

Bulga Complex News

Bulga Complex Newsletter
April 2011, Issue no. 3



News from the open cut

In 2010, Bulga Coal mined around nine million tonnes of coal which was exported to Japan and China for steel making and power generation.

30 new noise attenuated dump trucks are now on site, replacing the unattenuated trucks that are no longer in use at Bulga Coal. After an investigation into blast fume in June 2010, Bulga Coal is trialling a high quality blast product designed to reduce the potential for blast fume. For more details, see the article below. Congratulations to the Coal Handling and Preparation Plant for winning Minerals Processing Plant of the Year in the 2010 Australian Mining Prospect Award. The award was largely due to the commissioning of the first Paste Thickener in coal processing in Australia. The paste thickener thickens tailings, saving water, power and reduces space required for tailing storage.

Bulga Coal welcomes Ben Hiatt as Operations Manager, replacing Nigel Wood; and Paul Amidy as Environment and Community Superintendent.

Coal mining history

Coal was first discovered in the Broke area in 1924 when Mr A Rose, who lived about three miles from Vere on Broke Road, noticed an outcrop of coal on his property and sunk a shaft. The presence of coal in the district surrounding Broke and Bulga was noted as early as 1820 when John Howe's exploratory party returned to Windsor with large pieces they had found on the banks of the Hunter River.

In 1972, BHP was authorised to prospect for coal in the Broke Bulga area. BHP's Saxonvale mine commenced regular production in 1981 with an output of 5,000 tonnes of coal per day. Now known as the Bulga Complex, the open cut and underground operations produce around 15 million tonnes of coal a year which is exported to Japan and China.

The Bulga Complex directly employs 1,050 staff and contractors across the open cut and underground operations. In 2010, a total of \$73 million was paid to the State Government in royalties.

Bulga Coal Complex	2010
Employees and contractors (open cut and underground operations)	1,050
State Royalties (open cut and underground operations)	\$73,000,000

The Bulga Complex is focused on contributing to the social and economic development of the local community, and we achieve this by protecting the environment, providing stable funding of community initiatives and having responsible relationships with our community members.

Rehabilitation using compost

Bulga Coal planted 40 hectares of pasture mix in December 2010 using compost to improve the quality of the overburden soil. The pasture mix included cover crop, annuals and perennials commonly used in pastures throughout the Hunter. The rehabilitation included 35 hectares planted using compost, with a further five hectares planted using topsoil.

Environment and Community Officer Steven Shoesmith said the compost, green waste from landfill, adds much needed nutrients to the overburden to improve quality and strike rate. "So far we have had a great result and the December rainfall certainly helped things along," he said. The rehabilitation will be monitored and applied to future rehabilitation planned at the mine.

Bulga Coal is looking to further improve rehabilitation efforts by preparing for seeding in winter and spring to take advantage of spring rainfalls.

There is 50 hectares of rehabilitation planned for 2011.



Pasture rehabilitation – December 2010.

Investigation into blast fume

Between April and June of 2010, 15 blasts were monitored to assess potential impacts on the workforce and the community. Blast fume cloud is created by an incomplete explosion and factors such as presence of moisture in the ground; atmospheric conditions including wind speed, directions and temperature inversion; blast design parameters, including size of the blast and stemming; geology; and quality of the blasting product.

Fume concentrations were monitored with two ODALOG 6,000 gas monitors per blast. The gas monitors were positioned at different distances downwind of the blast within the 500 metre clearance zone. The main components of blast fume are Nitrogen dioxide (NO₂) and Nitric oxide (NO). In concentrations of more than 30ppm, NO₂ is indicated by the red-brownish colour of blast fume.

The analysis of the collected data from the 15 blasts indicated that none of the workforce or community were exposed to fume gas levels above the occupational exposure levels or DECCW criteria. Recent trials of a high grade blast product showed it can reduce the potential generation of an orange fume cloud. This product is now being used at Bulga Coal in difficult blasting conditions. Bulga Coal will continue to collect data with the assistance of air quality experts to enable the atmospheric modelling of the monitored blast including the concentrations of fume constituents. A health assessment of the predicted fume concentration the workforce and public may be exposed to will then be undertaken and the results will be made public. We are also placing an electronic noticeboard on the corner of Broke and Charlton Roads which will advise the community of road closures due to blasting.

Managing dust emissions

Dust emissions from our operation are subject to strict limits contained in the mine's development consent. Current dust controls include watering of haul roads, dust suppression sprays on coal stockpiles, planting of temporary cover crops on exposed areas and suspending operations in difficult weather conditions. In addition to this, Bulga Coal is also investigating:

- the use of dust suppressants on haul roads
- potential aerial seeding of former mining areas
- irrigation of blasted ground prior to excavation
- using real time dust monitors.

Bulga Coal is going to supplement the existing dust monitoring network with the installation of a number of real time PM10 dust monitors and one real time PM2.5 dust monitor. One of these will be located near the Bulga community and another near Broke with the remainder located closer to the mine. The data collected from these units will be made available in report format on the Bulga Coal and Beltana websites (www.beltanaoperations.com.au, www.bulgacoal.com.au) as is all of the currently collected dust data.

Recognising the importance of issues raised by the broader community regarding the impact of dust in the Hunter Valley, Xstrata Coal is actively participating in a steering committee and working group with the Department of Environment Climate Change and Water (DECCW) to oversee the establishment of the Upper Hunter independent air-quality monitoring network of fine particulates (PM 10 and PM2.5). Once the network is established, the data will be available to the community through the DECCW's existing air-quality website.

News from the underground

Production has stopped at our Blakefield South operation due to a fire which ignited underground in early January. An attempt to re-ventilate the mine as part of a staged re-entry on the 15th February was not successful. During this process Broke Road was closed for longer than initially communicated and Beltana would like to apologise for any inconvenience this may have caused.

While mining has ceased at our Blakefield South operation, longwall mining of the Whybrow seam at Beltana is continuing. We are approximately 300 metres from completing longwall panel 14, which is the last panel of the Whybrow seam.

Fire at Blakefield South underground mine

Recovery of the Blakefield South underground operation continues after a fire broke out behind the longwall on the 5th January. The fire was located within the goaf of Blakefield South Longwall 1 which is about 185 m below the surface. The fire was extinguished by starving the underground atmosphere of oxygen.

A recent attempt on the 15th February to re-ventilate the underground area was unsuccessful. Inert gas is currently being pumped into the workings to starve the ignition source of oxygen. The underground atmosphere is currently inert and stable with continual gas monitoring in place. The focus of management and employees is the safe recovery of the mine. The damage to the underground equipment will only be determined with a visual inspection of the area, however, vision from video cameras, lowered down boreholes, is positive in this regard. It is still too early to predict when we may be able to re-enter the mine or recommence production. The unsuccessful re-ventilation also means that there will be further drilling to install more monitoring points in the coming weeks.

Many of our underground employees at our Blakefield South operation have been redeployed on other assignments or to other Xstrata Coal operations until production recommences.

Broke road closure

Beltana wishes to thank road users for their patience during the extended road closure of Broke Road. Three complaints were received from a predicted 4,000 road users. The road was kept closed after the re-ventilation of the underground area was unsuccessful and we worked to re-seal the ventilation shafts. Broke Road was closed with the approval of the Singleton Council with both emergency and public services informed prior to and during the closure. Beltana sincerely apologises for any inconvenience.

Flora and fauna booklet

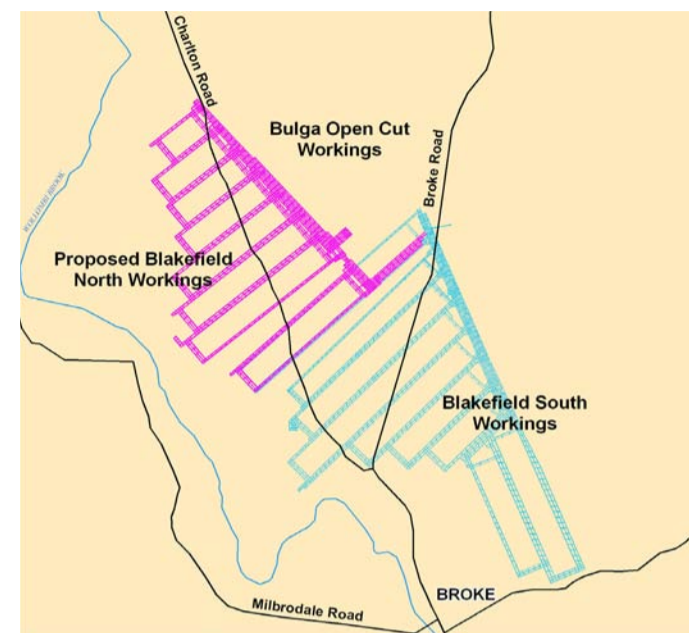
The Bulga Complex has produced an information booklet on *Animals and Plants of the Broke, Milbrodale and Bulga Area*. The intended audience of the booklet is primary school children, so the contents are limited to those animals and plants most frequently seen in the area.

A copy of the booklet will be provided to each of the children at the Broke and Milbrodale schools in the first term. If your child does not attend either of these schools and would like a copy, please contact Teegan Hayward on 6570 4320.

Blakefield North – modification to current development consent

Beltana has approval to mine the coal from four seams: Whybrow, Blakefield, Glen Munro and Woodlands Hill until 2030. Preparation is underway to mine the Blakefield seam in the north of the underground mining area (Blakefield North), scheduled to begin longwall mining in 2015. We are currently preparing an application to modify our development consent in relation to the Blakefield North operation. The main changes to the original consent that will be requested are the following:

- Entry to the underground workings will be via a drift rather than highwall access. Current pit-top facilities and coal clearance at Blakefield South will continue to be used.
- Construction of surface ventilation shafts close to the current highwall away from Charlton Road.
- Construction of gas drainage surface infrastructure comparable to that used in the Blakefield South mining area. The Blakefield coal seam contains moderate to high levels of methane. Removing the gas from the coal prior to and after mining is critical for the safety of employees working underground. Pre-drainage gas wells are required to remove the methane from the underground workings before mining commences. Post-drainage gas wells are required to remove the methane that accumulates in the collapsed area behind the longwall (the goaf). Beltana's gas drainage program is about safety for underground employees, and reducing delays in production. Beltana does not utilise hydraulic fracturing or use BTEX chemicals in its gas drainage program. The pre and post mining gas wells will not be installed through the alluvial aquifer. For more information about our gas drainage program, please read the enclosed *Gas Drainage Q & A Sheet*.



Proposed Blakefield North mine workings.

- Increased capacity for power generation to support our continued efforts to reduce greenhouse gas emissions. The planned location for the power generators is beside the present coal preparation plant on the north-eastern boundary of the mining lease. All power generation infrastructure will have appropriate noise attenuation and will utilise the methane recovered in the gas drainage program.

More details regarding the Blakefield North modification will be provided to the community during 2011. The request for modification will be submitted to the Department of Planning for approval.

Reducing greenhouse gas emissions

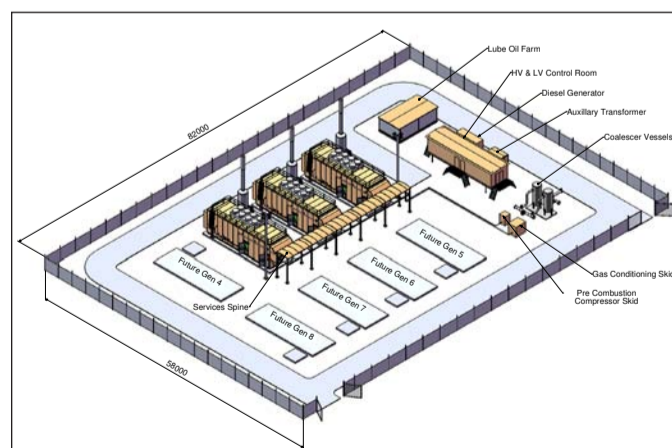
Power generator units

Following Beltana's approval from the government to produce up to 25MW of gas-fired power, three generator units are scheduled to arrive at the Blakefield South operation this year. Each unit will produce 3MW of power which will be used on site.

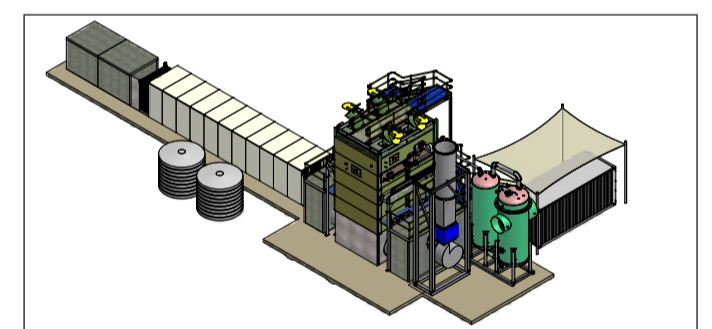
The generator units will utilise the methane captured from our gas drainage system. Because the gas is not produced at a constant rate, excess methane will continue to be flared when required.

Ventilation Air Methane Update

Work has commenced on the pilot Ventilation Air Methane abatement system (VAM). The pilot VAM system will oxidise the low percentage of methane contained in the mine ventilation air that cannot be captured and used in the power station or flares.



Power generator units.



Ventilation air methane regenerative after burner.

Called a Regenerative After Burner (RAB), the VAM RAB directs ventilation air through a chamber where it is heated to around 1000°C. Using this oxidation technique, almost all of the methane is converted to carbon dioxide and water, significantly reducing Beltana's greenhouse gas impact.

The VAM RAB is being constructed at Rutherford and will be trucked to Blakefield South for final construction.

The pilot plant will allow us to understand how efficiently this system can oxidise the levels of methane from the mine ventilation air.

Gas Drainage update

In response to increased community interest regarding gas drainage, a Question & Answer Sheet regarding our gas drainage program is enclosed with this newsletter. Beltana's gas drainage program is about providing a safe working environment for our employees underground.

For further information contact:

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Xstrata's commitment to Sustainable Development

We are committed to the goal of sustainable development. We balance social, environmental and economic considerations in how we manage our business. We believe that operating to leading standards of health, safety and environmental management, contributing to the development of sustainable communities, and engaging with our stakeholders in two-way, open dialogue, regardless of our location, enhances our corporate reputation and is a source of competitive advantage. This enables us to gain access to new resources, maintain a licence to operate, attract and retain the best people, access diverse and low-cost sources of capital, identify and act upon business opportunities, and optimise our management of risks.