle.**

For more information  
please contact us on

**1800 078 797**

or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)





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# Growing BMA – Daunia Mine draft Environmental Impact Statement

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter.**

In response to expected long term demand for our product, we are strengthening our growth options through the expansion of existing operations and the development of new mines.

Over the past nine months, residents of Moranbah, Nebo and Mackay have been introduced to the proposed Daunia Mine through newsletters, local meetings, advertisements and public information displays.

BMA has taken on board community feedback and completed studies on Daunia Mine's potential environmental, social and economic impacts.

Based on this information, BMA has prepared a draft Environmental Impact Statement (EIS) for the Daunia Mine project, which was released for public comment by the Department of Infrastructure and Planning on 29 November 2008.

**BMA and the Department of Infrastructure and Planning invite you to provide feedback on the Daunia Mine draft EIS.**

**Public submissions will be accepted until**

**5pm on Monday 2 February, 2009.**

A copy of the draft EIS is available at  
[www.bmacoal.com](http://www.bmacoal.com) or [www.dip.qld.gov.au](http://www.dip.qld.gov.au)

Visit these websites for details about how to make a submission.

BMA has now completed the information display period for the Daunia Mine draft EIS and would like to thank everyone who visited the displays and provided feedback.

For more information  
please contact us on

**1800 078 797**

or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)



**BMA radio ads****For Radio beginning Monday 12 January:**

Earlier this year BMA introduced the proposed Daunia and Caval Ridge Mines to the community.

BMA's draft Environmental Impact Statement for the Daunia Mine is now available for public comment.

BMA welcomes your feedback.

If you'd like to talk to BMA about the Daunia Mine, or you'd like assistance when preparing your written submission in response to the EIS, drop into the Moranbah Community Centre any time between 2pm and 7pm on Monday the 19<sup>th</sup> of January.

You can also find out more about Daunia Mine and BMA's other growth projects this weekend at Moranbah Fair Shopping Centre between 10am and 2pm on Saturday the 17<sup>th</sup> of January, or join the BMA team for a sausage sizzle at Moranbah Town Square on Sunday the 18<sup>th</sup> of January between 7.30am and midday.







BHP Billiton Mitsubishi Alliance

## COMMUNITY ENGAGEMENT

### Growing BMA

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter.**

In response to the expected long term strong demand for our product, we are strengthening our growth options through the expansion of existing operations and the development of new mines.

BMA is proud to be part of the Moranbah regional community. As part of the Environmental Impact Statement process for the proposed Caval Ridge and Daunia Mines and BMA's overall approach to growth we will conduct an engagement process with stakeholders and the broader community.

A mobile display will be visiting centres throughout the local region. These displays will include information about BMA projects, feedback opportunities and the chance to talk to members of our team.

The mobile display will be visiting the following locations in your area soon.

Location	Date	Time
Moranbah Fair Shopping Centre	Thursday 8 May	10.00am - 3.30pm
Black Nugget Carpark	Saturday 10 May	8.30am -11.00am

The mobile display will also visit the Nebo Rodeo on Saturday 24 May and the Lions Markets at Moranbah on Sunday 25 May. More mobile display dates will be advertised shortly.

For more information  
please contact us on  
**1800 078 797**  
or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)





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A mobile display will be visiting centres throughout the local region. These displays will include information about BMA projects, feedback opportunities and the chance to talk to members of our team.

The mobile display will be visiting the following locations in your area soon.

Location	Date	Time
Nebo Rodeo	Saturday 24 May	1pm–4.30pm
Lions Markets – Moranbah Town Square	Sunday 25 May	7.30am–12pm

For more information  
please contact us on

**1800 078 797**

or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)

The mobile display will also visit the Moranbah Fair Shopping Centre on Thursday 5 June, Caneland Central, Mackay on Friday 6 June and Mackay Showground Markets on Saturday 7 June. More mobile display dates will be advertised shortly.





BHP Billiton Mitsubishi Alliance

## COMMUNITY ENGAGEMENT

### Growing BMA

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A mobile display will be visiting centres throughout the local region. These displays will include information about BMA projects, feedback opportunities and the chance to talk to members of our team.

The project team will be visiting the following locations in your area soon for the last planned mobile displays in this round of engagement.

Location	Date	Time
Moranbah Fair Shopping Centre	Saturday 28 June	10.00am–2.00pm
Lions Markets, Moranbah Town Square	Sunday 29 June	7.30am–12.00pm

For more information  
please contact us on

**1800 078 797**

or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)



E4C3 – 1 – 28 April 08 Media Release – Community Engagement



BHP Billiton Mitsubishi Alliance

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## Media Release

28 April 2008

### **Community engagement begins for new BMA projects**

BHP Billiton Mitsubishi Alliance (BMA) will this week commence engagement with its Northern Bowen Basin communities regarding planned growth projects in the region.

To meet the strong demand for coal, BMA will grow through the expansion of existing operations and the development of new mines.

Two initial developments have been identified, Daunia Mine and Caval Ridge Mine, located in the Northern Bowen Basin. The company will conduct an engagement process on these proposed projects with Moranbah and broader regional community to support the Environmental Impact Statement process and build on BMA's existing reputation.

John Smith, BMA CEO, explained the company would be actively engaging with the community to ensure information was shared in an open and transparent process.

"We are long term members of the Bowen Basin community and these potential projects will strengthen our future in the region, our local economies and the regional economy through royalties and new jobs.

"It is important that we understand the effects our growth may have within the community, and to ensure that any impacts are mitigated, we will encourage two-way dialogue," Mr Smith said.

In coming months BMA will be visiting centres throughout the local region with information and displays about the projects, along with the chance to provide feedback. Dates and locations of the display will be advertised locally.

The primary focus will be on the proposed Daunia Mine, which will produce semi-hard coking coal and PCI coal; and the larger Caval Ridge Mine, which will produce high quality, hard coking coal.

BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA owns and operates seven mines – Broadmeadow, Blackwater, Goonyella Riverside, Gregory Crinum, Peak Downs, Saraji and Norwich Park, and the Hay Point Coal Terminal near Mackay. In addition, BMA manages the South Walker Creek and Poitrel operations of BHP Mitsui Coal. The company employs over 8,900 people, including contractors.

ENDS

**Further information:  
Nicole Ireland  
Mobile 0409 207 672**







BHP Billiton Mitsubishi Alliance

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## Media Release

1 December 2008

### **BMA calls for comment on new Bowen Basin mine**

BHP Billiton Mitsubishi Alliance (BMA) is hosting information displays across Moranbah and Mackay in the coming months to present the Daunia Mine Environmental Impact Statement (EIS).

The Department of Infrastructure and Planning is managing the EIS process for the Daunia Mine on behalf of the Coordinator-General, and released the document to the public on Saturday 29 November.

At the information displays BMA will present findings on the environmental, economic and social studies carried out for the proposed mine, and field community questions about the company's growth plans.

BMA Chief Executive Officer Marcelo Bastos said the company had sought to engage with the community about its growth projects throughout the year.

"We're pleased to kick off our second growth projects information roadshow this year," Mr Bastos said.

"Engaging with the communities in which we live and work is an integral part of what we do at BMA. It helps us better understand community concerns and shapes the way in which our company grows.

"BMA's information displays have attracted considerable interest in the past and we encourage the community to visit our displays again to find out more about the Daunia Mine, meet members of the project team and talk to our technical specialists," he said.

Daunia Mine is one of four proposed growth projects for BMA in the Northern Bowen Basin, which also include Caval Ridge Mine, the expansion of the existing Goonyella Riverside Mine, and the upgrade and relocation of the Moranbah Airport.

"The primary focus of our displays will be on the Daunia Mine Environmental Impact Statement," Mr Bastos said.

"However, the team will also have information at hand about the other expansion projects that BMA has proposed to meet the strong demand for coal," he said.

The submission period for the Daunia Mine EIS closes at 5pm on February 2, 2009.

For a copy of the Daunia Mine EIS document visit [www.bmacoal.com](http://www.bmacoal.com) or [www.dip.qld.gov.au](http://www.dip.qld.gov.au).

**Background Information:**

BHP Billiton Mitsubishi Alliance (BMA) is hosting information displays across Moranbah and Mackay to present the Daunia Mine Environmental Impact Statement (EIS).

Upcoming information displays:

<b>Date</b>	<b>Display location</b>	<b>Times</b>
Friday 5 December	Mount Pleasant Greenfields Shopping Centre, Mackay	1pm – 5pm
Saturday 6 December	Mount Pleasant Greenfields Shopping Centre, Mackay	9am – 1pm

Additional information displays and a submission writing support workshop will be hosted in January - times and locations will be advertised in the new year.

BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA owns and operates seven mines – Broadmeadow, Blackwater, Goonyella Riverside, Gregory Crinum, Peak Downs, Saraji and Norwich Park, and the Hay Point Coal Terminal near Mackay. In addition, BMA manages the South Walker Creek and Poitrel operations of BHP Mitsui Coal. The company employs around 10,000 people, including contractors.

ENDS

**Further information:**

**Tracy Walsh, Mobile 0410 764 049**





# fact sheet



**BHP Billiton Mitsubishi Alliance**

## CAVAL RIDGE MINE

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA continues to build upon its strong position within the sector by increasing production at existing operations and identifying strong growth opportunities.**

Caval Ridge Mine has been identified as a quality coal resource to support these growth options. The Mine will be located in the northern section of the Bowen Basin and will produce up to 5.5 million tonnes per annum of high quality, hard coking coal.

### **Community**

BMA is proud to be part of the Moranbah regional community.

BMA will conduct an open and transparent community engagement process with stakeholders and the broader community. This is to support the long-term relationship between BMA and the community that is based on trust and mutual respect.

BMA will establish a Community Reference Group, that will include a range of organisations such as community groups,

government agencies, environment groups and local businesses, to work with BMA to determine potential impacts and mitigation strategies; assist BMA to understand community views on the projects; and act as a two-way information source for the project team and community stakeholders.

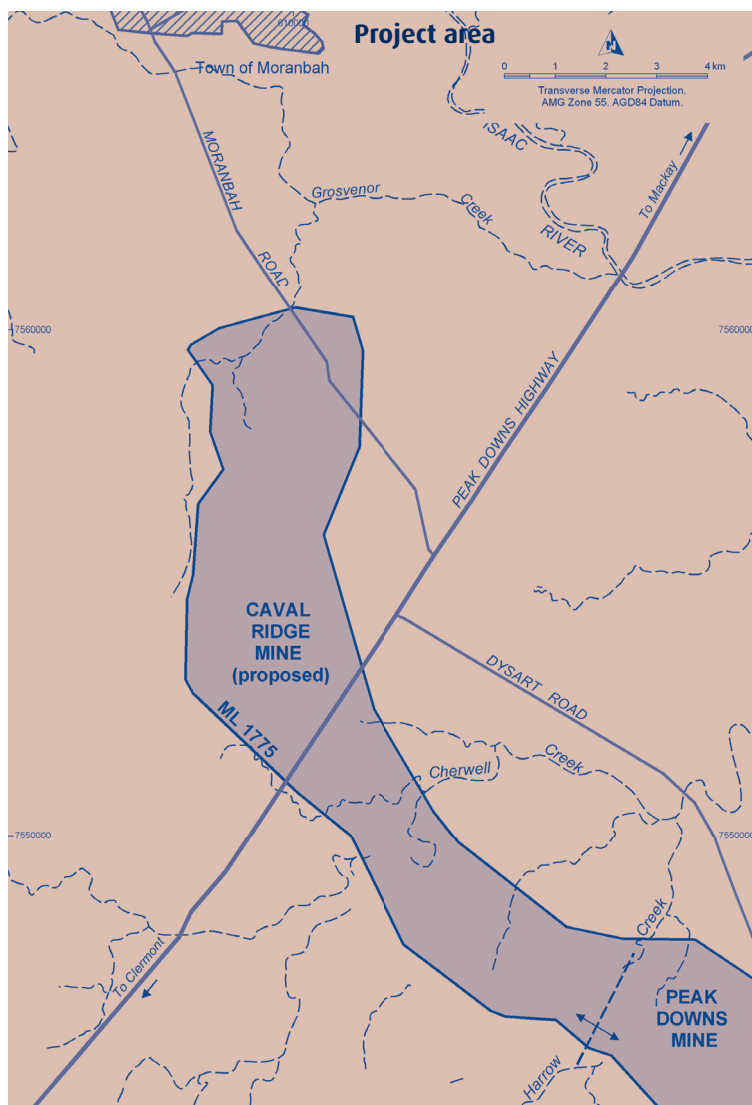
You can also access more information about the EIS through the Department of Infrastructure and Planning website, [www.dip.qld.gov.au/projects/energy/coal.html](http://www.dip.qld.gov.au/projects/energy/coal.html)

### **More information**

Information about our planned activities and the projects will also be available on our website at [www.bmacoal.com](http://www.bmacoal.com) and we welcome your questions on our plans by contacting us on 1800 078 797 or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com).

## Project Statistics

Location	Located southeast of Moranbah, north of the existing Peak Downs Mine, on the northern and southern sides of the Peak Downs Highway
Local Government area	Isaac Regional Council
Lease size	1425 hectares
Ownership	The project will be a 50-50 joint venture between BHP Billiton and Mitsubishi Development Pty Ltd, managed by BMA
Product	High quality, hard coking coal
Production	5.5 million tonnes per annum
Construction:	
Duration	24 months First coal expected in 2011
Employment	1200
Operations:	
Duration	More than 30 years
Employment	340
Mining Type	Open cut dragline and truck shovel operation
Infrastructure	A new coal handling and preparation plant will be built on site
Export	Coal will initially be railed to BMA's Hay Point Coal Terminal







# fact sheet



BHP Billiton Mitsubishi Alliance

## DAUNIA MINE

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA continues to build upon its strong position within the sector by increasing production at existing operations and identifying strong growth opportunities.**

Daunia Mine has been identified as a quality coal resource opportunity to support BMA's growth options. The Mine will be located in the northern section of the Bowen Basin and will produce up to 4 million tonnes per annum of semi-hard coking coal and PCI coal.

### Community

BMA is proud to be part of the Moranbah regional community.

BMA will continue to conduct an open and transparent community engagement process that not only keeps stakeholders updated on the project, but provides opportunities to gather feedback and address community concerns.

BMA is conducting an Environmental Impact Statement (EIS) process for the Project. As part of this process, our Community Reference Group, that includes a range of organisations

such as community groups, government agencies, environment groups and local businesses, will continue to work with BMA to determine potential impacts and mitigation strategies; assist BMA to understand community views on the projects; and act as a two-way information source for the project team and community stakeholders.

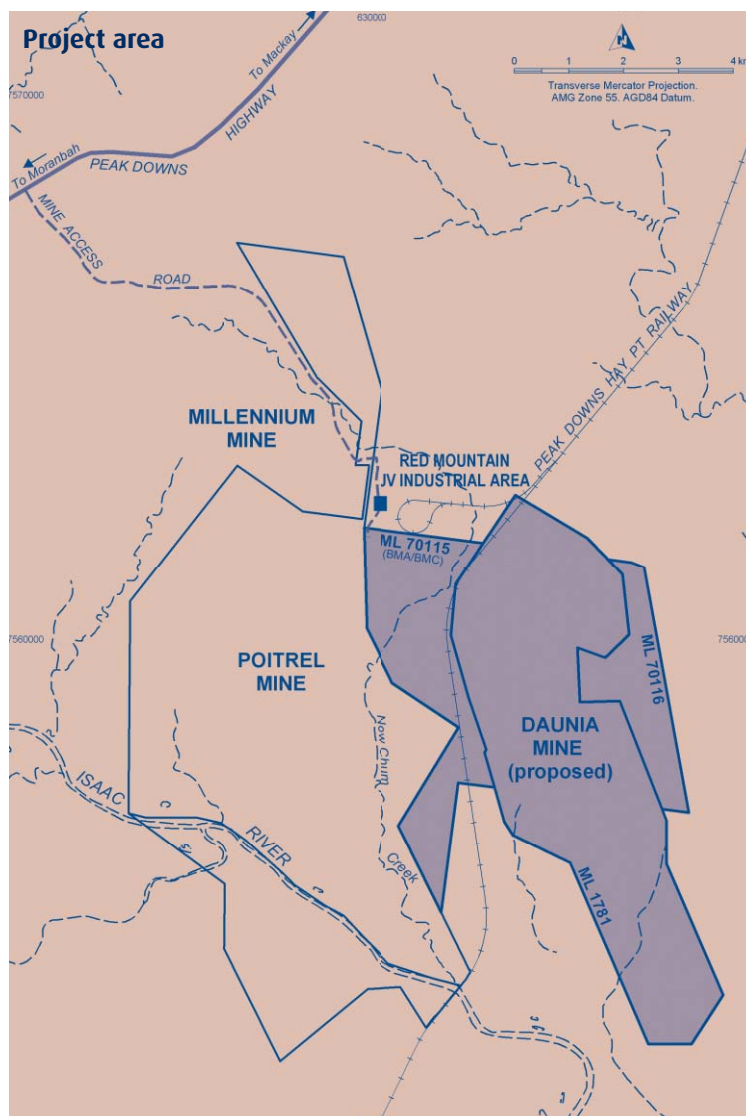
You can access more information about the EIS through the Department of Infrastructure and Planning website, [www.dip.qld.gov.au/projects/energy/coal.html](http://www.dip.qld.gov.au/projects/energy/coal.html)

### More information:

Information about our planned activities and the projects will also be available on our website at [www.bmacoal.com](http://www.bmacoal.com) and we welcome your questions on our plans by contacting us on 1800 078 797 or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com).

## Project Statistics

Location	Located on the eastern side of the existing Poitrel Mine, 25km southeast of Moranbah	
Local Government area	Isaac Regional Council	
Lease size	2690 hectares	
Ownership	The project will be a 50-50 joint venture between BHP Billiton and Mitsubishi Development Pty Ltd, managed by BMA	
Product	Semi-hard coking coal and PCI	
Production	4 million tonnes per annum	
Construction:		
Duration	14 months	First coal is expected in 2010
Employment	Around 450 Majority will be a contract workforce, located and housed in a village at Coppabella	
Operations:		
Duration	Approximately 21 years	
Employment	Around 300 Majority will be a contract workforce, located and housed in a village at Coppabella	
Mining Type	Open cut truck/excavator operation	
Infrastructure	A new coal handling and preparation plant will be built on site	
Export	Coal will initially be railed to BMA's Hay Point Coal Terminal	









## DUST – NOISE – VIBRATION

# fact sheet



BHP Billiton Mitsubishi Alliance

### Growing BMA - Environmental Monitoring

Contact details  
**1800 078 797**  
[enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)  
[www.bmacoal.com](http://www.bmacoal.com)

**This fact sheet provides information about how BHP Billiton Mitsubishi Alliance (BMA) will identify, monitor and potentially manage key issues such as air quality, noise and vibration, based on detailed computer modelling, during the construction and operation of the proposed Daunia Mine, Caval Ridge Mine, Goonyella Riverside Mine Expansion and other growth projects.**

#### Will the projects impact air quality and generate noise and vibration?

A number of activities associated with mine construction and operation can generate dust, noise and vibration. Potential sources of disturbance include:

- ground disturbance
- the movement of machinery
- haul roads
- stockpiles
- blasting.

Vehicle and machinery exhausts also release fine dust particles. Activities such as dragline operation, truck, shovel and excavator use, blasting, processing and coal transport typically create noise and, in some cases, vibration.

#### How will BMA address air quality, noise and vibration?

BMA is currently preparing Environmental Impact Statements (EIS) for a number of proposed growth projects. The EIS process will outline:

- existing air quality and noise levels on and around the proposed projects

- potential changes in air quality and noise levels associated with construction and operation, based on detailed computer modelling
- the extent of blasts, size of blasts, prevailing weather conditions and terrain, and
- the management strategies to help reduce and offset potential impacts.

The State Government will impose licence conditions relating to the management of air quality, noise and vibration which BMA will comply with.

#### How does BMA determine existing air quality and noise and vibration levels?

BMA is currently monitoring existing air quality and noise levels at each of its proposed project sites, as well as blast activities at existing mines in the Moranbah region.

This long term monitoring has included studies on the climate, existing operations, agricultural activities and traffic in the local area.

More detail on the specifics of monitoring and mitigation measures BMA is undertaking can be found in the sections that follow.



# DUST

## What is air quality?

Air quality refers to the condition of the atmospheric environment. This is measured through the concentrations of pollutants and the impacts they may have on human health and the environment. An important aspect of air quality for mining operations is dust generated from sources such as wind erosion, vehicles using unsealed roads and blasting.

## What is dust?

Dust is a generic term used to describe fine particles that are suspended in the air. It is formed when fine particles are taken up into the air by wind or other physical disturbances. Dust exists naturally in the atmosphere and comes from a wide variety of natural sources including vegetation (pollens and fungi), sea salt spray and smoke from bushfires. Dust can be increased due to human activities through vehicle exhaust, industrial processes, power stations, mining, farming and wood heaters.

Dust particles individually are not visible to the human eye, although a high concentration of fine particles may appear as a haze or smog.

## How is dust classified?

Scientists and regulators call 'dust' particulate matter (PM). Dust is often discussed in relation to its size (refer to Figure 1 for comparison of particle sizes). Scientists use micrometres (sometimes called 'microns') to measure the diameter of dust particles. A micrometre is one-millionth of a metre and its symbol is  $\mu\text{m}$ . Dust particles in the atmosphere can be as small as a few microns and as large as  $100\mu\text{m}$ . Dust is typically classified as follows:

- **TSP** - Total Suspended Particulate Matter (TSP) all dust (particles suspended) in the air.

- **PM<sub>10</sub>** - Particles with a diameter less than 10 microns ( $0.01\text{ mm}$ ). Particles in the size range  $2.5\text{ }\mu\text{m}$  to  $10\text{ }\mu\text{m}$  in diameter are referred to as coarse particles (PM<sub>2.5-10</sub>).
- **PM<sub>2.5</sub>** - Particles with a diameter less than 2.5 microns ( $0.0025\text{ mm}$ ) (a subset of both PM<sub>10</sub> and TSP categories). These are referred to as fine particles and are mainly produced from combustion processes such as vehicle exhaust.

Any dust that falls out of suspension in the atmosphere is called deposited dust. Larger or heavier particles are deposited more readily than small or lighter particles.

## What are the health impacts of dust?

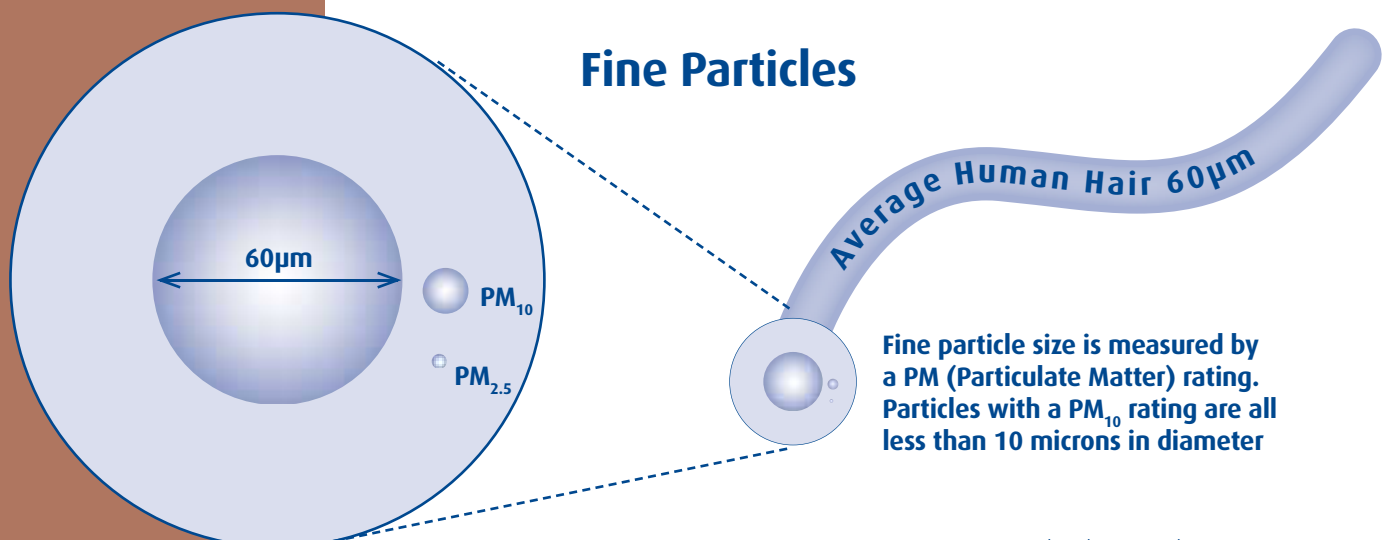
Health impacts of dust vary depending on the nature of the particles (where they are from) and the size of the particles. Exposure to inhalable and respirable dust can have potential health impacts on the respiratory system.

- **Inhalable Dust** - Inhalable dust is less than 10 microns and greater than 2.5 microns in size. These particles may be deposited in the nose, throat, and upper sections of the lungs.
- **Respirable Dust** - Respirable dust refers to those dust particles that are less than 2.5 microns in diameter and may be deposited in the lower sections of the lungs, including the alveoli.

People who may be more susceptible to the health effects from inhalable and respirable dust are: infants and children; elderly people; people with respiratory conditions; people with heart disease; and people with diabetes. Provided that mines are operated with proper dust controls, it is unlikely that a healthy adult would suffer any serious health effects from the dust.

Figure 1

Comparison of size of PM<sub>10</sub> and PM<sub>2.5</sub> with an average human hair



Source: Queensland EPA website

## What is nuisance dust?

Nuisance dust usually has a particle size larger than 10 microns and tends to be trapped in the nose, mouth, throat or upper respiratory tract and are typically expelled from the body. However, high levels of nuisance dust may reduce visibility and amenity. The presence of nuisance dust can also cause a perceived increase in health risk.

The impact of dust from mines on local amenity depends on the distance from the mine site and climatic conditions such as wind. Concerns about amenity from mine site dust often relate to "visibility" of dust plumes and dust sources. Visible dust is usually due to short-term episodes of high emissions, such as from blasting. Other amenity impacts include dust depositing on fabrics (such as clothes washing), or on household surfaces including roofs.

## What are the regulatory levels for dust relevant to BMA Mines?

The Environmental Protection Agency is responsible for regulating the management of the air environment in Queensland under the *Environmental Protection Act 1994*. Air quality guidelines are outlined in the Queensland *Environmental Protection (Air) Policy 2008*:

- $PM_{10}$  24-hourly average -  $50 \mu\text{g}/\text{m}^3$ ;
- $PM_{2.5}$  24-hourly average -  $25 \mu\text{g}/\text{m}^3$ ;
- $PM_{2.5}$  annual average -  $8 \mu\text{g}/\text{m}^3$ ; and
- Total Suspended Particulates (TSP) annual average -  $90 \mu\text{g}/\text{m}^3$ .

No formal criteria for deposited dust exist within Queensland however the EPA recommends a nuisance guideline of  $120 \text{ mg}/\text{m}^2/\text{day}$  averaged over one month.

## How is dust measured?

Dust levels in the air are commonly measured in two ways:

- Concentration - the weight (in micrograms) of dust in one cubic metre of air ( $\mu\text{g}/\text{m}^3$ )  
Dust as TSP,  $PM_{10}$  and  $PM_{2.5}$  can be measured in this manner.
- Deposition rate - the weight (in grams) of dust falling on one square metre over time and is usually expressed as  $\text{mg}/\text{m}^2/\text{day}$ .

Concentration can be measured using instruments which draw air through the unit so that dust is collected on filter paper. The most commonly used are the High-Volume Sampler (Hi-Vol) and the Tapered Element Oscillating Microbalance (TEOM). Dust deposition gauges also measure how much dust is deposited over time and involves the collection of dust within a funnel and bottle. BMA uses a combination of these methods to analyse the air quality impacts from our operations.

## How does a Hi-Vol work?

The Hi-Vol operates in a similar manner to a vacuum cleaner, by drawing air from the surrounding environment under a vacuum and through a large filter which is able to measure very low levels of dust. The Hi-Vol is generally operated for a 24-hour period, and measurements are made every sixth day. At the end of sampling, the filter paper is sent to a laboratory for analysis of the mass of dust collected over the 24-hour period and the filter paper is replaced. The Hi-Vol can be used to measure 24-hour averages. (see Figures 2 & 3)

**Figure 2 & 3**  
**Example of a High-Volume Sampler**





## How does a TEOM work?

The TEOM works by drawing air through a filter mounted on a vibrating glass tube. As particles are collected on the filter the increasing weight changes the oscillating frequency of a highly sensitive balance. The balance converts the frequency into a particulate mass and relates it to the volume of air drawn into the TEOM. The airborne concentration ( $\mu\text{g}/\text{m}^3$ ) is the mass of dust per unit of air that is sampled.

The TEOM operates in real-time, meaning that samples are collected continuously and can be reported on a 10-minute or 1-hour basis. Real-time monitors such as the TEOM are the preferred method of monitoring dust concentrations and the effectiveness of methods to reduce dust.



**Figure 4**  
Example of dust deposition  
gauge installation

## How does a dust deposition gauge work?

Dust deposition gauges measure how much dust is deposited over time and involves the collection of dust within a funnel and bottle which sits in a canister on a stand. (see Figure 4)

The sample is analysed in a laboratory as soon as possible after collection to give information on the total amount of particulate matter, the proportion that is soluble and insoluble, and the amount of combustible matter. Scientists use the data for insoluble solids to determine the industrial impacts, as combustible matter often relates to organic material such as leaves and pollen. Data is usually collected over monthly periods and results are expressed in  $\text{mg}/\text{m}^2/\text{day}$ .

## What influences the movement of dust?

Particle size is one factor which influences the movement and spread of dust in the air and therefore its potential impact on humans. Lighter or smaller particles can travel further and remain in the air for longer before being deposited. Particles can also be picked up and moved again after being deposited.

The movement of dust is also influenced by rainfall, wind, weather, atmospheric conditions and landforms. Rain can wash dust particles out of the air, while wind speed and direction are the key factors determining where the dust will travel to.

The combined effect of all of these factors is called dispersion of dust. Scientists use dispersion models to predict where dust will be moved to and its concentration at the receiving location.



## How are the monitoring locations chosen?

Dust samplers should be located at or near 'sensitive receivers'. A sensitive receiver is a location where people are likely to work, play or live; this may include homes, schools, hospitals, offices or parks.

The dust samplers are best located at sensitive receivers closest the potential source of dust, for example, a mining operation. If dust samples are located across a wider area, it will be more difficult to determine if the dust is coming from the specific mining operation or other sources such as other mining or industrial activity, agriculture activity or unsealed roads. The appropriate number of monitoring sites depends on the number of sensitive receivers.

## How does BMA manage dust?

BMA uses a range of measures to manage dust including:

- watering of haul roads and other exposed areas,
- progressive rehabilitation of areas no longer used for mining,
- controlling land disturbance,
- enforcing speed limits on unsealed roads, and
- controlling the potential for spontaneous combustion of coal material.

All dust complaints are promptly investigated and a register of dust complaints is maintained. Ongoing dust monitoring will be undertaken at the nearest sensitive receptor/s to assist with planning appropriate dust management strategies for new and existing mines.

## How does Moranbah air quality compare to other places?

BMA is currently monitoring for dust ( $PM_{10}$ ) near the proposed Caval Ridge Mine site. The monitoring is focused on determining the potential effects on air quality from the proposed Caval Ridge Mine, and not on determining the surrounding air quality of Moranbah. However, the data collected for the Caval Ridge Mine baseline studies may give an indication as to the air quality of Moranbah. This indication is likely to be conservative as the Caval Ridge Mine data may not show the cumulative dust conditions for the township area.

The table below shows the data collected for the Caval Ridge Mine baseline studies, data from Mackay, Gladstone, Toowoomba and Brisbane, as well as national, state and local guidelines.

BMA is still assessing the data and will present a full assessment as part of the Caval Ridge Mine EIS. Data collected does indicate that the baseline conditions for the Caval Ridge Mine do achieve the Queensland Objective, NEPM guidelines, NSW long term land acquisition criteria and the proposed Isaac Regional Council target.

Location and dates	Monitoring dates	24 hour $PM_{10}$ concentration ( $\mu g/m^3$ )	Exceedance information
Caval Ridge Project	December 2007 to December 2008	2.3 – 36.6	No exceedances of EPP (Air)
South Gladstone <sup>d</sup>	December 2007 to November 2008 <sup>a</sup>	2.4 – 65.6	2 exceedances of EPP (Air) 2008 guideline in April due to dust storms
West Mackay <sup>d</sup>	December 2007 to September 2008 <sup>b</sup>	(minimum unknown) – 94.0	2 exceedances of EPP (Air) 2008 guideline in April due to dust storms, 1 exceedance in July and August
Brisbane CBD <sup>d</sup>	December 2007 to November 2008 <sup>a</sup>	(minimum unknown) – 77.6	Exceedances of EPP (Air) 2008 guideline in April <sup>c</sup>
Toowoomba <sup>d</sup>	December 2007 to November 2008 <sup>a</sup>	4.0 – 105.2	1 exceedance of EPP (Air) 2008 guideline in April, 2 in September and 1 in November
Queensland Objective from 1 January 2009 (EPP (Air) 2008); National Guideline (NEPM)		50	Allowed 5 exceedances per year
Queensland Guideline to 31 December 2008 (EPP (Air) 1997)		150	-
NSW Guideline for long-term land acquisition criteria		50	-
Isaac Regional Council target		70	Allowed 10 exceedances per year

Note: <sup>a</sup> EPA monitoring data from December 2008 was unavailable at time of preparation

<sup>b</sup> EPA monitoring data at Mackay are unavailable from September 2008

<sup>c</sup> Detailed report for April 2008 unavailable from EPA at time of preparation

<sup>d</sup> Data sourced from EPA monthly monitoring reports ([www.epa.qld.gov.au](http://www.epa.qld.gov.au)) for monthly summaries and databases obtained from the EPA for daily records.

# NOISE

## How does BMA determine existing noise levels?

BMA is currently monitoring noise levels at each of its proposed project sites and surrounds. This long term activity has included studies on the climate, existing operations, agricultural activities and traffic in the local area.

Monitoring locations for noise are based at sensitive receiver locations. A sensitive receiver is a location where people are likely to work, play or live; this may include homes, schools, hospitals, offices or parks.

Noise monitoring includes the use of noise data loggers, which are left on site for up to ten days. Noise is logged over a 24-hour period with peak noise events taken into consideration.

## How does BMA determine potential changes to noise levels?

A noise model is developed to predict changes in noise levels surrounding the site and within nearby towns. Key inputs in this model include:

- Mining activity
- Mine life and planning
- Landforms, and
- Natural weather conditions.

Any predicted changes in noise levels at each site will be reported and compared against Queensland noise guidelines.

## How will BMA manage or reduce potential changes in noise levels?

Monitoring and modelling results will help BMA develop appropriate and effective methods for reducing or managing noise around each

proposed mine. Potential noise management strategies may include:

- Restricting the hours and duration of certain activities that generate excessive noise
- Using appropriate or modified plant and equipment
- Using landforms such as hills to shield the operations
- Limiting the speed of vehicles on site, and
- Monitoring weather and modifying activities as required.

# VIBRATION

## How does BMA determine existing vibration levels?

Varying levels of vibration can result from blasting associated with mining.

### Current Operations

BMA is currently monitoring blast activities at our mines in the Moranbah region. Independent consultants have established baseline data, and on an ongoing basis are evaluating blast results, and providing advice on blast practices and patterns to mitigate impacts. Community complaints involving blast impacts are investigated to determine the source of the blast, as well as the level of noise and vibration at monitoring points.

### Proposed Operations

As part of the EIS process for the proposed BMA growth projects, we will review the extent of blasts, size of blasts, prevailing weather conditions and terrain. These will be modelled to simulate the predicted impacts of blasting on nearby residents and townships.

## How will BMA manage or reduce potential changes in vibration levels?

A range of vibration management strategies could be implemented, based on modelling and impact assessments:

- Identifying the extent and location of the blasting over the life of the mine
- Examining weather patterns prior to blasting, for example, wind direction and temperature
- Restricting blasting (time and days)
- Restricting the size of proposed blasts
- Using modelling results to identify mine areas where blasts have a greater potential to cause disturbance, enabling specific management of blast design
- Locating monitoring stations in identified townships and other sensitive areas.

Monitoring stations can be used to both proactively manage blasts as well as to investigate community concerns.

For further information about BMA's environmental monitoring and management strategies, contact the Community Engagement Team:

1800 078 797  
enquiries@bmacoal.com  
www.bmacoal.com

Noise monitoring equipment









# fact sheet

## DUST – NOISE – VIBRATION



BHP Billiton Mitsubishi Alliance

### Growing BMA - Environmental Monitoring

Contact details  
**1800 078 797**  
[enquiries@bmacoal.com](mailto:enquiries@bmacoal.com)  
[www.bmacoal.com](http://www.bmacoal.com)

**This fact sheet provides information about how BHP Billiton Mitsubishi Alliance (BMA) will identify, monitor and potentially manage key issues such as air quality, noise and vibration, based on detailed computer modelling, during the construction and operation of the proposed Daunia Mine, Caval Ridge Mine, Goonyella Riverside Mine Expansion and other growth projects.**

#### Will the projects impact air quality and generate noise and vibration?

A number of activities associated with mine construction and operation can generate dust, noise and vibration. Potential sources of disturbance include:

- ground disturbance
- the movement of machinery
- haul roads
- stockpiles
- blasting.

Vehicle and machinery exhausts also release fine dust particles. Activities such as dragline operation, truck, shovel and excavator use, blasting, processing and coal transport typically create noise and, in some cases, vibration.

#### How will BMA address air quality, noise and vibration?

BMA is currently preparing Environmental Impact Statements (EIS) for a number of proposed growth projects. The EIS process will outline:

- existing air quality and noise levels on and around the proposed projects

- potential changes in air quality and noise levels associated with construction and operation, based on detailed computer modelling
- the extent of blasts, size of blasts, prevailing weather conditions and terrain, and
- the management strategies to help reduce and offset potential impacts.

The State Government will impose licence conditions relating to the management of air quality, noise and vibration which BMA will comply with.

#### How does BMA determine existing air quality and noise and vibration levels?

BMA is currently monitoring existing air quality and noise levels at each of its proposed project sites, as well as blast activities at existing mines in the Moranbah region.

This long term monitoring has included studies on the climate, existing operations, agricultural activities and traffic in the local area.

More detail on the specifics of monitoring and mitigation measures BMA is undertaking can be found in the sections that follow.

# DUST

## What is air quality?

Air quality refers to the condition of the atmospheric environment. This is measured through the concentrations of pollutants and the impacts they may have on human health and the environment. An important aspect of air quality for mining operations is dust generated from sources such as wind erosion, vehicles using unsealed roads and blasting.

## What is dust?

Dust is a generic term used to describe fine particles that are suspended in the air. It is formed when fine particles are taken up into the air by wind or other physical disturbances. Dust exists naturally in the atmosphere and comes from a wide variety of natural sources including vegetation (pollens and fungi), sea salt spray and smoke from bushfires. Dust can be increased due to human activities through vehicle exhaust, industrial processes, power stations, mining, farming and wood heaters.

Dust particles individually are not visible to the human eye, although a high concentration of fine particles may appear as a haze or smog.

## How is dust classified?

Scientists and regulators call 'dust' particulate matter (PM). Dust is often discussed in relation to its size (refer to Figure 1 for comparison of particle sizes). Scientists use micrometres (sometimes called 'microns') to measure the diameter of dust particles. A micrometre is one-millionth of a metre and its symbol is  $\mu\text{m}$ . Dust particles in the atmosphere can be as small as a few microns and as large as  $100\mu\text{m}$ . Dust is typically classified as follows:

- **TSP** - Total Suspended Particulate Matter (TSP) all dust (particles suspended) in the air.

- **PM<sub>10</sub>** - Particles with a diameter less than 10 microns (0.01 mm). Particles in the size range  $2.5\mu\text{m}$  to  $10\mu\text{m}$  in diameter are referred to as coarse particles (PM<sub>2.5-10</sub>).
- **PM<sub>2.5</sub>** - Particles with a diameter less than 2.5 microns (0.0025 mm) (a subset of both PM<sub>10</sub> and TSP categories). These are referred to as fine particles and are mainly produced from combustion processes such as vehicle exhaust.

Any dust that falls out of suspension in the atmosphere is called deposited dust. Larger or heavier particles are deposited more readily than small or lighter particles.

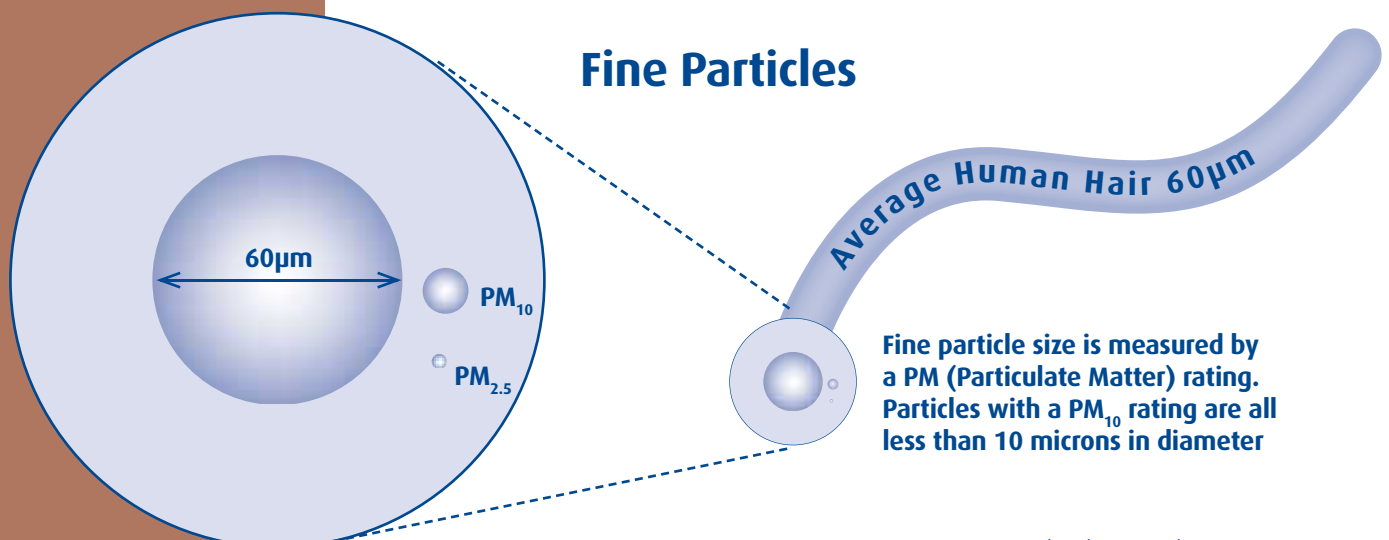
## What are the health impacts of dust?

Health impacts of dust vary depending on the nature of the particles (where they are from) and the size of the particles. Exposure to inhalable and respirable dust can have potential health impacts on the respiratory system.

- **Inhalable Dust** - Inhalable dust is less than 10 microns and greater than 2.5 microns in size. These particles may be deposited in the nose, throat, and upper sections of the lungs.
- **Respirable Dust** - Respirable dust refers to those dust particles that are less than 2.5 microns in diameter and may be deposited in the lower sections of the lungs, including the alveoli.

People who may be more susceptible to the health effects from inhalable and respirable dust are: infants and children; elderly people; people with respiratory conditions; people with heart disease; and people with diabetes. Provided that mines are operated with proper dust controls, it is unlikely that a healthy adult would suffer any serious health effects from the dust.

Figure 1  
Comparison of size of PM<sub>10</sub> and PM<sub>2.5</sub>  
with an average human hair



Source: Queensland EPA website



## What is nuisance dust?

Nuisance dust usually has a particle size larger than 10 microns and tends to be trapped in the nose, mouth, throat or upper respiratory tract and are typically expelled from the body. However, high levels of nuisance dust may reduce visibility and amenity. The presence of nuisance dust can also cause a perceived increase in health risk.

The impact of dust from mines on local amenity depends on the distance from the mine site and climatic conditions such as wind. Concerns about amenity from mine site dust often relate to “visibility” of dust plumes and dust sources. Visible dust is usually due to short-term episodes of high emissions, such as from blasting. Other amenity impacts include dust depositing on fabrics (such as clothes washing), or on household surfaces including roofs.

## What are the regulatory levels for dust relevant to BMA Mines?

The Environmental Protection Agency is responsible for regulating the management of the air environment in Queensland under the *Environmental Protection Act 1994*. Air quality guidelines are outlined in the Queensland *Environmental Protection (Air) Policy 2008*:

- $PM_{10}$  24-hourly average -  $50 \mu\text{g}/\text{m}^3$ ;
- $PM_{2.5}$  24-hourly average -  $25 \mu\text{g}/\text{m}^3$ ;
- $PM_{2.5}$  annual average -  $8 \mu\text{g}/\text{m}^3$ ; and
- Total Suspended Particulates (TSP) annual average -  $90 \mu\text{g}/\text{m}^3$ .

No formal criteria for deposited dust exist within Queensland however the EPA recommends a nuisance guideline of  $120 \text{ mg}/\text{m}^2/\text{day}$  averaged over one month.

## How is dust measured?

Dust levels in the air are commonly measured in two ways:

- Concentration - the weight (in micrograms) of dust in one cubic metre of air ( $\mu\text{g}/\text{m}^3$ )  
Dust as TSP,  $PM_{10}$  and  $PM_{2.5}$  can be measured in this manner.
- Deposition rate - the weight (in grams) of dust falling on one square metre over time and is usually expressed as  $\text{mg}/\text{m}^2/\text{day}$ .

Concentration can be measured using instruments which draw air through the unit so that dust is collected on filter paper. The most commonly used are the High-Volume Sampler (Hi-Vol) and the Tapered Element Oscillating Microbalance (TEOM). Dust deposition gauges also measure how much dust is deposited over time and involves the collection of dust within a funnel and bottle. BMA uses a combination of these methods to analyse the air quality impacts from our operations.

## How does a Hi-Vol work?

The Hi-Vol operates in a similar manner to a vacuum cleaner, by drawing air from the surrounding environment under a vacuum and through a large filter which is able to measure very low levels of dust. The Hi-Vol is generally operated for a 24-hour period, and measurements are made every sixth day. At the end of sampling, the filter paper is sent to a laboratory for analysis of the mass of dust collected over the 24-hour period and the filter paper is replaced. The Hi-Vol can be used to measure 24-hour averages. (see Figures 2 & 3)

**Figure 2 & 3**  
**Example of a High-Volume Sampler**



## How does a TEOM work?

The TEOM works by drawing air through a filter mounted on a vibrating glass tube. As particles are collected on the filter the increasing weight changes the oscillating frequency of a highly sensitive balance. The balance converts the frequency into a particulate mass and relates it to the volume of air drawn into the TEOM. The airborne concentration ( $\mu\text{g}/\text{m}^3$ ) is the mass of dust per unit of air that is sampled.

The TEOM operates in real-time, meaning that samples are collected continuously and can be reported on a 10-minute or 1-hour basis. Real-time monitors such as the TEOM are the preferred method of monitoring dust concentrations and the effectiveness of methods to reduce dust.



**Figure 4**  
Example of dust deposition  
gauge installation

## How does a dust deposition gauge work?

Dust deposition gauges measure how much dust is deposited over time and involves the collection of dust within a funnel and bottle which sits in a canister on a stand. (see Figure 4)

The sample is analysed in a laboratory as soon as possible after collection to give information on the total amount of particulate matter, the proportion that is soluble and insoluble, and the amount of combustible matter. Scientists use the data for insoluble solids to determine the industrial impacts, as combustible matter often relates to organic material such as leaves and pollen. Data is usually collected over monthly periods and results are expressed in  $\text{mg}/\text{m}^2/\text{day}$ .

## What influences the movement of dust?

Particle size is one factor which influences the movement and spread of dust in the air and therefore its potential impact on humans. Lighter or smaller particles can travel further and remain in the air for longer before being deposited. Particles can also be picked up and moved again after being deposited.

The movement of dust is also influenced by rainfall, wind, weather, atmospheric conditions and landforms. Rain can wash dust particles out of the air, while wind speed and direction are the key factors determining where the dust will travel to.

The combined effect of all of these factors is called dispersion of dust. Scientists use dispersion models to predict where dust will be moved to and its concentration at the receiving location.





## How are the monitoring locations chosen?

Dust samplers should be located at or near 'sensitive receivers'. A sensitive receiver is a location where people are likely to work, play or live; this may include homes, schools, hospitals, offices or parks.

The dust samplers are best located at sensitive receivers closest the potential source of dust, for example, a mining operation. If dust samples are located across a wider area, it will be more difficult to determine if the dust is coming from the specific mining operation or other sources such as other mining or industrial activity, agriculture activity or unsealed roads. The appropriate number of monitoring sites depends on the number of sensitive receivers.

## How does BMA manage dust?

BMA uses a range of measures to manage dust including:

- watering of haul roads and other exposed areas,
- progressive rehabilitation of areas no longer used for mining,
- controlling land disturbance,
- enforcing speed limits on unsealed roads, and
- controlling the potential for spontaneous combustion of coal material.

All dust complaints are promptly investigated and a register of dust complaints is maintained. Ongoing dust monitoring will be undertaken at the nearest sensitive receptor/s to assist with planning appropriate dust management strategies for new and existing mines.

## How does Moranbah air quality compare to other places?

BMA is currently monitoring for dust ( $PM_{10}$ ) near the proposed Caval Ridge Mine site. The monitoring is focused on determining the potential effects on air quality from the proposed Caval Ridge Mine, and not on determining the surrounding air quality of Moranbah. However, the data collected for the Caval Ridge Mine baseline studies may give an indication as to the air quality of Moranbah. This indication is likely to be conservative as the Caval Ridge Mine data may not show the cumulative dust conditions for the township area.

The table below shows the data collected for the Caval Ridge Mine baseline studies, data from Mackay, Gladstone, Toowoomba and Brisbane, as well as national, state and local guidelines.

BMA is still assessing the data and will present a full assessment as part of the Caval Ridge Mine EIS. Data collected does indicate that the baseline conditions for the Caval Ridge Mine do achieve the Queensland Objective, NEPM guidelines, NSW long term land acquisition criteria and the proposed Isaac Regional Council target.

Location and dates	Monitoring dates	24 hour $PM_{10}$ concentration ( $\mu g/m^3$ )	Exceedance information
Caval Ridge Project	December 2007 to December 2008	2.3 – 36.6	No exceedances of EPP (Air)
South Gladstone <sup>d</sup>	December 2007 to November 2008 <sup>a</sup>	2.4 – 65.6	2 exceedances of EPP (Air) 2008 guideline in April due to dust storms
West Mackay <sup>d</sup>	December 2007 to September 2008 <sup>b</sup>	(minimum unknown) – 94.0	2 exceedances of EPP (Air) 2008 guideline in April due to dust storms, 1 exceedance in July and August
Brisbane CBD <sup>d</sup>	December 2007 to November 2008 <sup>a</sup>	(minimum unknown) – 77.6	Exceedances of EPP (Air) 2008 guideline in April <sup>c</sup>
Toowoomba <sup>d</sup>	December 2007 to November 2008 <sup>a</sup>	4.0 – 105.2	1 exceedance of EPP (Air) 2008 guideline in April, 2 in September and 1 in November
Queensland Objective from 1 January 2009 (EPP (Air) 2008); National Guideline (NEPM)		50	Allowed 5 exceedances per year
Queensland Guideline to 31 December 2008 (EPP (Air) 1997)		150	-
NSW Guideline for long-term land acquisition criteria		50	-
Isaac Regional Council target		70	Allowed 10 exceedances per year

Note: <sup>a</sup> EPA monitoring data from December 2008 was unavailable at time of preparation

<sup>b</sup> EPA monitoring data at Mackay are unavailable from September 2008

<sup>c</sup> Detailed report for April 2008 unavailable from EPA at time of preparation

<sup>d</sup> Data sourced from EPA monthly monitoring reports ([www.epa.qld.gov.au](http://www.epa.qld.gov.au)) for monthly summaries and databases obtained from the EPA for daily records.

# NOISE

## How does BMA determine existing noise levels?

BMA is currently monitoring noise levels at each of its proposed project sites and surrounds. This long term activity has included studies on the climate, existing operations, agricultural activities and traffic in the local area.

Monitoring locations for noise are based at sensitive receiver locations. A sensitive receiver is a location where people are likely to work, play or live; this may include homes, schools, hospitals, offices or parks.

Noise monitoring includes the use of noise data loggers, which are left on site for up to ten days. Noise is logged over a 24-hour period with peak noise events taken into consideration.

## How does BMA determine potential changes to noise levels?

A noise model is developed to predict changes in noise levels surrounding the site and within nearby towns. Key inputs in this model include:

- Mining activity
- Mine life and planning
- Landforms, and
- Natural weather conditions.

Any predicted changes in noise levels at each site will be reported and compared against Queensland noise guidelines.

## How will BMA manage or reduce potential changes in noise levels?

Monitoring and modelling results will help BMA develop appropriate and effective methods for reducing or managing noise around each

proposed mine. Potential noise management strategies may include:

- Restricting the hours and duration of certain activities that generate excessive noise
- Using appropriate or modified plant and equipment
- Using landforms such as hills to shield the operations
- Limiting the speed of vehicles on site, and
- Monitoring weather and modifying activities as required.

# VIBRATION

## How does BMA determine existing vibration levels?

Varying levels of vibration can result from blasting associated with mining.

### Current Operations

BMA is currently monitoring blast activities at our mines in the Moranbah region. Independent consultants have established baseline data, and on an ongoing basis are evaluating blast results, and providing advice on blast practices and patterns to mitigate impacts. Community complaints involving blast impacts are investigated to determine the source of the blast, as well as the level of noise and vibration at monitoring points.

### Proposed Operations

As part of the EIS process for the proposed BMA growth projects, we will review the extent of blasts, size of blasts, prevailing weather conditions and terrain. These will be modelled to simulate the predicted impacts of blasting on nearby residents and townships.

## How will BMA manage or reduce potential changes in vibration levels?

A range of vibration management strategies could be implemented, based on modelling and impact assessments:

- Identifying the extent and location of the blasting over the life of the mine
- Examining weather patterns prior to blasting, for example, wind direction and temperature
- Restricting blasting (time and days)
- Restricting the size of proposed blasts
- Using modelling results to identify mine areas where blasts have a greater potential to cause disturbance, enabling specific management of blast design
- Locating monitoring stations in identified townships and other sensitive areas.

Monitoring stations can be used to both proactively manage blasts as well as to investigate community concerns.

For further information about BMA's environmental monitoring and management strategies, contact the Community Engagement Team:

1800 078 797  
enquiries@bmacoal.com  
www.bmacoal.com

Noise monitoring equipment







# fact sheet



BHP Billiton Mitsubishi Alliance

## GOONYELLA RIVERSIDE MINE EXPANSION

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA continues to build upon its strong position within the sector by increasing production at existing operations and identifying strong growth opportunities.**

Goonyella Riverside Mine expansion has been identified as a quality coal resource opportunity to support BMA's growth options. The project involves expansion of the existing Goonyella Riverside Mine, and the underground operations at Broadmeadow Mine, to increase the capacity from 16 million tonnes per annum to up to 25 million tonnes per annum of hard coking coal.

### Community:

BMA is proud to be part of the Moranbah regional community.

BMA will continue to conduct an open and transparent community engagement process that not only keeps stakeholders updated on the project, but provides opportunities to gather feedback and address community concerns.

BMA will conduct an Environmental Impact Statement (EIS) process for the project. As part of this process, our Community Reference Group, that includes a range of

organisations such as community groups, government agencies, environment groups and local businesses, will continue to work with BMA to determine potential impacts and mitigation strategies; assist BMA to understand community views on the projects; and act as a two-way information source for the project team and community stakeholders.

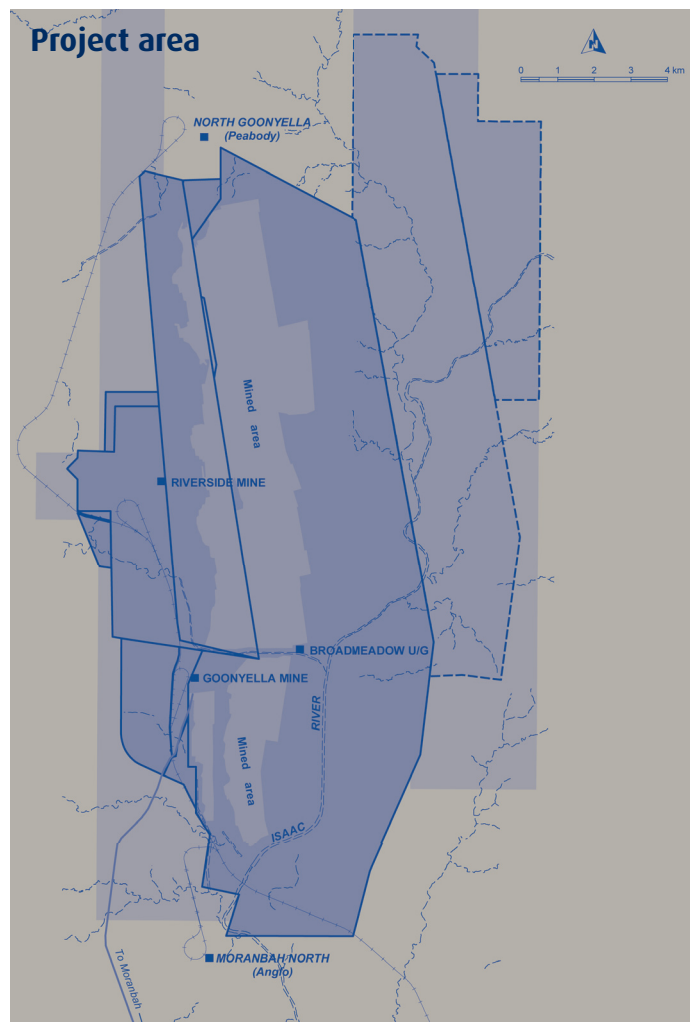
You can access more information about the EIS process, including the Initial Advice Statement and the Terms of Reference, through the Department of Infrastructure and Planning website, [www.dip.qld.gov.au/projects/energy/coal.html](http://www.dip.qld.gov.au/projects/energy/coal.html)

### More information:

Information about our planned activities and the projects will also be available on our website at [www.bmacoal.com](http://www.bmacoal.com) and we welcome your questions on our plans by contacting us on 1800 078 797 or [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com).

## Project Statistics

Location	Located north of Moranbah, encompassed by existing Goonyella Riverside Mine lease areas
Local Government area	Isaac Regional Council
Ownership	The project will be a 50-50 joint venture between BHP Billiton and Mitsubishi Development Pty Ltd, managed by BMA
Product	Hard coking coal
Additional Production	Up to 9 million tonnes per annum Open cut: up to 4.5 million tonnes per annum Underground: up to 4.5 million tonnes per annum (underground and open cut expansion)
Construction:	
Duration	Up to 36 months Operational 2012
Employment	1000 to 1200
Operations:	
Duration	Total life of mine - more than 30 years
Employment	700 to 750 at peak of operation (open cut and underground)
Mining Type	Open cut: dragline, truck shovel and in-pit crushing and conveying operation Underground: longwall
Infrastructure	A new coal handling and preparation plant and train loadout will be built on site
Export	BMA's Hay Point Coal Terminal and Abbot Point Coal Terminal







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# BHP Billiton Mitsubishi Alliance

World Leaders in Coal Mining and Marketing

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## Growth Projects

### Strengthening our Future

BMA is Australia's largest metallurgical coal miner and exporter. BMA continues to build upon its strong position within the sector by increasing production at existing operations and identifying strong growth opportunities.

We believe there will be continued strong demand from India and China. In response to expected long term strong demand for our product, we are strengthening our growth options.

We have a deep and diversified portfolio of quality assets that allows us to position ourselves as a long term reliable supplier of high quality and tailored offering to suits the needs of any customer.

BMA is considering a range of further growth options including expansion of existing operations and developing new mines. To ensure we maximise the current demand for our product, BMA's growth strategy includes the staged development of up to 11 projects in the coming years.

We are long term members of the Bowen Basin community and these potential projects will strengthen our future in the region.

We understand that there will be effects for the community and our stakeholders, and are committed to conducting an open and transparent engagement process. We will keep you fully informed of our activities, and as more information becomes available it will be added to this web site.

### Environmental Impact Statement process

On 18 July 2008 the Department of Infrastructure and Planning Coordinator-General declared the project a 'significant project' for which an Environmental Impact Statement (EIS) is required.

The following documents relate to the EIS process:

- Draft Terms of Reference

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The following documents relate to the EIS process:

- Draft Terms of Reference
- Initial Advice Statement

### Have your say

We are committed to conducting open and transparent engagement with our employees and community stakeholders so that we can understand how you think our growth will affect the region.

As the projects progress we will keep you fully informed of our activities, and give you the opportunity to provide input and feedback. [Read more about our community engagement program](#)

We will provide updates to you on our community engagement program via posters.

Poster 1 - May 2008

Poster 2 - August 2008

In addition, we will produce a series of regular newsletters to inform you and keep you updated on our plans to grow our business, and on how we are working to meet the needs of the whole community. We are also producing fact sheets to provide a snapshot of various aspects of our growth strategy.

BMA has also set up a Community Reference Group (CRG) with representatives from a range of community organisations. The CRG works with BMA to identify potential impacts and how to minimise them and assist BMA to understand community views.

If you have any questions about BMA growth or particular project impacts please contact the project team on 1800 678 797.







BHP Billiton Mitsubishi Alliance

## COMMUNITY ENGAGEMENT

### Growing BMA

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA owns and operates seven mines - Broadmeadow, Blackwater, Goonyella Riverside, Gregory Crinum, Peak Downs, Saraji, Norwich Park, and the Hay Point Coal Terminal near Mackay. In addition, BMA manages the operations of BHP Mitsui Coal; South Walker Creek and Poitrel. The company employs over 8,900 people, including contractors.**

BMA continues to build upon its strong position within the coal sector. Our growth options include the expansion of existing operations and the development of new mines, with up to 11 projects planned for the Central Queensland region in the coming years.

Caval Ridge Mine and Daunia Mine are two potential new development projects located in the northern section of the Bowen Basin. Current options also include expansions at the existing Peak Downs Mine and Goonyella Riverside Mine.

BMA welcomes your input on its growth plans. We encourage you to discuss our plans with the project team through our informative mobile displays or the contact details outlined below. Your feedback will assist the Environmental Impact Statement process for each Project and will ensure BMA understands the full effects of its growth.

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA continues to build upon its strong position within the sector by increasing production at existing operations and identifying strong growth opportunities.**

### Mobile Displays

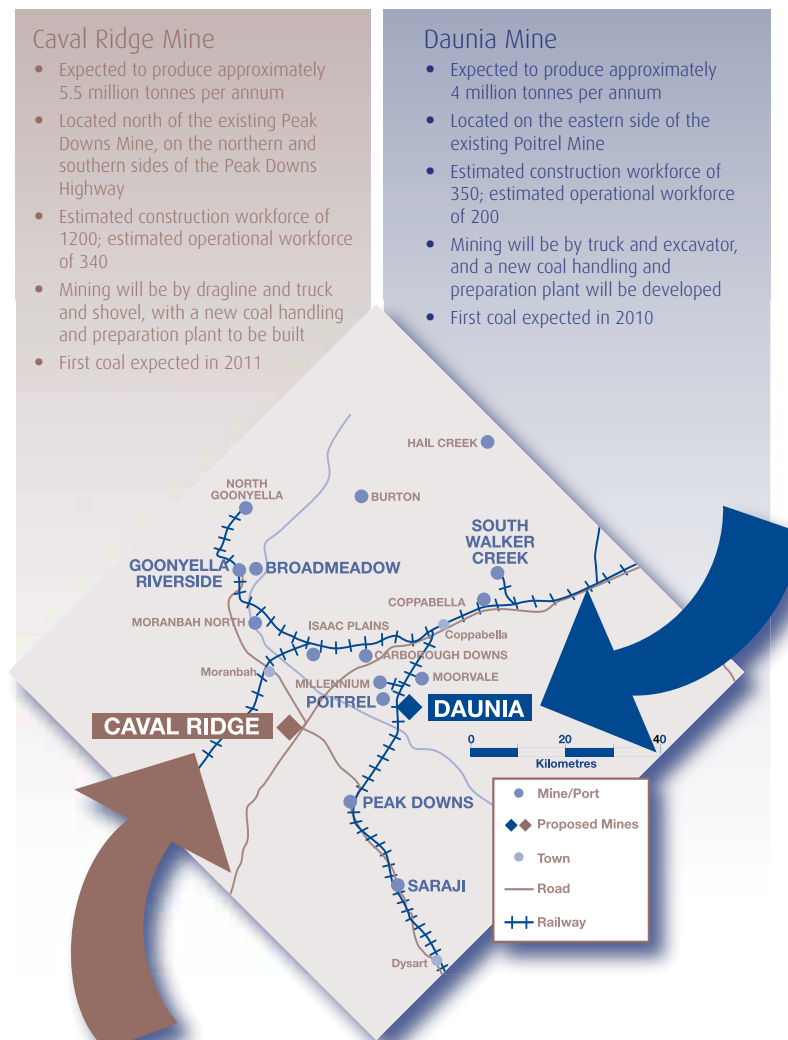
LOCATION	DATE	TIME
Moranbah Fair Shopping Centre	Thursday 8 May	10am – 3.30pm
Black Nugget Carpark, Moranbah	Saturday 10 May	8.30am – 11am
Nebo Rodeo	Saturday 24 May	1pm – 4.30pm
Lions Markets, Moranbah Town Square	Sunday 25 May	7.30am – 12pm
Moranbah Fair Shopping Centre	Thursday 5 June	2pm – 6pm
Caneland Central, Mackay	Friday 6 June	10am – 5pm
Mackay Showground Markets	Saturday 7 June	7.30am – 12pm
Moranbah Fair Shopping Centre	Saturday 28 June	10am – 2pm
Lions Markets, Moranbah Town Square	Sunday 29 June	7.30am – 12pm

#### Caval Ridge Mine

- Expected to produce approximately 5.5 million tonnes per annum
- Located north of the existing Peak Downs Mine, on the northern and southern sides of the Peak Downs Highway
- Estimated construction workforce of 1200; estimated operational workforce of 340
- Mining will be by dragline and truck and shovel, with a new coal handling and preparation plant to be built
- First coal expected in 2011

#### Daunia Mine

- Expected to produce approximately 4 million tonnes per annum
- Located on the eastern side of the existing Poitrel Mine
- Estimated construction workforce of 350; estimated operational workforce of 200
- Mining will be by truck and excavator, and a new coal handling and preparation plant will be developed
- First coal expected in 2010



Contact details 1800 078 797 • [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com) • [www.bmacoal.com](http://www.bmacoal.com)





BHP Billiton Mitsubishi Alliance

## COMMUNITY ENGAGEMENT

**BHP Billiton Mitsubishi Alliance (BMA) is Australia's largest metallurgical coal miner and exporter. BMA continues to build upon its strong position within the sector by increasing production at existing operations and identifying strong growth opportunities.**

### Growing BMA

**BHP Billiton Mitsubishi Alliance (BMA) owns and operates seven mines – Broadmeadow, Blackwater, Goonyella Riverside, Gregory Crinum, Peak Downs, Saraji, Norwich Park and the Hay Point Coal Terminal near Mackay. In addition BMA manages the operations of BHP Mitsui Coal; South Walker Creek and Poitrel. The company employs over 8,900 people, including contractors.**

BMA continues to build upon its strong position within the coal sector. Our growth options include the expansion of existing operations and the development of new mines, with up to 11 projects planned for the Central Queensland region in the coming years.

Caval Ridge Mine and Daunia Mine are two potential new development projects located in the northern section of the Bowen Basin. Other projects include expansions at the existing Peak Downs Mine and Goonyella Riverside Mine.

BMA is also proposing a new airport which is suitable for larger aircraft. Key issues such as the size, location and timing of this facility are being considered.

BMA, with the help of its consultants, is preparing Environmental Impact Statements (EIS) for the proposed Daunia and Caval Ridge Mines. These documents detail the natural, social and economic environment surrounding each project area as well as both beneficial and negative impacts from mine development. Management strategies for potential impacts will also be reported.

### Community Update

As part of its community engagement process BMA conducted nine community displays during May and June 2008. About 760 people had the opportunity to ask questions and provide comments about the proposed mines and potential regional impacts. Key areas of interest included employment opportunities, accommodation for new employees, environmental concerns, local facilities and impacts on local lifestyles. BMA is working through each of these issues and will ensure feedback is included in studies and mine planning.

Community engagement is ongoing and BMA welcomes your continued involvement and feedback.

### TOR Consultation

The Department of Infrastructure and Planning has released the draft Terms of Reference (TOR) for EIS, Bowen Basin Coal Growth Project EIS. This document, which outlines what must be addressed in the EIS process, is available for public review and comment until 5pm Friday 5 September.

The draft TOR includes:

- Daunia Mine
- Caval Ridge Mine
- Goonyella Riverside Mine Expansion
- Moranbah Airport.

A copy the draft TOR is available through:

- <http://www.dip.qld.gov.au/projects/energy/coal.html>
- [www.bmacoal.com/growth\\_projects/GrowthProjects.asp](http://www.bmacoal.com/growth_projects/GrowthProjects.asp)

### Caval Ridge Mine

- Expected to produce approximately 5.5 million tonnes per annum
- Located north of the existing Peak Downs Mine, on the northern and southern sides of the Peak Downs Highway
- Estimated construction workforce of 1200; estimated operational workforce of 340
- Mining will be by dragline and truck and shovel, with a new coal handling and preparation plant to be built
- First coal expected in 2011

### Daunia Mine

- Expected to produce approximately 4 million tonnes per annum
- Located on the eastern side of the existing Poitrel Mine
- Estimated construction workforce of 350; estimated operational workforce of 200
- Mining will be by truck and excavator, and a new coal handling and preparation plant will be developed
- First coal expected in 2010

**For information about making a submission, please see the BMA website. Comments can be forwarded to:**

**Department of Infrastructure and Planning  
Significant Projects Coordination  
Bowen Basin Coal Growth Project  
PO Box 15009  
City East Qld 4002 Australia**

**Fax: +61 7 3225 8282**

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

**Contact details 1800 078 797 • [enquiries@bmacoal.com](mailto:enquiries@bmacoal.com) • [www.bmacoal.com](http://www.bmacoal.com)**



# feedback form



BHP Billiton Mitsubishi Alliance

Contact details  
**1800 078 797**  
**enquiries@bmacoal.com**  
**www.bmacoal.com**

BMA welcomes your input on its growth plans. It is important that we understand your views on the proposed Daunia and Caval Ridge Mines as well as our general growth plans and what they could mean for you and your family. This feedback form will also help us to gather information on what you value about your area and the potential changes that may result from BMA's growth.

Please take the time to fill out this feedback form at the display or send it in the reply paid envelope to:

BMA Growth  
Consultation coordinator  
Reply paid  
GPO Box 2907  
Brisbane Qld 4001

Your individual comments will remain confidential, with overall results reported in the Environmental Impact Statements for the Daunia and Caval Ridge Projects.

**1.** What would you describe as your local area?

- ☐ Moranbah
- ☐ Nebo
- ☐ Mackay
- ☐ Sarina
- ☐ Coppabella
- ☐ Other \_\_\_\_\_

**2** What do you like about living in this area?

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**3** What don't you like about living in this area?

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**4** How would you describe your lifestyle?

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# feedback form

**5** What are the major issues facing your community currently?

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**6** What are your general thoughts on the Daunia and Caval Ridge Projects?

**Daunia:**

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**Caval Ridge:**

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**7** How will BMA growth affect the following: (Please tick one column for each line)

	Very positive	Positive	No affect	Negative	Very negative	Unsure/ don't know
Community services						
Water						
The local economy						
Housing						
Flora and fauna						
Local lifestyles						
Recreation activities						
You and your family						
Other (please specify) _____						

Comments: \_\_\_\_\_

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**8** What do you think BMA could do to minimise impacts to the community?

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**9** Would you be interested in commenting on the draft Environmental Impact Statements when they are released?

- ☐ Yes, continue to question **10**  
☐ No, continue to question **11**

**10** Which sections of the Environmental Impact Statements are you most interested in (please tick more than one option):

- ☐ Water resources  
☐ Nature conservation  
☐ Air quality  
☐ Greenhouse gas  
☐ Noise and vibration  
☐ Transport  
☐ Waste management  
☐ Cultural heritage - Indigenous and European  
☐ Social  
☐ Economy  
☐ Health and safety  
☐ Hazard and risk  
☐ Cumulative impacts  
☐ Other \_\_\_\_\_

Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **11 Consultation**

Please rate the effectiveness of the information you have received about BMA growth. This includes the Daunia and Caval Ridge projects:

### • **Easy to read**

☐ very effective ☐ effective ☐ not effective ☐ neutral ☐ don't know

### • **Timely**

☐ very effective ☐ effective ☐ not effective ☐ neutral ☐ don't know

### • **Informative**

☐ very effective ☐ effective ☐ not effective ☐ neutral ☐ don't know

### • **Interesting**

☐ very effective ☐ effective ☐ not effective ☐ neutral ☐ don't know





# feedback form

**12** How would you like to receive information about BMA growth and provide your comments in the future?

- ☐ Newsletters
- ☐ Advertising
- ☐ Public displays
- ☐ Surveys
- ☐ Other: \_\_\_\_\_

**13** The following information will help with demographic studies:

Age:

- ☐ 18 – 30 years
- ☐ 31 – 45 years
- ☐ 46 – 60 years
- ☐ 61 years or over

**14** Gender:

- ☐ Male
- ☐ Female

If you would like to receive further information about BMA growth please provide your contact details. It is important to note that these details will remain confidential and will be used for the distribution of BMA information only.

Name: \_\_\_\_\_

Postal address: \_\_\_\_\_

Thank you for taking the time to complete this feedback form. If you have any questions about this or any other aspect of BMA growth please contact the project team on 1800 078 797.





BMA STAKEHOLDER FEEDBACK FORM RESULTS																												
Question and details	Responses																											TOTAL
<b><i>Your local area?</i></b>																												
Moranbah	1	1	1		1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24
Mackay																				1								1
Coppabella							1																					1
Brisbane				1																								1
<b><i>What do you like about living in the area?</i></b>																												
Social amenities – sport clubs and dance theatres, pubs (active spaces)	1							1										1		1					1	1		6
Lifestyle – quiet and laid back atmosphere	1			1			1				1	1			1		1	1			1		1		1	1		12
Employment opportunities					1				1				1								1	1						6
Sense of community		1	1	1										1	1		1		1			1	1					8
Family					1		1		1	1				1				1										6
Low crime						1																				1		2
Shopping centres								1																				1
Prosperity of Moranbah	1																											1
Proximity to work								1		1																		2
Great place for children							1																					1
Climate			1			1		1									1											4
Proximity to a city														1														1
Location						1																						1
Availability and proximity of services																1		1										2
<b><i>What do you dislike about living in the area?</i></b>																												
Coal dust									1					1				1									1	4
Lack of shopping choices and amenities				1				1						1		1	1	1										6
Mining developments and infrastructure						1														1								2
Trucks and other traffic hazards											1					1												2
Cost of living				1			1		1					1									1					5
Stress on local infrastructure														1														1
Separation of families	1																											1
Noise related to mining				1						1				1														3
Distance to services and major centres											1				1													2
Distance to recreational amenities		1				1							1															3
Negative comments about miners																				1								1
Lack of local support of businesses			1																					1				2
Dust					1																							1
Lack of housing and accommodation								1	1							1							1					4
Shift work clashing with club activities																									1			1
Lack of water																1												1
<b><i>How would you describe your lifestyle?</i></b>																												
Relaxed										1						1	1		1				1		1	1		7
Happy						1	1										1					1		1				5
Working	1												1						1				1					5
Active					1		1	1							1													4
Fine			1																			1						2
Family oriented	1					1				1					1									1				5
Average lifestyle															1													1
Community focused	1																1											2
Travel								1																				1
Hobbies								1																				1
Full							1																					1
Outdoors		1																										1
Simple									1																			1
Perfect - without the coal												1																1
<b><i>What are the major issues facing your community?</i></b>																												
Housing and accommodation issues	1			1		1		1	1		1				1	1		1	1			1	1	1	1	1	1	16
Lack of infrastructure and services				1		1	1		1						1	1												6
Cost of living											1				1											1		3
Water									1							1			1			1						3
Activities available to the local youth													1										1					2

Question and details	Responses																								TOTAL
Dust					1							1													2
Environmental issues					1						1	1							1						3
Loss of agricultural land						1																			1
Noise & vibration related to mining operations					1							1													2
Traffic issues															1									1	2
Issue regarding heavy loads on Peak Downs Highway.											1														1
Impacts to family life including single camps				1		1			1																3
Peoples lives split between the coast and Moranbah	1																								1
Transient population															1										1
Fly in fly out operations									1														1		2
Threat of new mines																		1							1
Skilled staff shortage in service industries																				1					1
General thoughts about:																									
Daunia?																									
Good employment opportunities				1		1						1											1		4
proximity to town - negative																1									1
Improvements to Moranbah								1	1		1							1					1		5
Increased long-distance commutes	1																								1
Impact to Coppabella															1										1
Disruption to rural lifestyle						1																			1
Increased noise & vibration and population					1	1																			2
Increase negative impacts to families because of single men's quarters										1			1												2
Great that it can be adjacent to another mine													1												1
encourage the expansion			1																						1
Infrastructure & road upgrades will be required						1							1												2
Concern about safety	1																								1
Concern about lack of support for local community															1								1		2
Will not have major impact to Moranbah																1									1
Should not proceed																			1						1
Caval Ridge?																									
Proximity to Moranbah - negative				1	1				1					1		1	1						1	1	8
Good employment opportunities					1						1												1		3
Noise & vibration issues					1			1		1						1							1		5
Proximity to Moranbah - positive	1			1					1		1		1				1								6
Dust	1				1				1					1									1	1	6
Community contributions would be welcomed													1												1
Encourage the expansion			1																						1
Health concerns				1					1					1	1									1	5
Infrastructure upgrades will be required						1						1				1					1				4
Good quality coal available													1												1
Should not proceed																			1						1
Positive affect to:																									
Community services	1	1					1	1	1		1		1			1	1	1			1				12
Water	1		1	1				1			1	1					1								7
unsure		1									1										1	1			4
Local economy	1	1			1		1	1	1	1		1	1	1		1	1	1				1	1		18
unsure			1	1																					2
Housing	1	1								1		1						1							5
unsure								1																	1
Flora and fauna												1					1	1							3
unsure			1					1														1			3
Local lifestyles			1					1				1	1				1	1	1		1	1	1		10
Recreation activities				1				1				1	1				1	1	1			1		1	9
You and your family	1	1		1				1	1			1	1					1	1			1			10
Negative affect to:																									
Community services									1		1		1		1	1			1				1		7
Water					1		1		1			1		1	1		1		1				1	1	12
Local Economy				1	1						1			1					1						5
Housing					1	1			1	1		1		1	1		1		1	1	1	1	1	1	16

Question and details	Responses																										TOTAL
unsure															1												1
Flora and fauna	1		1		1		1		1	1	1	1		1	1	1	1			1	1				1		16
Local lifestyles				1			1			1		1								1					1	1	7
unsure									1							1											2
Recreation activities						1					1									1							3
You and your family				1	1		1			1		1		1						1	1			1	1	1	11
unsure																1	1										2
Crime																1											1
Comments																											
The inability for local business to benefit from employees living on site.																						1					1
Mining companies should be responsible for the maintenance of roads and services.																1											1
Questions regarding sourcing employees																	1										1
Good luck with BMA's future growth, wishes for BMA to consider a "mothers shift" considering the paid maternity leave									1																		1
The affects will depend on BMA's contributions to a range of issues facing Moranbah										1															1		2
BMA doesn't care about the town or residents							1																				1
Housing for workers not only staff - like old days																								1			1
What can BMA do to minimise impacts to the community?																											
Build homes instead of single accommodation			1				1				1					1		1							1		6
Address issues of dust, noise and vibration	1							1										1	1								4
Increase Moranbah's services											1																1
Address housing issues and prices												1	1							1					1		4
Environmental consideration								1																			1
Vegetate between the mines and Moranbah															1												1
Introduce an employee transportation system															1												1
Increase the availability of water for residents		1															1										2
Discontinue long shifts												1															1
Inform community as to the potential affects																		1									1
Be respectful towards property owners							1																				1
Wider operation hours for child care									1																		1
10km mine free buffer zone around Moranbah																						1					1
BMA will have positive impact given if they contribute as Goonyella and Peak Downs Mines																1											1
Stay away from fly in fly out operations			1																								1
Listen to the community				1																							1
Don't mine these sites					1	1															1						3
Build houses then sell at cost price							1																				1
Minimise development								1																			1
Upgrade housing & infrastructure											1								1								2
Upgrade roads																								1	1		2
Interested in draft EIS?																											
Yes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24
No															1								1		1		3
Areas of the EIS that interest you?																											
Water resources	1	1	1	1			1	1	1	1	1	1	1		1	1	1	1		1	1				1		19
Nature conservation				1			1	1	1	1	1	1	1		1	1	1	1		1	1				1		16
Air quality	1	1	1	1	1		1	1	1	1	1	1			1	1	1	1	1	1					1	1	20
Greenhouse Gas				1				1	1	1					1			1		1							8
Noise and vibration	1			1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1				1	1	1	20
Transport	1						1	1		1	1		1		1			1		1	1			1	1	1	14
Waste management			1		1			1		1	1	1	1		1			1		1						1	12
Cultural heritage							1		1								1		1						1		6
Social	1				1			1	1	1		1		1	1	1	1		1						1	1	15
Economy	1						1	1			1				1		1	1		1					1	1	11
Health and Safety	1	1	1				1	1	1		1				1		1	1		1	1			1	1		16
Hazard and risk	1						1	1	1				1		1		1		1							1	10

Question and details	Responses																									TOTAL
Cumulative impacts				1			1			1			1		1	1		1			1		1	1	10	
Roads									1																1	
Why?																										
Knowledge is power																									0	
Concerned for the long term affect to Moranbah	1									1														1	3	
Need for bush walking																									0	
Concerned resident of Moranbah																									0	
Futures depends on the outcome																									0	
Interested in the impacts to the environment													1												1	
So they are not ignored																									0	
Ensure the lifestyle of Moranbah remains																									0	
Concerns for flora and fauna, v's grazing land																									0	
Global warming issues																									0	
Environmentalist and interested in the social impacts of Caval Ridge Mine to Moranbah																									0	
How was our consultation?																										
Very effective or effective overall	1	1	1		1	1	1	1	1		1		1	1	1	1	1		1	1		1	1	1	1	22
Ineffective overall																									0	
Easy to read - not effective										1								1			1				3	
Timing - not effective										1	1									1			1		4	
Informative - not effective										1	1									1					3	
Interesting - not effective							1			1															2	
"thank you for the opportunity to have my input"																									0	
Best method to provide information?																										
Newsletters					1	1	1	1	1	1	1	1		1	1	1			1	1	1	1		1	1	19
Advertising													1						1				1		4	
Public displays	1	1	1					1	1	1				1	1		1	1	1	1		1	1		15	
Surveys	1							1	1				1						1		1				6	
Newspapers									1																1	
Email							1									1									2	
At work																							1		1	
Age?																										
18 -30					1								1	1	1							1		1	1	7
31 - 45							1		1							1	1		1	1	1	1		1		9
46 – 60	1	1	1	1		1				1	1						1	1							9	
61 +								1																	1	
No answer											1														1	
Gender?																										
Female							1		1			1	1			1	1	1	1		1		1	1		12
Male	1	1	1	1	1	1		1	1	1	1			1	1				1		1		1	1		17
Mailing list?																										
Yes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1				1		1		19
No																			1	1	1	1				4