

Dendrobium Mine

# Environmental Management System

## Management Plan



## Traffic

## Review History

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0		Nov 04	Bryan Quinn
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## 1 INTRODUCTION

### 1.1 Background

Dendrobium Mine is an underground mine which commenced construction in January 2002 following approval from the Minister of the then Department of Urban Affairs and Planning on 20 November 2001. Longwall mining commenced at Dendrobium in April 2005. The mine is owned and operated by Dendrobium Coal Pty Ltd, a wholly owned subsidiary of BHP Billiton and is operated on a continuous basis, 24 hours a day and 7 days a week.

The Mining operations are located immediately adjacent to Mt Kembla, approximately 8km west of Wollongong, NSW, on the Illawarra escarpment. Mt Kembla village, located within 500m of the Pit Top site, has close historical links with coal mining.

The Pit Top facilities have been developed on the site previously known as Nebo Colliery, which was combined with Wongawilli Colliery in 1993 to form Elouera Colliery. The Nebo Portal site was relinquished from the ownership and responsibility of Elouera Colliery in December 2001 to enable Dendrobium Mine to acquire formal responsibility, ownership and identity of the site.

Dendrobium Mine accesses coal from the No. 3 Seam (Wongawilli Seam) of the Illawarra Coal Fields. Three mining areas make up the approved mine plan for Dendrobium and are named Areas 1, 2, and 3 respectively.

Dendrobium produces coking coal and is approved to produce up to 5.2 million tonnes per annum with an expected life of mine in excess of 20 years. The Bluescope Port Kembla Steel Works and Whyalla Steel Works are the major customers. In addition to these Australian based customers, coal may be exported via the Port Kembla Coal Terminal to international customers.

This Traffic Management Plan (TMP) addresses the management of road traffic and rail movements associated with operation of the mine and associated infrastructure in accordance with the Dendrobium Development Consent and Environmental Protection Licence 3241.

This Traffic Management Plan is a component of the Environmental Management Strategy for Dendrobium Mine. Common aspects across individual Plans are covered in the Environmental Management Strategy document.

## 1.2 Scope

The scope of this management plan includes the following Dendrobium Mine sites and facilities:

**Dendrobium Pit Top** - consists of administration building, workshop, machinery and equipment storage areas, people and materials access to the underground workings via the Dendrobium Tunnel, a sedimentation pond and grey water treatment and Oil Water Separation facility.

**Kemira Valley Coal Loading Facility** – the KVCLF receives coal from underground via the Kemira Valley Tunnel. Coal is transported from underground to KVCLF via a conveyor network. The coal is then fed into a rill tower and deposited onto a 150,000 tonne stockpile from which it is loaded into trains via an enclosed rail-loading chute.

**Kemira Valley Rail Line** - used to transport the coal from KVCLF to the Dendrobium Coal Preparation Plant.

**Ventilation Shaft Number 1** - The No.1 ventilation shaft, located within the Metropolitan Special Area administered by Sydney Catchment Authority (SCA), operates as a downcast shaft (i.e. drawing fresh air into the underground workings). The No. 1 vent shaft is on land owned by Illawarra Coal.

**Ventilation Shafts Number 2 and 3** – Also located within the Metropolitan Special Area and within Mining Lease ML1566. Construction of the No.2 and 3 ventilation shafts was completed during 2008. The No.2 shaft operates as an additional downcast shaft whilst the No.3 shaft operates as an upcast shaft.

In addition to the above, the following residential areas of Mt Kembla are also covered by this plan:

- Cordeaux Road and vehicle movements in and around the Pit Top site; and
- Stones Road and vehicle movements in and around the Kemira Valley Coal Loading Facility (KVCLF).

## 2 OBJECTIVES

The objectives of this TMP are to:

- Ensure compliance with Development Consent conditions and any undertakings made by BHP Billiton to the community with respect to traffic management;
- Ensure that BHP Billiton's policies and internal company requirements are met with respect to traffic management;
- Minimise the potential for traffic conflict and/or personal injury resulting from traffic generated by the Dendrobium Mine;
- Create a road environment where all road users feel safe; and
- Successfully enforce a Drivers' Code of Conduct for all personnel associated with Dendrobium, including a monitoring and reporting process.

### 3 RESPONSIBILITIES

It is the responsibility of all employees and contractors to undertake practices to manage and minimise traffic impacts according to this Management Plan.

The Environment and Community Manager is responsible for coordinating the implementation of this Management Plan and for the periodic review of the Plan. The Environment and Community Manager will be responsible for ensuring the commitments of the TMP are met. This will include:

- i. Enforcement of the Drivers' Code of Conduct;
- ii. Notification of key stakeholders when large loads are required to be transported, or road closures are to occur; and
- iii. Production and dissemination of reports and appropriate summaries of information in reports.

The Environment and Community Manager, along with the Safety and Training Manager, is also responsible for coordinating the training of employees and contractors with regards to their responsibilities under this plan.

Traffic management relating to the Kemira Valley Rail Line is managed by the Logistics Group of Illawarra Coal, with some aspects, such as the relevant conditions in the Development Consent, managed in conjunction with Dendrobium's Environment and Community Manager.

## 4 LEGISLATIVE AND OTHER REQUIREMENTS

### 4.1 Legislative Requirements

Legislation relating to traffic management includes:

- Road Transport (General) Act 2005
  - o Road Transport (General) Regulation 2005
- Road Transport (Safety and Traffic Management) Act 1999
  - o Road Transport (Safety and Traffic Management) (Road Rules) Regulation 1999

### 4.2 Environment Protection Licence Requirements

Licence 3241 applies to the Dendrobium Mine premises and associated activities, and contains conditions pertaining to traffic. A copy of the licence can be accessed at the DECC website.

[http://www.environment.nsw.gov.au/poeo/details.asp?licence\\_no=3241](http://www.environment.nsw.gov.au/poeo/details.asp?licence_no=3241)

### 4.3 Development Consent Requirements

Schedule 4 of the Development Consent specifies the specific environmental conditions (surface facilities) with which Dendrobium must comply. The following conditions apply to this management plan.

#### **Schedule 4**

#### **Transport – Rail Transport**

23. The Applicant shall ensure that trains do not travel on the Kemira Valley rail line:

- a. between 12 midnight and 6am, until 29 April 2010; and
- b. between 11pm and 6am, from 30 April 2010.

24. The Applicant shall record the:

- a. date and time of each train movement on the Kemira Valley rail line; and
- b. amount of coal transported from the KVCLF each year

and include a comprehensive summary and discussion of the results of this monitoring in each AEMR.

#### **Transport – Road Transport**

25. The applicant shall prepare and implement a Traffic Management Plan for the development to the satisfaction of the Director-General. This plan must:

- a. be submitted to the Director-General for approval by 30 April 2009;
- b. be prepared in consultation with the WCC, Mt Kembla Primary School and the CCC;
- c. include traffic control measures for truck movements through residential areas, including Stones Road and its intersection with Cordeaux Road;
- d. provide that mine shift changeover times and deliveries by heavy vehicles to the pit top facilities and KVCLF do not conflict with pick-up and drop-off times for Mt Kembla Primary School students;
- e. provide heavy vehicle speed limits;
- f. include a Driver's Code of Conduct to be applied to the Applicant's employees and contractors working at the development and measures for the enforcement of this code; and
- g. include procedures for regular monitoring of compliance with this plan.

27. The Applicant shall establish an agreement with WCC to share the reasonable costs of maintenance of Stones Road for the life of the development. Prior to decommissioning of the mine, Stones Road must be inspected, to the satisfaction of WCC, and the road restored by the Applicant to a standard not less than its condition prior to the development's approval. If roadworks are not carried out by the Applicant within one month of being informed by WCC that these works are required under the maintenance agreement, WCC shall be entitled to carry out such maintenance work at the Applicant's cost. Any dispute over implementation of this condition is to be referred to the Director-General for resolution.

#### 4.4 BHP Billiton and Other Policies and Strategies

BHP Billiton operates in accordance with the Health, Safety, Environment and Community (HSEC) Management Standard (STA.009) which covers all operational aspects and activities of its business and the Environment Standard (STA.020) which prescribes the mandatory environmental performance requirements that support the aspiration of zero harm across BHP Billiton.

The HSEC Management System framework is consistent with internationally recognised standards. It aims to set benchmarks for the Company's diverse range of businesses to develop and implement their own HSEC Management Systems, to provide auditable criteria for these systems and to provide a basis from which to drive continuous improvement.

The Traffic Management Plan has been developed consistent with the principles of the HSEC Management Standard and Environment Standard.

Dendrobium Mine maintains an environmental management system which is certified to ISO14001 standard.

## 5 MANAGEMENT STRATEGIES

There are a number of areas where the Dendrobium operations could potentially generate traffic issues. These areas, and the associated management strategies, are discussed in more detail in the following section.

### 5.1 Operational Activities and Potential Traffic Issues

#### 5.1.1 Dendrobium Surface Activities

Due to its proximity to Wollongong, Dendrobium Mine employees mostly travel to the site by light vehicle. Employee and contractor numbers vary according to operational activities being undertaken at the time, however generally are around 200 and 100 respectively. Due to the shift times at the Mine, light vehicle movements are spaced out over a 24 hour period rather than concentrated at one time.

Medium and heavy vehicles require access to the site for the purposes of:

- Delivery of materials and equipment;
- Waste bin delivery and removal;
- Providing services where external equipment is required (e.g. regular environmental monitoring, drug and alcohol testing, crane hire etc).

Vehicles accessing the site are required to adhere to the Drivers' Code of Conduct.

#### 5.1.2 Kemira Valley Coal Loading Facility

The Kemira Valley site is designed to operate mostly unattended except for the stockpile equipment operators and site supervisors. Medium to heavy vehicles require access to the site to transport equipment such as earth moving machinery, as well as materials such as fuels, chemicals and lubricants. Vehicles also regularly access the site for maintenance purposes and environmental monitoring.

Vehicles accessing Kemira Valley are also subject to the Drivers' Code of Conduct and associated curfew times.

#### 5.1.3 Ventilation Shafts (1, 2 and 3)

The Ventilation Shafts are generally unattended sites, with access generally limited to a Weekly Maintenance inspection. Additional access to the site will be infrequent and only for specific works. It would only be during these times, and upon decommissioning of the sites that medium or heavy vehicles would require access to the site.

## 5.2 Traffic Mitigation and Management Measures

### 5.2.1 Road Traffic Management

Measures are taken to ensure that the effects of traffic on the local communities associated with Dendrobium Mine, and its related sites, are minimised.

Aspects that are focused on, which are discussed in detail below, include:

- Signage and physical structures to notify and control drivers to ensure correct behaviour;
- Driver behaviour – Driver’s Code of Conduct;
- Curfew times for both road and rail;
- Control of materials being transported;
- Encouraging ‘car-pooling’ for employees and contractors; and
- Notification of relevant stakeholders when large loads are required, or road closures are to occur.

#### ***Signage and Physical Structures***

Physical structures are in place to inform drivers of road conditions in relation to the mine and its associated sites. These include signage, pedestrian refuge areas, widening of roads, improvement of bridges, and painting of road markings both on and off the mine site.

Temporary variable message signs are also used intermittently to inform drivers of the local road conditions, speed limits, and alert them of area of high pedestrian activity (i.e. the Mt Kembla Primary School).

Road maintenance programs for Stones Road will continue as required by Dendrobium’s Development Consent.

#### ***Driver Behaviour and Curfew Times***

In addition to physical structures and signage, Dendrobium ensures that BHP Billiton employees, contractors and visitors focus on their driving behaviour by reinforcing requirements during site inductions and through relevant training documents such as the Environment and Community Awareness Training package. Driver behaviour is controlled across the sites through measures such as the Drivers’ Code of Conduct which is detailed in the following section.

The Allowable Travel Times for travel for vehicles, other than personnel passenger vehicles, to the Pit Top, KVCLF or Ventilation Shaft 1 are as follows:

- Monday to Friday – 7.00am-8.00am, 9.30am-2.30pm, 4.00pm-5.00pm
- Saturday – 8.00am-1.00pm

Dendrobium Mine shift changeover times take into account the Mt Kembla Public School pick up and drop off times. Proposed amendments to shift patterns are discussed with the Mt Kembla Public School prior to implementation.

All drivers, including operators of heavy vehicles, are required to comply with the speed limits designated by signage installed by the Roads and Traffic Authority and to drive to road conditions i.e. slow down in wet conditions and on narrow roads. A heavy vehicle speed limit of 40 km/hr has been imposed on Stones Road.

### ***Drivers' Code of Conduct***

All employees, contractors and visitors accessing the Dendrobium Pit Top, Kemira Valley, or Ventilation Shaft sites will continue to be made aware that responsible driving is a condition of employment at Dendrobium.

A Drivers' Code of Conduct for vehicles outlines the driving behavior required of all employees, contractors and visitors (refer to *DENPL0001 Dendrobium Mine Drivers Code of Conduct*). All personnel are trained about the Code of Conduct as part of the site induction process and through regular audits undertaken at the sites. The requirements of the Code are also reinforced through the Environment and Community Awareness Training.

Any drivers reported or found to be acting in a manner contrary to the Code will be subject to disciplinary action. The following penalties apply for breaches of the driver's code of conduct:

- i. for a first breach a warning letter is sent to the company along with the requirement for the company to make a donation of \$500 to a charity nominated by the contractor;
- ii. a second breach of the Code (within a 12 month period) results in further donation of \$1000 payable to a charity nominated by the contractor; and
- iii. a third breach of the Code (within a 12 month period) results in further donation of \$3000 payable to a charity nominated by the contractor.

Delivery vehicles can only access the mine during the allowable times except for safety or production related emergencies where both the Operations Manager and the Environment and Community Manager have approved the transport movement.

Dendrobium reserves the right to review the contractors' continued working association with the mine following any breaches of the Code.

### ***Car pooling***

Dendrobium employees and contractors are regularly encouraged to car pool by mine senior management, particularly during longwall change-outs or activities during which there are additional contractors on site, in order to reduce the number of cars traveling through the Mt Kembla residential areas.

### 5.2.2 Rail Traffic Management

All Dendrobium coal is transported from Mount Kembla via the Kemira Valley Coal Loading Facility and associated rail line. No coal will be transported by road. Measures are taken to ensure that the effects of rail traffic on the local communities associated with Dendrobium Mine are minimised.

Aspects that will be focused on, which are discussed in detail below, include:

- Night Time Restrictions;
- Train Cycle Restrictions; and
- Driver Awareness Training.

#### ***Night Time Restrictions***

The coal loading facilities at Kemira Valley have been designed to enable sufficient stockpiling of coal, so train movements are not normally required during the hours of 12 midnight and 6:00 am. This window will be reduced to 11:00pm to 6:00 am from 30 April 2010, unless otherwise agreed by the Director-General as per Schedule 4, Condition 23 of the Dendrobium Development Consent.

In the event that train movements are required outside of these hours the DECC will be notified as soon as practicable but within 24 hours. Notification will include a justification for the need for additional loading cycles.

#### ***Train Cycle Restrictions***

As outlined in EPL3241, the total number of train cycles may be exceeded on no more than two occasions per year, provided the total number of train loading cycles does not exceed six during the Night Shift period between 11.20pm and 7.20am.

In the event that train movements are required outside of these hours the DECC will be notified as soon as practicable but within 24 hours. Notification will include a justification for the need for additional loading cycles.

#### ***Driver Awareness Training***

All train drivers operating on the Kemira Valley Rail Line are required to undertake a driver awareness training package. This training package has been designed to ensure all drivers operate the trains in a way that minimises the potential impact to the local community.

### 5.3 Management Strategy Effectiveness

The management strategies discussed above are used to minimise the potential traffic issues relating to the Dendrobium operations. Dendrobium Mine will continue to research and where its is relevant to do so, develop and implement, traffic management and mitigation measures to ensure that traffic related issues are maintained at community acceptable levels.

## 6 MONITORING

### 6.1 Existing Traffic Monitoring Program

Traffic related issues associated with the Dendrobium operations will continue to be closely monitored to ensure that they are managed to an acceptable level. The ways in which traffic related issues are monitored at Dendrobium include:

- i. Drivers' Code of Conduct
- ii. Community Call Line

#### ***Drivers' Code of Conduct***

The Drivers' Code of Conduct is an integral part of the traffic management system for the Dendrobium operations. The monitoring of compliance against the Code occurs both internally (via Dendrobium employees) and externally (via the community call line – see below). Breaches of the Code of Conduct are followed up immediately with the contract company involved, via the process outlined in '*DENPL0001 Dendrobium Mine Drivers Code of Conduct*', to ensure follow-up incidents do not occur.

A spreadsheet is maintained which details when breaches of the Code of Conduct have occurred, the contractor involved and any follow-up correspondence with the contractor.

#### ***Community Call Line***

Traffic issues (both road and rail) related to the Dendrobium operations can also be identified by members of the local community. The 24 hour community call line allows the local community to provide feedback on these issues to Dendrobium personnel. Enquires/complaints received via the community call line will be followed up by the appropriate Dendrobium personnel via the process outlined in '*ICHP0112 Handling Community Complaints*'. Further detail on the community call line is provided in Section 8.

A spreadsheet is maintained detailing when traffic related complaints are received. This spreadsheet is reviewed on a regular basis to identify any trends.

### 6.2 Traffic Monitoring Program Review

The Traffic Monitoring Program will be reviewed on a triennial basis or when required.

## 7 REPORTING

### 7.1 Monitoring Data and Non-Conformances

All non-conformances to this TMP (i.e. breaches of the Code of Conduct etc) and community complaints are recorded in First Priority, a computer based incident recording and reporting system. This system keeps track of non-compliances, corrective actions, responsibilities, estimated and actual completions and reporting to Authorities and the community.

Reporting of traffic related issues and non-compliances with the Code of Conduct occur in a range of formats including:

- Internal Reporting (e.g. Monthly and Annual reports);
- Reports to Regulatory Agencies (e.g. annual Environmental Management Report); and
- Community Reports (e.g. BHP Billiton/Illawarra Coal annual Sustainability Reports, Dendrobium News and presentations to the Dendrobium Community Consultative Committee (DCCC)).

The Environmental Management Strategy contains further details of these reporting systems.

### 7.2 Notification of Potential Significant Traffic Events

In the event of a planned operational activity that has the potential to create significant traffic related issues (i.e. wide loads), one of the following notifications will occur prior to the event occurring:

- Notification of the planned activity to the community representatives on the DCCC either at the meeting prior to the event, or, in the case that a meeting is not scheduled close to the event, an email will be sent to the community representatives; or
- Notification of the planned activity to potentially affected residences via a letter box drop; or
- Notification of the planned activity to the local community via a Dendrobium newsletter.

Notification will include the scheduled date and approximate time of the traffic movement/s and a description of the traffic movement (i.e. piece of equipment etc).

### 7.3 Auditing

A system of HSEC auditing is undertaken on the Dendrobium Mine sites and includes the use of trained internal and external auditors. In addition auditing is undertaken to ensure compliance with the ISO14001 standard.

Dendrobium Mine has an independently certified Environmental Management System (EMS). The Illawarra Coal EMS Team meets on a regular basis to develop, implement and improve the EMS. An ongoing audit program is implemented in accordance with the following schedule:

Audit Type	Frequency
Internal – from other IC site	Every 6 months
External - independent	Every 12 months
ISO14001 Certification - independent	Every 3 years

All internal auditors are trained and certified as competent auditors by an independent and external provider.

The results of monitoring and auditing are regularly reported through the senior management team to ensure that action items are addressed.

## 8 COMPLAINTS RECORDING AND REPORTING

Dendrobium has a 24 hour, 7 day free call community hotline number (1800 000 510), advertised to the public via the DCCC and public notices such as the Dendrobium News, which provides a mechanism by which complaints and general enquiries regarding environmental or community issues associated with operational activities can be directed. All complaints (whether received via the hotline or directly to Dendrobium personnel) are documented and entered into First Priority (a data and document management program). After hours community complaints are immediately forwarded to the relevant Environment and Community representative for investigation and action.

Complaints will be handled via the procedures required by Section M4 of the EPL and explained in the Environmental Management Strategy. These involve the keeping of a legible record of all complaints showing:

- i. The date and time of the complaint
- ii. The method by which the complaint was received
- iii. The personal detail of the complainant which were provided by the complainant and if no details were provided a note to that effect
- iv. The nature of the complaint
- v. The action taken including any follow up contact
- vi. If no action is taken the reason why no action was taken.

The number and category (noise, traffic, dust, etc) of complaints are reported monthly to senior Mine Management and also during Community Consultative Committee meetings on a bi-monthly basis. A summary of complaints for the year is reported in the annual Environmental Management Report.

All aspects of the operation will be reviewed in the event of a significant increase in traffic related complaints to identify further improvements that can practically be implemented, with the goal being to achieve zero traffic related complaints received as a result of operational activities.

## 9 REFERENCES

Dendrobium Mine (2008) - *Dendrobium Drivers' Code of Conduct DENPL0001*

Department of Planning (2008) Notice of Modification – *Dendrobium Development Consent*

Department of Environment and Climate Change (2009) – *Environment Protection Licence 3241*