



# Dartbrook Mine Report 2006

## Message from the General Manager



Although our Lost Time Injury Frequency Rate (LTIFR) was marginally above target, the Total Recordable Case Frequency Rate (TRCFR) of 15 bettered the 2006 target of 20.5 and was a 28% improvement on 2005.

We also maintained certification of our Safety, Health, Environment and Community Management System (SHECMS) to Australian Standard 4801.

Unfortunately, placing the mine under care and maintenance meant we had to release the majority of our workers but I was pleased to see that most of them found employment within the mining industry, including 30 people that went to other Anglo Coal Australia (ACA) operations. All employees received their full entitlements.

During the year we successfully maintained certification of our SHECMS to the ISO 14001 standard and continued working on a number of biodiversity related initiatives. In collaboration with the Hunter-Central Rivers Catchment Management Authority (CMA), we planted 2,200 River Red Gum seedlings as well as a number of acacias and bottlebrush in the River Red Gum area, which was established as a Biodiversity Area on mine buffer land. We also commenced fencing and planting of seedlings along the 6.5 kilometre (km) stretch of the Hunter River and Dart Brook as part of the larger River Restoration Project that was established with the CMA in late 2005.

During the year we focused on ensuring that local communities, particularly Aberdeen, are not adversely impacted by us suspending operations. We continued to sponsor a number of community programs and even though the mine has ceased production we will continue to sponsor the local newspaper, the *Aberdeen Whisper*, and the Youth off the Streets initiative that we began supporting six years ago. We will also fund up to \$200,000 of the re-development of a park in Aberdeen.

In 2006, our key focus was to reduce the number of community complaints and we are pleased to report that we were successful in recording only one, down from 19 in 2005.

This Report and ACA's 2006 Sustainability Report (available at [www.anglocoal.com.au](http://www.anglocoal.com.au)) provide a summary of the way this site and the business manages its responsibilities in these areas. We welcome your feedback on any aspect of our performance and reporting.

**Barry Robinson**  
General Manager

In 2006, we produced 1.02 million tonnes (Mt) of coal. Due to ongoing operational and geological issues the operation was placed under care and maintenance while a decision is made about its future.

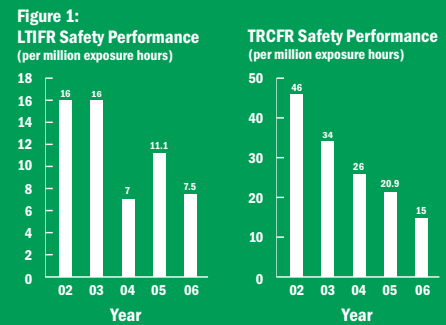
Our proactive management of safety risks during a difficult time of ongoing operational issues and consequent suspension of mining has been rewarded by a sound safety performance in 2006. The Coal Handling and Preparation Plant (CHPP) has not reported a Lost Time Injury (LTI) for 520 days whilst our maintenance section has worked for 996 days since the last recordable injury was reported.





Right: Breaking the AFC chain in the longwall signalling the end of the longwall mining at Dartbrook mine.

Below right: Miner, Greg Brown.



## About the mine

Dartbrook mine is an underground longwall coal mine located in the Upper Hunter Valley of New South Wales (NSW), north of Muswellbrook. Dartbrook mine produces low sulphur, bituminous thermal coal, which is exported to South East Asia for power generation and industrial applications. In 2006, the mine produced 1.02 Mt of coal. As a result of ongoing operational and geological issues a decision was made in May 2006 to temporarily suspend mining as of December 2006. The mine has been placed under care and maintenance, while a decision is made about its future. Despite activities being limited to maintaining infrastructure during care and maintenance, the management of Safety, Health, Environment and Community (SHEC) issues will continue to be a primary focus.

## Safety

In a time of changing circumstances with the suspension of mining and consequent loss of employment at Dartbrook mine, it is pleasing that our employees remained focused on their safety. Our CHPP achieved over one year LTI free during 2006. The mine recorded a LTIFR of 7.5, against a target of 6. Our TRCFR of 15 bettered the 2006 target of 20.5 and was a 28% improvement on 2005. No fatalities, permanent disabling injuries, safety related fines or breaches were recorded in 2006. There was, however, an ongoing prosecution from an incident in 2003 and a new prosecution from an incident in 2004.

Our Occupational Health, Safety and Environmental (OHS&E) Committee of nine employees and four management representatives met monthly to discuss our safety, health and environmental related issues. Amongst other items, the Committee addressed the following health and safety risks faced by the mine and strategies to mitigate them:

- Sources of energy;
- Falls of ground;
- Dust; and
- Potential loss of safety focus as a result of the care and maintenance status.

Strategies implemented to address these risks included the formation of a Dust Committee to identify and recommend additional dust controls, and the implementation of a lockable isolation system to control sources of energy.

As the phased reduction in operations commenced, a more intense communication process was implemented with the OHS&E Committee reinforcing safe messages amongst the workforce. A Safety Innovation Awards Program was also implemented by the OHS&E Committee encouraging the workforce to identify innovative solutions or improvements to overcome areas of risk.

Certification of our SHECMS to Australian Standard AS 4801: 2001 for Occupational Health Safety Management Systems was maintained after two surveillance audits. No major non-conformances were identified and three minor non-conformances were all addressed.

Internal audits carried out in 2006 included:

- A First Aid Management Systems audit, which identified additional training required by employees; and
- A Contractor Management System audit, which identified the need for additional focus on the contractor safety management system.

The District Inspector of Coal Mines audited the effectiveness of our OHS&E consultation arrangements and no major non-conformances were identified. One minor improvement was recommended.

Throughout 2006, the mine's rescue team continued rescue refresher training. The Compressed Air Breathing Apparatus was used in safe evacuation scenario training to familiarise employees with the equipment.

To further lower incident rates and move toward the target of zero injuries, particularly as operations started to wind down, the implementation of the Zero Incident Potential safety behaviour program was intensified to encourage safe work behaviours and ensure everyone remained focused on their safety. We also initiated a safety incentive scheme rewarding employees and contractors for good safety performance.

In line with ACA's safety management standard, known as the 'Safety Way', which integrates the Golden Rules, Behaviour Based Safety and Visible Felt Leadership, we implemented the 'Dartbrook LifeSaver' program detailing how employees, contractors and visitors can be safe on site.

**Table 1: Safety Performance** PER MILLION EXPOSURE HOURS

	2006 Target	2006 Actual
Lost Time Injury Frequency Rate	6	7.5
Total Recordable Case Frequency Rate	20.5	15





Left: Ian McDonald, Crew Leader, inspecting longwall hydraulic chocks removed from underground.

Below: Hayley Pyne, Safety Graduate, in the forestry area north of the CHPP.

## Sustainable Development

### PEOPLE

Dartbrook mine had maintained employment levels for direct employees and full time contractors at around 240 and 110 respectively up until the announcement of the mine being placed under care and maintenance. Since the announcement, Dartbrook mine conducted an orderly three phase reduction in the number of employees and contractors with significant reductions taking place at the end of June, mid October and mid November.

Extensive community consultation took place concerning the impact of ceasing operations. The recent growth in the global coal market ensured that the majority of employees in the industry were able to gain employment. Over 30 employees, from operators and trades employees to senior managers, accepted positions within the ACA group.

To ensure the careers of our apprentices, trainees and ACA graduates were not affected by the decision, the full complement were found alternative places within the ACA group.

With the changing circumstances of the mine, Human Resources data for the Dartbrook business is not applicable.

We continued to support (financially and with study leave) work related and development education programs for our employees.

These included engineering diplomas and deputy management courses. Employees also participated in the apprenticeship training program and the ACA People - Performance - Growth program.

### ENVIRONMENT

We successfully maintained certification of our SHECMS to the ISO 14001 Environmental Management System Standard, which was reviewed and updated to meet the new ISO 14001 - 2004 requirements in May. The two surveillance audits undertaken in 2006 identified no major non-conformances. No significant findings were identified during a number of internal audits throughout the year on dust minimisation, land management, ground water, subsidence and rehabilitation, waste tracking and the Reject Emplacement Area.

In 2006, Dartbrook mine recorded two level 1 environmental incidents, both of which were water pipeline breaks, which did not cause any environmental harm and did not attract any environmental related prosecutions, fines or breaches.

### Rehabilitation and Land Management

We rehabilitated 90 hectares of land in 2006, which was well above the target of 22 hectares. In 2007, 58.6 hectares will be rehabilitated, including the final rehabilitation of the Reject Emplacement Area at the CHPP.

**Table 3: Environmental Incidents**

	2006
Level 1	2
Level 2	0
Level 3	0

### Biodiversity

In 2006, we prepared a draft Biodiversity Action Plan. The site maintained its biodiversity focus on the:

- Rehabilitation of the Hunter River and Dart Brook Project (River Restoration Project);
- Forestry Project; and
- River Red Gum Biodiversity Project.

In 2006, in collaboration with Hunter-Central Rivers CMA, we established the River Red Gum Biodiversity Area. This project covers an area of approximately 11 hectares that consists of an endangered Red Gum Community of 4 hectares (approximately 60 mature River Red Gums) and 8 hectares planted with over 2,000 River Red Gums seedlings and 1,600 habitat species, including acacias, bottlebrush and rushes. Drip irrigators were installed to water the seedlings during establishment. Small banks were constructed around the mature trees to assist with holding water in the area once they are irrigated, as the River Red Gums require occasional flooding to survive. The River Red Gum project forms part of a larger joint project, the River Restoration Project, which was established with the CMA in late 2005.

**Table 2: Key Human Resources Data**

	2004	2005	2006
Number of employees	247	240	178
Number of contractors	120	116	69
Number of trainees	1	5	NA
Number of apprentices	4	4	NA
Graduate Development Program	6	7	NA
Employee turnover	40	18	NA





Fiona Bailey, Senior Environmental Coordinator, inspects progress of seedlings planted along the Hunter River (left) and prepares to take a dust sample (below).

Below left: The tailings cells being desilted.

The River Restoration Project involves the restoration and rehabilitation of the banks of a 6.5 km stretch of the Hunter River and Dart Brook (totalling 13 km). Major activities undertaken in 2006 included fencing off land adjacent to the river and planting sections of the Hunter River with native vegetation to help control bank erosion. This project will continue in 2007, when we hope to involve a number of community groups in the project.

Through the Australian Government's Natural Heritage Trust funding, Dartbrook mine, as a landholder, was successful in obtaining some funds to assist in the project from the CMA.

We also continued inspections and maintenance works on the Forests NSW administered tree plantation, a 75 hectare area that was planted with native trees in 2004 and 2005. This project is part of a regional plan to create a sustainable forestry resource in the Upper Hunter Valley.



**Table 4: Types of Waste**

	2005 Disposed	2005 Recycled	2006 Disposed	2006 Recycled
Hazardous Waste (t)	83	5	20	10
Non-hazardous Waste (t)	515	468	349	1160

**Water**

To improve water use, we installed additional pipelines to circulate recycled water to the CHPP and installed water meters on groundwater bores to improve the accuracy of water use monitoring.

Despite these initiatives, we used 139 megalitres (ML) of water in 2006, 35% more than last year, leading to an efficiency of 136 litres per tonne (L/tonne) of saleable coal against a target of 80 L/tonne of saleable coal. This decline is due to less coal being produced than projected for the year. It is estimated that we consumed a further 227 ML of recycled water on site.

**National Pollutant Inventory**

Dartbrook mine is required to report in accordance with the National Pollutant Inventory, Australia's national database of pollutant emissions.

To obtain further detail on Dartbrook mine's emissions during 2006 please refer to [www.npi.gov.au](http://www.npi.gov.au).

**Waste**

We continued focusing on reducing waste to landfills and increasing material recycled, with 1,160 tonnes of solid material and 10.8 kilolitres of oil recycled. As we began decommissioning the site, the amount of waste disposed to landfill was reduced compared to last year and the amount sent for recycling, particularly metal, increased. In 2006, we continued to pump tailings (fine process waste) into the underground goaf, reducing the amount of material emplaced in the surface Reject Emplacement Area.





House used in the 'Youth Off the Streets' initiative.

Below left: Dartbrook mine has provided up to \$200,000 for the redevelopment of A. F. Taylor Park.

Below: Township of Aberdeen from Browns Mountain.

## COMMUNITY

Our focus during the year was to ensure that local communities, particularly Aberdeen, are not adversely impacted by the suspension of mining. Dartbrook mine's key community stakeholders are:

- Employees;
- Local land and lease holders;
- Contractors and suppliers;
- The local towns of Muswellbrook, Scone and Aberdeen; and
- Customers, regulators, councils and Traditional Owners.

We continued to sponsor the *Aberdeen Whisper*, the local paper that features a monthly article on Dartbrook mine. We will continue to sponsor the paper during care and maintenance. Other community engagement programs in 2006 included:

- A partnership with the Advancing Aberdeen Committee through which Aberdeen development issues are discussed and strategies implemented;

- Participation in the 'Bursting with Energy' expo at the Upper Hunter Show;
- Hosting a number of tours of the underground mine for Muswellbrook Shire Council (MSC) and Upper Hunter Shire Council staff;
- Continuation of the Dartbrook Community Consultative Committee with six meetings held and one site surface tour;
- Participation in the Mine General Managers' Forum facilitated by the MSC;
- Ongoing regular two-way communication with local landholders and lease holders;
- Face to face meetings with contractors and suppliers regarding the pending care and maintenance of Dartbrook mine; and
- Correspondence and meetings with various regulators regarding the proposed care and maintenance of Dartbrook mine.

In 2006, Dartbrook mine continued to participate in an Australian Coal Association Research Program (ACARP) study on the cumulative impacts of mines in Muswellbrook. The results are expected to be published in 2007.

For over six years, we have been involved with the Youth off the Streets initiative, by providing a rent-free house to the community organisation. It is envisaged in the future that the relationship between Dartbrook mine and Youth off the Streets will continue. Dartbrook mine has committed up to \$200,000 for the re-development of the A.F. Taylor park in Aberdeen.

In 2006, our key focus was to reduce the number of complaints and we are pleased to report that we were successful in recording only one, down from 19 in 2005. The dust related complaint was investigated and resolved.





Drill rigs continue to explore future reserves.



### CLIMATE

Due to the mine entering into care and maintenance, Dartbrook mine did not complete the study that was commissioned to identify energy reduction opportunities. Although we used less diesel and electricity in 2006, our energy efficiency still declined with the decrease in coal tonnes of saleable coal produced.

ACA is a signatory to the Greenhouse Challenge Plus initiative and is required to annually report greenhouse gas emissions and minimisation initiatives. Despite the drop in energy use, greenhouse gas emissions per saleable tonne increased as a result of marginally higher methane emissions and the decrease in coal tonnes of saleable coal produced.

Dartbrook mine established equipment on site to trial the flaring of methane in the gas drainage from the mine goaf to reduce greenhouse gas emissions. However, the trial was not concluded once the mine entered care and maintenance.

### CONTACT

This SHEC Report covers the period of 1 January to 31 December 2006. Further details on the content of this Report can be obtained by contacting Fiona Bailey (Senior Environmental Coordinator) on 02 6540 8888 (email: [fiona.bailey@anglocoal.com.au](mailto:fiona.bailey@anglocoal.com.au)).

This Report, links to web-based supplementary material and an electronic feedback form can be viewed at [www.anglocoal.com.au](http://www.anglocoal.com.au).

**Table 5: Performance Summary**

Parameter	Indicator	2006
Safety	Fatalities	0
	Lost Time Injury Frequency Rate	7.5
	Total Recordable Case Frequency Rate	15
People	New occupational illnesses	2
	Average number of employees	178
	Average number of FTE contractors	69
Environmental	Water used for primary activities (ML)	139
	Water use efficiency (L/saleable tonne)	136
	Area of land remaining disturbed end 2006 (ha)	183
	Rehabilitated land end 2006	786
	Incidents (Level 1)	2
Community	Incidents (Level 2)	0
	Complaints (Level 1)	1
	Community Cash Donations (AUD)	41,000
Climate	Energy Use (Gj)	193,251
	CO <sub>2</sub> equivalent emissions (tonnes)	367,529
Economic	Saleable Coal (tonnes)	1,021,890



	2004	2005	2006
Energy use (GJ)	312,665	302,338	193,251
Energy efficiency (GJ/t saleable coal)	0.107	0.157	0.189
Greenhouse gas emissions (kt CO <sub>2</sub> -e)	559	428	368
Greenhouse gas efficiency (tCO <sub>2</sub> -e/t saleable coal)	0.191	0.222	0.360
Methane (t)	15,535	12,453	12,500



DARTBROOK



ANGLO  
COAL

[www.anglocoal.com.au](http://www.anglocoal.com.au)