



# ASSESSMENT REPORT

## Proposed Modification - Dendrobium Coal Mine Coal Sizer

File No: S03/01444-34

### 1. BACKGROUND

The Dendrobium Coal Mine is operated by BHP Billiton Pty Ltd (the Applicant). The mine's pit top and coal loading facilities are located at two sites near Mount Kembla, about 20 kilometres west of Wollongong, in the Wollongong LGA. The mine's coal loading facilities are located in the Kemira Valley (see Figure 1).

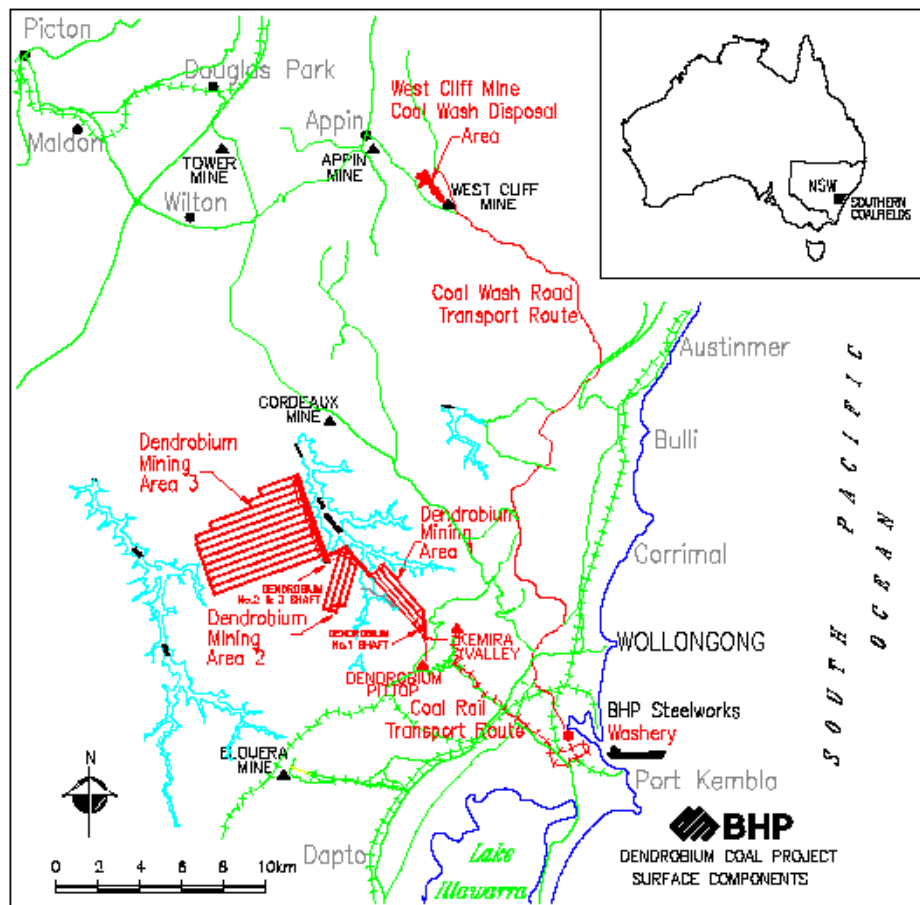


Figure 1: Regional Location of Dendrobium Coal Mine

The mine was approved by the then Minister, following a Commission of Inquiry, on 20 November 2001, and started construction and development of mining operations in early 2002. Longwall mining operations commenced in April 2005. Under the Minister's 2001 consent, the Applicant is allowed to:

- extract run-of-mine (ROM) coal using longwall and conventional underground mining methods at a rate of up to 5.2 million tonnes a year;
- construct and use surface facilities for the Dendrobium mine, including the Kemira Valley Coal Loading Facility;
- transport ROM coal by rail to the upgraded Dendrobium Coal Preparation Plant at the Port Kembla Steelworks site for processing; and
- transport and emplace coal rejects at the West Cliff colliery.

## 2. PROPOSAL

The Applicant is proposing to construct and operate an above-ground coal sizing (crushing) plant as part of the Dendrobium mine's coal clearance system within its existing surface facilities in the Kemira Valley at a location immediately east of the mine's portal.

The basic operational principle of the plant is to allow ROM coal of less than 200 mm in size to freely pass through, and only crush material greater than this size (see Figure 2). The Applicant estimates that 95% of all ROM coal would pass through and that only 5% would be crushed.

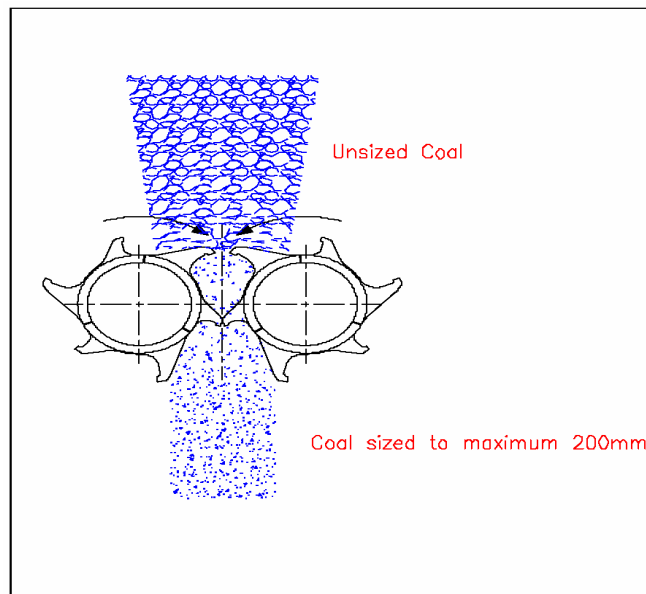


Figure 2: Internal Operation of the Proposed Sizer

Currently, ROM coal is transported by underground conveyor to the Kemira Valley Portal and then transported directly to the rill tower and stockpile at the Kemira Valley Coal Loading Facility (KVCLF). Under the proposal, ROM coal exiting the Portal would enter a transfer tower, pass through the sizer and then be returned to the conveyor before continuing to the KVCLF. There would be no change to any other aspect of the operation of the Dendrobium coal mine. The proposed general arrangement of the sizer and the transfer tower enclosing it is shown in Figure 3.

The Applicant previously lodged an application for the proposal in October 2004. The application was placed on exhibition, which led to 108 submissions, many requesting further environmental assessment of the proposal. The Applicant withdrew this initial application and undertook additional noise, air quality and social assessments and a more detailed assessment of alternative locations for the sizer.

On 29 March 2005, the Applicant lodged a second application (DA 60-03-2001-MOD 4) with the Department, seeking approval for the proposal under section 96(2) of the *Environmental Planning and Assessment Act 1979* (the Act). This is the current application. The Applicant has submitted a Statement of Environmental Effects (SEE) assessing the potential environmental impacts of the proposal.

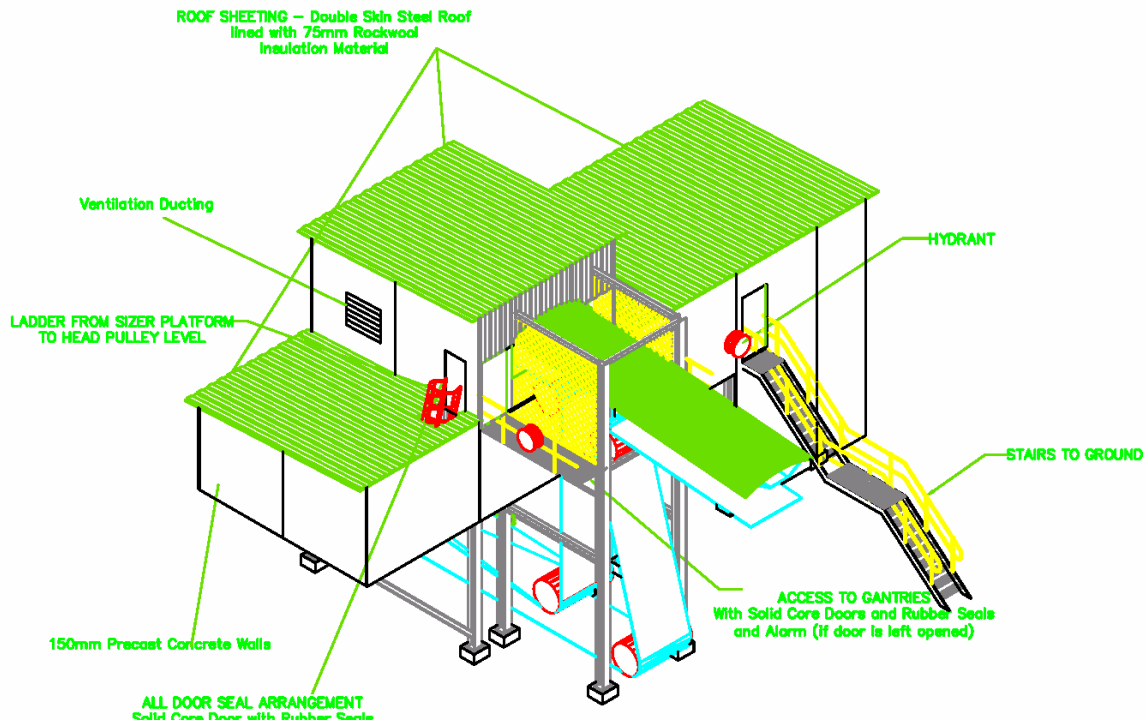


Figure 3: General Layout of Transfer Tower Enclosing Sizer

### 3. STATUTORY CONTEXT

#### Permissibility

The land subject to the application is entirely within the Wollongong LGA and is zoned 1 Non-Urban under the Wollongong Local Environmental Plan 1990. Mining is permissible with development consent in this zone.

#### Consent Authority

The Minister was the consent authority for the original development application (DA) for the Dendrobium mine, and is therefore the consent authority for this application to modify the consent.

## Section 96(2)

Under Section 96(2) of the EP&A Act, a consent authority may modify a development consent if it is satisfied that the “*development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all)*”.

The Department is satisfied that the mine with the sizer is substantially the same as the originally approved development for the Dendrobium mine. The development was and remains an underground coal mine extracting coal by longwall methods. Its pit top and coal handling facilities remain at their existing locations. The coal sizer is a small addition to the coal handling chain which is located within the existing footprint of the KVCLF.

### 3. CONSULTATION

The Department exhibited the current application between 31 March and 20 April 2005, and gave public and agency notice of the application in accordance with the requirements for public participation in the *Environmental Planning and Assessment Regulation 2000*.

During the exhibition period, the Department received 66 submissions on the proposal, being:

- 61 from the general public;
- 1 from a special interest group (Mount Kembla Progress Association); and
- 4 from government agencies.

All submissions from the general public and the special interest group were opposed to the proposal. The issues raised in these submissions are shown in Table 1.

Issue Raised	Number of Submissions
Noise impacts	56
Crusher should be located underground	52
Dust impacts	48
Poor response by Applicant to past complaints	43
Lifestyle and amenity impacts	36
Traffic impacts	32
Incorrect description as a “sizer” of what is in fact a crusher	15
Poor performance of the Department in exhibition of the proposal and ensuring compliance of Applicant with consent	11
Proposal fails the threshold test for a modification of consent	10
Health/stress	8
Other	6
Cost analysis of alternatives is flawed	5
Visual impacts	1

Table 1: Issues Raised in Public Submissions

In respect of agency submissions, the **Department of Primary Industries** supported the proposal, suggesting that it would result in a more efficient recovery of the coal resource.

The **Department of Environment and Conservation** indicated that the proposal will not require a variation to the environmental protection licence already held by the Applicant. Should the proposal be approved, the Applicant would be required to meet the existing criteria of the mine's environmental protection licence for both construction activities and operations, including stormwater, dust and, in particular noise.

The **Sydney Catchment Authority** indicated that the proposal was not located within its area of responsibility and that it therefore had no comments.

The **Wollongong City Council** expressed support for community concerns over locating the sizer above-ground at the Kemira Valley Portal. However, the Council did not oppose the proposal, instead encouraging the Applicant to take "every measure" to prevent noise, dust and traffic impacts from the sizer on the surrounding community. The Council also proposed that the sizer's noise, traffic, air quality and visual impacts be subject to the relevant conditions of consent for the Dendrobium mine itself, and that the mine's relevant environmental management plans be amended to manage and mitigate the adverse environmental impacts associated with the sizer's construction or operation.

#### **4. SECTION 79C ASSESSMENT**

Under section 96(3) of the Act, the consent authority must take into account "such of the matters referred to in section 79C(1) as are of relevance to the development the subject of the application (to modify the consent)".

##### **4.1 Environmental Planning Instruments**

The Department is satisfied that the proposal is consistent with the aims, objectives and relevant provisions of the Wollongong LEP. The Department is also satisfied that other potentially relevant planning instruments (eg State Environmental Planning Policies 11, 33, 44 and 55) are not applicable to the proposal (see attachment 1).

##### **4.2 Need for the Proposal and its Proposed Location**

A number of submissions suggested that the need for the proposed sizer should have been foreseen by the Applicant and included in its original DA. It seems apparent that if the need for the sizer had been foreseen, then it would have been included in the original DA, rather than incur the additional costs and delays associated with the current application.

The SEE also indicates that "slabbing" of the floor material beneath the Wongawilli Seam was not predicted during project planning and has only become apparent during project development. These slabs of stone are picked up by the longwall cutter and are travelling intact through the coal transfer system, leading to coal flow problems at both the KVCLF and the Dendrobium Coal Preparation Plant at Port Kembla. Further, the SEE indicates that it is expected that there will be additional slabbing of the roof material above the coal seam when the mine extends beneath the existing Mount Kembla workings. This has been confirmed in additional correspondence dated 12 May 2005 from the Applicant and an attached consultant's report. It is apparent that there is a substantial increased risk of slabbing beneath the Mount Kembla workings. In addition, there are safety problems associated with manual clearance of these large rock slabs from chutes and conveyors.

The Department considers that there is no reason to question the need for the proposal. Whether or not the need could have been foreseen earlier is not material to the assessment.

**a) Potential to Locate Sizer Underground**

Many submissions also suggested that the sizer should be located underground. Four options to accommodate these suggestions were examined by the Applicant, including two options put forward by the Dendrobium Community Consultative Committee. Other surface options were also considered, including locating the sizer at the coal preparation plant at Port Kembla, or else excavating the Kemira Portal sufficiently so as to enclose the sizer within it. A number of key facts concerning the eight underground and surface options examined, including the favoured option proposed by the Applicant, are set out in Table 2.

<b>Option</b>	<b>Projected Cost</b>	<b>Construction Period</b>	<b>Mine Shutdown</b>	<b>Mine Safety Issues</b>
Underground Option A	N/A	N/A	c. 34 weeks	Significant
Underground Option B	\$21.35 m	36 weeks	16 weeks	Some
Underground Option C	\$25.67 m	??	18 weeks	Significant
Underground Option D	\$37.80 m	42 weeks	c. 26 weeks	Some
Surface Option (enlarge Kemira Portal)	\$35.58 m	??	40 weeks	N/A
Port Kembla upgrade option 1	\$29.0 m	24 months	Nil	N/A
Port Kembla upgrade option 1	\$20.0 m	15 months	Nil	N/A
<b>Surface Option (Applicant's Proposal)</b>	\$3.19 m	25 weeks	1 week	N/A

*Table 2: Comparisons between Underground and Surface Options for Sizer – Key Facts*

Because of significant mine safety issues, the costs and construction periods for Underground Options A and C were not considered in detail by the Applicant and its consultants. The best available underground option results in costs of around \$21.4 million, a projected construction period of 36 weeks and a projected mine shutdown period of 16 weeks (the cost of which is included in the overall cost estimate). In addition, it leads to a number of mine safety issues (including a risk of water inrush associated with breach of overlying workings by shot-firing or weakening of roof strata), construction difficulties around existing below-ground infrastructure, and additional traffic along Cordeaux Road, which passes through Mount Kembla Village and past the school grounds.

In response to submissions received, the Department requested the Applicant to provide further advice concerning the need for the sizer and the reasons why an underground option was not appropriate. The Applicant responded in correspondence dated 12 May 2005.

Based on all available evidence, the Department accepts that the Applicant's proposal is the best available option. Benefits associated with locating the sizer in the Kemira Valley include:

- construction is relatively simple, with only minor civil works
- avoidance of significant occupational health and safety concerns associated with underground construction;
- lessening of additional construction traffic flow and noise in Mount Kembla Village and past the school, and reduction in traffic along Cordeaux Road associated with the underground options; and
- timeframe and cost of construction is markedly lower, with the least downtime for the mine.

### 4.3 Environmental Impacts

Because the proposal is located close to suburban residential areas with the possibility of a number of impacts (particularly during the construction phase), the Department has carefully assessed all potential impacts of the proposal.

#### **a) Operational Noise Impacts**

The Applicant proposes to enclose the sizer within external walls of 150 mm concrete panels and a roof of double skin steel lined with 75 mm of rockwool acoustic insulation. All doors would be fitted with self-closing actuators and seals to minimise noise leakage from the building.

The SEE included two Noise Impact Assessments of the proposal: one undertaken by Hatch Associates Pty Limited (Hatch) in September 2004, and one by Richard Heggie Associates Pty Ltd (RHA) in January 2005. The RHA assessment was undertaken to provide a peer review of the initial assessment by Hatch, and to address issues raised during the exhibition of the initial proposal in 2004. The RHA assessment included field noise measurements obtained from an identical sizer operating at a similar capacity, and treating a similar proportion of coal and rock, to that proposed for the Dendrobium mine.

Both assessments identified that the proposal's most-limiting noise criterion would be to not cause an exceedance of 35 dB(A)  $L_{eq(15 \text{ minute})}$  at the nearest residential receiver during evening and night hours. Both assessments calculated that if the contributed noise level from the proposal was to be less than a  $L_{eq(15 \text{ minute})}$  level of 25 dB(A), the proposal would not contribute to measured noise levels at any residence.

RHA used acoustic modelling, in accordance with DEC's *Industrial Noise Policy* (INP), to predict noise levels at selected nearby residential receivers. The modelled noise levels are shown in Table 3. These noise levels are for adverse meteorological conditions, ie conditions that are likely to enhance the noise levels received at the nominated residences and so represent a "worst-case scenario" for all but the most exceptional meteorological conditions. The most affected selected residential receivers are R2, R3 and R14. The location of all selected receivers is shown in Figure 4.

Receiver	Receiver Identification	Temperature Inversion and 2 m/s Wind
R1	O'Briens Road top	-7 dBA
R2	Figtree Farm	15 dBA
R3	House on Creek	16 dBA
R4	8 William James Drive	-10 dBA
R5	House East of Stones Road	0 dBA
R6	House 200 m S of Cordeaux Road	-3 dBA
R7	House 150 m of Cordeaux Road S of Site	0 dBA
R8	Eagle's View	-12 dBA
R9	Araluen high side	-10 dBA
R10	House 150 m S of Araluen	-11 dBA
R11	House on hill West of Site	-4 dBA
R12	House on Harry Graham Drive, NW	3 dBA
R13	Ashmount Farm	11 dBA
R14	House on Nat Gas pipeline SE of Site	15 dBA

Table 3: Predicted Noise Levels at Residential Receivers under Adverse Conditions

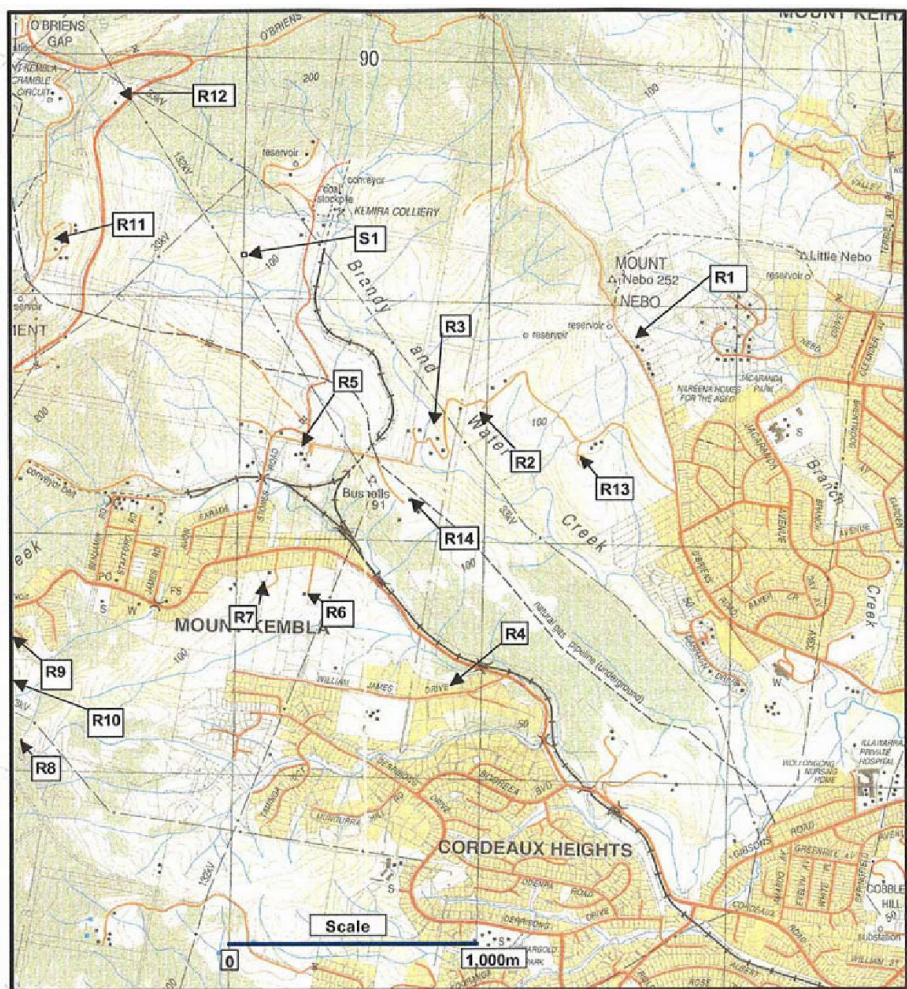


Figure 4: SEE's Noise Assessment – Representative Receiver Locations<sup>1</sup>

<sup>1</sup> It should be noted that noise receiver locations and numbers in the SEE are not the same as in the 2001 Dendrobium EIS. Only two locations near the KVCLF were modelled in the EIS and are referenced in the existing consent. These were the EIS's receivers R2 and R39. R39 is Ashmount Farm (R13 in the SEE and close to the SEE's R2 (Figtree Farm) and R3 (house on creek)). The EIS's R2 (4 Stones Rd) was not modelled in the SEE, but is reasonably close to the SEE's R5.

The predicted noise levels from the proposal are all well within the noise criteria established by both Hatch and RHA, using the INP. The most affected residence is predicted to be R3, which is expected to receive noise levels of 16 dB(A) from the proposal. This is 9 dB(A) lower than the 25 dB(A) criterion. This means that noise levels generated by the sizer would need to be significantly greater than predicted before its operation would influence received noise levels at any residential receiver. The Applicant has also indicated that the proposal may reduce noise in the Kemira Valley through to it preventing oversized material from entering the rill tower.

The Department believes that the Applicant should implement all of the noise mitigation measures associated with the full enclosure of the sizer equipment that it has outlined in the SEE. The noise impact assessments indicate that, should this be done, there will be no noise-related impact on any receiver associated with the sizer's operation.

The Department has recommended that the conditions of consent be modified to clarify the application of all noise criteria (including acquisition criteria) at all dwellings. The previous wording could have been read to imply that the criteria only apply at the modelled receiver locations (ie the consent's R2 and R39).

The Department considers that the noise monitoring program for the KVCLF and sizer should include measurements that enable the contribution of the company's activities to be identified, and its contribution to received noise levels to be established for all receivers nominated in the consent. Conditions are therefore recommended requiring the Applicant to revise the mine's Noise Management Plan and Noise Monitoring Program.

The Department has recently completed a Compliance Audit of the mine (DoP, February 2006). This audit has identified a number of non-compliances associated with noise emissions from the KVCLF and required actions in consequence. It has also identified a number of observations of concern and actions to address these. Conditions are also recommended requiring implementation of the audit.

The matters identified in the audit are significant but it is considered that they are unlikely to be exacerbated by installation of the sizer. The appropriate means of addressing these matters is via implementation of the audit's required and recommended actions, the review of the mine's Noise Management Plan and Monitoring Program, and ongoing use of the Department's and DEC audit and compliance processes, rather than refusal of the coal sizer proposal.

#### ***b) Construction Noise Impacts***

The Applicant proposes to construct the sizer in 3 main stages, over a period of 25 weeks, in a manner that would allow the existing coal clearance system to continue to operate. Construction activities are proposed to be undertaken for no more than 5½ days per week, except during the last week of the 25 week period.

Construction activities would be similar to those involved with the construction of the KVCLF, only on a reduced scale. They would include minor earthworks for foundations, concrete deliveries for installation of foundations, erection of steelworks, cranes for the installation of steelwork and equipment and the transport of workers and material to the site. The proposed construction schedule is shown in Table 4.

Stage	Description	Approximate Duration	Work Hours
Stage 1	Preparation of the work area.	10 weeks.	7 am to 5 pm Monday to Friday, and 8 am to 1 pm Saturday.
Stage 2	Scaffolding, footings and pre-installation of structural steel and gantries.	14 weeks.	7 am to 5 pm Monday to Friday (6 am start for work crews only). 8 am to 1 pm Saturday.
Stage 3	Change-over and commissioning – Involves cutting conveyor and feeding through the tripper drive, then re-joining the conveyor. Temporary lighting needs to be installed and used.	1 week.	24 hours for 5 days.

*Table 4: Sizer Construction Schedule*

The Applicant has not provided any prediction of construction noise levels likely to be received at nearby residences, only stating in the SEE; “*It is considered that traffic and construction noise can be managed to be acceptable and achieve the construction noise objectives at residential receivers*”. The relevant construction noise objectives referred to are noise limits contained in the existing consent for Dendrobium Mine, concerning the construction of the KVCLF. These are sound levels  $L_{A10(15\text{minute})}$  of 37 dB(A) at the consent’s R39 and 42 dB(A) at the consent’s R2 (see cdn 6.4.1 (f)). These are the same objectives as apply for normal mine operations during daytime (see cdn 6.4.1(a) Table 3). The Department believes that construction noise for the sizer can generally be managed to meet these daytime limits.

The construction noise limits in the consent do not allow construction to be undertaken prior to 7 am or after 6 pm, Monday to Friday. Accordingly, the Department agrees with the Applicant’s proposal that general construction of the sizer should not take place prior to 7 am. However, the Department believes that there are strong reasons relating to the efficient operation of the coal mine itself to minimise the extent of Stage 3 of construction, and therefore supports the Applicant’s proposal that construction activities occur for up to 24 hrs a day for a single period of 5 days. This single period of continuous activity should be confined to Monday to Friday, if at all possible. The Applicant should continue to meet the existing operational noise criteria for all construction during Stage 3 which takes place outside daytime hours. The Department also believes it is appropriate for work crews to undertake limited activities from 6 am Monday to Friday during Stage 2 of construction, such as the isolation of the conveyor system in preparation for construction activities, providing that the relevant operational noise criteria continue to be achieved. In each case, the relevant limiting criteria are  $L_{eq(15\text{minute})}$  sound levels of 35 dB(A) between 6 pm and 7 am in the vicinity of the consent’s R39 and 38 dB(A) between 10 pm and 7 am in the vicinity of the consent’s R2 (cdn 6.4.1 (a) Table 3).

Conditions of consent are recommended which will require the Applicant to meet existing operational noise criteria during the construction of the sizer. Stage 3 construction activities would be limited to a single period of 5 days (Monday to Friday), but with the ability for the Director-General to extend this period for a total of up to a further five days in the case of inclement weather or other serious disruption to completion of major activities. During both Stage 2 and Stage 3 construction, current operational noise criteria will apply for all construction activities.

### ***c) Dust and other Air Quality Impacts***

The Applicant proposes to control emissions of coal dust at the sizer through the following means:

- enclosing the sizer's feeding chute within the building, preventing dust generation associated with wind;
- installing water spray bars on the sizer's entry and exit conveyor systems;
- preventing dust emissions from the throat of the transfer chutes at the entry and exit points through the use of coffin seals;
- installing ventilation fans within the building housing the sizer, creating a negative pressure compared with the atmosphere outside;
- supporting this negative pressure by the sealing of joints within the building and fitting all doors with self-closing actuators and seals; and
- de-dusting exhaust air from the ventilation fans prior to release to the atmosphere.

Holmes Air Sciences assessed the potential air quality impacts of the proposal. The assessment concluded that emissions of coal dust from the sizer would be very small, and after taking account of the fact that the sizer would be enclosed and under negative pressure, will be so small as to ensure no impacts would occur even in its immediate vicinity. The Department agrees with the conclusion of the air quality assessment.

In regard to the proposal, the Department recommends that the Applicant be required to implement the air quality control measures set out in the SEE. It is also recommended that the consent be modified to ensure that current PM<sub>10</sub> standards become mandatory goals for the mine. The current consent merely establishes a monitoring and reporting protocol for PM<sub>10</sub>, and uses standards which are no longer current.

The Department's recent Compliance Audit has identified a significant non-compliance associated with dust emissions from the KVCLF and required actions in consequence. It has also identified a number of observations of concern and resulting recommended actions.

The mine is also subject to a current Pollution Reduction Program to review its dust monitoring network (PRP 9) required by the DEC.

The matters identified in the audit are significant but are unlikely to be exacerbated by installation of the sizer. The appropriate means of addressing these matters is via implementation of the audit's required and recommended actions, implementation of PRP 9, the consequent review of the mine's Air Quality Management Plan, and ongoing use of the Department's and DEC audit and compliance processes.

### ***d) Traffic Impacts***

There would be no noticeable traffic impacts associated with operation of the sizer. However, construction activities associated with the proposal would cause temporary increases in traffic flows on Cordeaux and Stones Roads. The Applicant has estimated the increase in traffic from the construction of the sizer and compared these estimates to traffic data obtained during the main construction phase of the KVCLF in 2002.

The maximum weekday construction traffic flow on Stones Road in 2002 was 267 vehicle movements (average 189 vehicle movements) and for Saturdays was 96 vehicle movements (average 67 vehicle movements). During this period, local traffic on Stones Road averaged 115 vehicle movements on weekdays and 77 on Saturdays.

The Applicant estimates that the proposal would generate a maximum average of 47 vehicle movements on Stones Road on weekdays (during Stage 3), and 20 vehicle movements on Saturdays (during Stage 2). This is only about 25-30% of the traffic volumes generated during the construction of the KVCLF.

The Department believes that, while the impacts of traffic associated with the construction of the KVCLF generated complaints from several local residents, the lower volume of traffic associated with the proposal would cause less inconvenience and traffic noise to local residents than during construction in 2002.

The Applicant has also developed and implemented a transport protocol for the Dendrobium Mine which includes a Drivers' Code of Conduct for the use of roads in the village of Mount Kembla. Several submissions indicated that not all drivers associated with Dendrobium Mine had adhered to the Drivers' Code of Conduct. The Department's recent Compliance Audit confirmed this, with between 1 – 8 breaches per month recorded from April to August 2005.

The Department is satisfied that the Applicant has a generally sound system to minimise traffic impacts and noise during the construction period. However, the Compliance Audit identified two traffic-related non-compliances, additional traffic-related observations of concern and a number of required and recommended actions in consequence. The Department is satisfied that the current conditions of consent, in conjunction with the audit's required and recommended actions, provide measures to control and minimise the residual traffic impacts of the proposal.

#### ***e) Visual Impacts***

The Applicant provided a series of photographic montages of the proposed sizer taken from public viewing points (Figures 7-9 of the SEE). The montages demonstrate that the building enclosing the proposed sizer, if painted a colour that blends in with the surrounding environment, would not have a significant impact from public viewing points. Additionally, the Applicant has undertaken to plant trees at locations that would reduce visual impacts from public viewing points on Stones Road.

The Department is satisfied that the proposal would have only minor visual impacts and that these impacts can be reduced to very low levels by the measures proposed by the Applicant.

#### ***f) Other Lifestyle and Amenity Impacts***

The Department considers that there are no significant lifestyle and amenity impacts associated with construction or operation of the sizer in addition to those already considered above in regards to operational and construction noise, dust and air quality, traffic and visual impacts.

### **4.4 Other issues**

#### ***a) Poor Response by Applicant to Past Complaints***

A number of submissions suggested that the Applicant had made inadequate responses to previous complaints by community members. These concerns were expressed in regard to traffic movements, noise and dust emissions, enforcement of the Drivers' Code of Conduct and the community complaints process. These matters were addressed in a community meeting held in Kembla Heights on 18 May 2005. The Applicant has since provided advice to the Department on actions either taken or under consideration to provide improvements regarding each of these issues.

The Department's recent Compliance Audit has identified a non-compliance associated with delays in reporting community complaints to the Department and other relevant agencies and required actions in consequence. It has also identified a number of observations of concern and resulting recommended actions.

The matters identified in the audit are noted but are unlikely to be exacerbated by installation of the sizer. The appropriate means of addressing these matters is via implementation of the audit's required and recommended actions, continued review by the mine's Community Consultative Committee, and ongoing use of the Department's audit and compliance processes.

#### ***b) Suitability of the Site***

The site is part of the existing surface infrastructure for the Dendrobium mine, adjacent to the KVCLF and located on company-owned land with a substantial buffer distance to surrounding residential areas. Alternatives to the proposed site have been fully canvassed by the Applicant and are discussed in section 4.2 above.

The Department believes that the site is suitable and appropriate for the proposal.

#### ***c) Public Interest***

The Department believes the proposal is in the public interest for a number of reasons. These include that the proposal will lead to:

- improved efficiency in operating the Dendrobium mine and the associated coal clearance system to the coal preparation plant at Port Kembla;
- improved level of safety for workers in the coal clearance system when compared to existing operational circumstances;
- avoidance of significant occupational health and safety concerns associated with underground construction;
- lessening of additional construction traffic flow and noise in Mount Kembla Village and past the school, and reduction in traffic along Cordeaux Road associated with the underground options; and
- less downtime for the mine, leading to better employment outcomes for workers and improved mine profitability.

The Applicant has revised its initial proposal in order to markedly reduce potential dust and operational noise impacts on residents. The proposal will not cause significant environmental impacts and will help ensure the financial viability of the Dendrobium mine, which offers ongoing employment for up to 300 people, and generates export revenue and royalties for NSW.

#### ***d) Updating and Clarifying the Consent***

Consideration of the application to modify the consent has provided the opportunity to update or clarify a number of conditions of the consent. The recommended changes:

- update references to various government agencies;
- ensure that all conditions which apply to the KVCLF also apply to the coal sizer;
- ensure that the applicant is required to "implement" all management plans;
- ensure that the mine's management plans are applied to the development as modified;
- clarify the wording of a number of conditions relating to noise (6.4.1(a) intrusive noise criteria, 6.4.1(b)&(h) noise acquisition criteria, 6.4.1(f) construction noise and 6.4.1(a) sleep disturbance); and
- correct a number of typographical errors (in conditions 3.2(d), 6.1(d), 6.3, 6.4.1 and 6.4.3(c)).

## 5. CONCLUSION

The proposal will have minimal impacts on the surrounding environment and local residential amenity. Most environmental impacts are predicted to be lower than similar impacts experienced during the construction of the KVCLF in 2002.

The proposed mining activities can be effectively managed through the recommended consent conditions and the review of existing management plans to include additional monitoring requirements. The proposal is consistent with State and regional planning objectives.

Overall, it is concluded that the improved, efficient and safe operation of the mine's coal clearance system associated with construction and operation of the sizer will generate social and economic benefits that significantly outweigh the minimal residual impacts of the proposal.

## 6. RECOMMENDATION

It is recommended that the Minister:

- consider this assessment report;
- determine that the development to which the consent as modified relates is substantially the same as the development for which consent was originally granted;
- approve the proposal under section 96(2) of the Act; and
- sign the attached notice of modification (see Tag A).

David Kitto  
**A/Director**  
**Major Development Assessment**

Chris Wilson  
**A/Executive Director**