

**Wesfarmers Premier Coal Mine, Collie
Noise Regulation 17 Variation**

Wesfarmers Premier Coal Ltd

**Report and Recommendations of the
Environmental Protection Authority**

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Summary and Recommendations

Introduction

Wesfarmers Premier Coal Ltd applied on 29 January 1998 to the Minister for the Environment under regulation 17 of the *Environmental Protection (Noise) Regulations 1997*, for approval to vary from the prescribed standard, in relation to noise emissions from its Premier Coal Mine at Buckingham, near Collie.

The basis of the application is that it is not practicable for the noise emissions to meet the prescribed standards, neither is it practicable to meet the noise levels set in the Ministerial Statement of 1993 following the EPA assessment of the proposed mine expansion in 1992. This is primarily as a result of the need to operate on a 24-hour basis and the effects of meteorological conditions – especially temperature inversions occurring at night in the winter months – on sound propagation from the mine site.

Wesfarmers Premier Coal Ltd needs noise regulation 17 approval in order to be able to operate within the prescribed standards for noise under the Environmental Protection Act, and is willing to provide ameliorative measures to the residents of the Buckingham townsite, who are impacted by the noise emissions.

The application was referred by the Minister to the Environmental Protection Authority (EPA) for assessment as required under noise regulation 17 (2). Where the EPA is of the view that noise emissions will vary from a prescribed standard in the noise regulations, the EPA is to inform the Minister, assess the application, and report to the Minister. This report provides the EPA's advice and recommendations, as required by noise regulation 17(3)(b).

EPA Advice

Through this assessment the EPA has formed the view that –

- the current noise emission levels are likely to exceed both the levels set in the (amended) Ministerial Statement and the prescribed standard in the regulations, when determined at the nearby Buckingham townsite;
- while noise reduction measures have been implemented, particularly in terms of purchase of quieter plant, the nature and effect of the prevailing meteorological conditions on sound propagation means it is unlikely to be reasonably practicable for Wesfarmers Premier Coal to achieve compliance with the prescribed standard; and
- a financial package offered by Wesfarmers Premier Coal to the affected residents in Buckingham is capable of providing some escape or complete escape from the noise, in amelioration of the noise impacts on existing residents.

Recommendations

The EPA recommends that a variation to the prescribed standard in the noise regulations be granted in accordance with the attached preliminary drafting instructions. (See Appendix B).

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1. Introduction and Background

Wesfarmers Premier Coal Ltd (WPC) – formerly Western Collieries Ltd – is a part of the Wesfarmers Energy Group of Wesfarmers Limited. WPC operates the Premier Mine 10km east of Collie and provides fuel for the States' southwest integrated electricity grid. Operating both open cut and underground mines for many years, the Premier operation is now one large open cut mine with reserves to operate beyond 2030.

The Premier Mine produces coal in two district pits, 1 and 4, from the Premier and Muja Members. Overburden removal is carried out at a rate of almost 26 million bank cubic metres per year, using large P&H electric shovels and 240-tonne haul trucks. Coal is mined at a rate of 3.3 million tonnes of coal per year using Hitachi 2500 excavators, and passed through a crushing and screening plant prior to blending on stockpiles using a rail mounted Stacker - Reclaimer system. Coal is delivered to local power station customers by overland conveyor and to distant customers by rail or truck.

Western Collieries Ltd received approval to develop the Premier coal mine on 2 April 1992. The Environmental Protection Authority (EPA) subsequently recommended changes to the Environmental Conditions, and the Conditions were amended through the Minister's *Statement to Amend Conditions Applying to a Proposal – Premier Coal Mine Expansion, Collie* (Statement 310) which was published on 5 April 1993.

The amended Conditions required the proponent to meet $L_{A10, 1 \text{ hour}}$ noise levels of 40 dB(A) at night, 45 dB(A) during evenings and on Sundays and public holidays, and 50 dB(A) during the day, when measured at any noise-sensitive premises (See Appendix A1). (An $L_{A10, 1 \text{ hour}}$ noise level is a level that must not be exceeded for more than 10% of a 1-hour period). These levels were set in anticipation of the new noise regulations. The *Environmental Protection (Noise) Regulations 1997*, however, brought in a prescribed standard for noise in which the assigned $L_{A 10}$ noise levels were generally 5 dB(A) lower than those in the amended Conditions (See Appendix A2).

The Conditions also required the proponent to develop a noise management strategy involving relocation of nearby residents where compliance with the noise limits could not be achieved. In the early years, attention was focussed on the Shotts townsite, being the nearest occupied area, and over a period of time all the properties were acquired and residents relocated.

The only other affected area is the Buckingham townsite, which now has five residences, all situated some 1.1 – 2km from the nearest point of mining operations. The easternmost end of the mining operations will be at its closest to the residences over the next few years, after which time the operations will progressively move away to the north.

The Buckingham residences are not on coal, and the residents have generally expressed a desire to remain in the townsite. Noise levels in Buckingham decreased a few years ago with the closure of the nearby Chicken Creek Mine. Residents have, however, complained about noise from the Premier Mine, particularly in relation to noise at night during the winter months when temperature inversions are prevalent.

2. The Application

Noise regulation 17 provides that “where a person is of the opinion that he or she cannot reasonably or practicably comply with a standard prescribed under these regulations ... that person may apply to the Minister for approval to allow the emission of noise in that case to exceed or vary from the standard.”

WPC has applied to the Minister for the Environment for an Approval pursuant to noise regulation 17 to enable it to vary its noise levels from the prescribed standard in the noise regulations. In accordance with noise regulation 17, the Minister has referred the application for variation to the EPA for assessment.

The basis of the application is that, while WPC is committed to operating the Premier Mine at best practice in terms of noise emissions, it cannot reasonably and practicably comply with the prescribed standard in the noise regulations, principally as a consequence of the effect of meteorological conditions on sound propagation. In recognition of the wishes of residents who would rather remain in Buckingham than be relocated, WPC has indicated its willingness to provide for ameliorative measures which would assist the residents in dealing with the noise impacts.

3. Noise Management

3.1 Noise emission levels

The EPA notes that the Department of Environmental Protection (DEP) has undertaken an extensive evaluation of the noise emissions from the Premier Mine, both through its own monitoring and through analysis of the data from the WPC noise monitor located in Buckingham. There have been difficulties in interpreting the data to distinguish mining noise from weather and fauna. Further, the noise from mining operations may be influenced by other operations in the area.

The DEP has accepted a detailed summary of monitoring results from WPC site in Buckingham, for the 12-month period ending October 2001. These results have been broken down into the following source categories –

- *Fauna* (typified by a significant increase in noise levels at the “dawn chorus” time when there is no change in mining operations);
- *Weather* (average wind speed for the hour exceeds 15km/h or rainfall exceeds 0.5mm);
- *Inversion* (temperature inversion present); or
- *Industry* (combined noise likely to result from mining operations or traffic in the area)

From the above, noise which was identified as *Inversion* or *Industry* was deemed to be, for the purposes of this assessment, dominated by and attributable to the Premier Mine. It should also be recognised that, in the absence of noise emissions from the Premier Mine, there would still be exceedances categorised as *Inversion* or *Industry* due to other mining operations.

Table 1 summarises the extent of exceedance of the Ministerial Conditions for the night time periods (10pm - 7am) for the four seasons for which monitoring data was provided.

Table 1: Exceedance of Ministerial Conditions – Night time

Noise source	Percentage of night time hours for which Ministerial Condition level of 40dB _{L_{A10}} was exceeded at Buckingham townsite (%)				
	Summer	Autumn	Winter	Spring	Average
<i>Fauna</i>	14	7	0	13	9
<i>Weather</i>	24	11	13	19	17
<i>Inversion</i>	0	12	36	16	16
<i>Industry</i>	18	21	23	27	22
Total <i>Inv + Ind</i>	18	33	59	43	38

The above exceedance data indicates that, while many of the recorded exceedances are due to non-mine sources (*Fauna* and *Weather*), there are significant percentages of the night time hours when exceedances of the Ministerial Conditions can be attributed to mining (*Inversion* and *Industry*). The impact of temperature inversions is concentrated in the winter months, while the *Industry* data are distributed across the seasons. The exceedance percentages are smaller during the evenings and are very small during the day.

It should be noted that, as the noise regulation limits are generally 5dB lower than those in the Ministerial Conditions, the duration of exceedances over the current regulations would be greater than the percentages shown above for the Ministerial Conditions.

The extent of exceedances above the Ministerial Conditions can be estimated by combining the *Inversion* and *Industry* data in the 5dB ranges for which it was presented, for the Day, Evening and Night periods, as shown in Table 2 below.

Table 2: Extent to which Ministerial Conditions are exceeded by mining operations

Time of day	Extent of exceedance (dB)	Percentage of hours and extent for which Ministerial Condition level was exceeded at Buckingham townsite due to <i>Inversions</i> and <i>Industry</i> (%)				
		Summer	Autumn	Winter	Spring	Average
Day	0 - 5	0	0.5	1	0	0
Evening	0 - 5	1	13	21	12	12
	6 - 10	0	0	1	0	0
	Total	1	13	22	12	12
Night	0 - 5	11	16	34	21	21
	6 - 10	7	16	23	21	17
	11 - 15	0	1	1	2	1
	Total	18	33	59	43	38

Note: Some columns do not add up due to rounding errors.

The extent of the exceedances is considered to be significant, indicating that achieving full compliance under all conditions, with either the Ministerial Conditions or the regulations, will be difficult.

3.2 Noise reduction

The EPA would normally only recommend approval of a regulation 17 application in cases where the applicant demonstrated that they could not reasonably or practicably comply with the prescribed standard.

Wesfarmers Premier Coal has implemented some noise reduction measures and investigated others over the years, and is of the view that all practicable measures have been implemented.

The main noise reduction method has been the purchase of quieter haul trucks, resulting in reductions of up to 11dB(A) when measured using a stationary test. The EPA notes that noise levels measured in stationary tests will be different to the levels emitted during operation under load. However, the stationary test results do provide an indication that some meaningful noise reductions have been achieved, and further reductions may be achieved as new items are purchased in future. It is noted that noise reductions were also achieved through the replacement of hydraulic excavators with quieter electric shovels.

WPC also investigated applying modifications to the trucks to reduce noise emissions, but as the effectiveness of the treatment and the maintenance of vehicle performance could not be guaranteed, elected to continue with the fleet replacement program.

Consideration was given to construction of a large earth bund to act as a noise barrier. Apart from its visual impacts, such a barrier would need to be moved several times during mining operations, and its acoustical performance would be limited during temperature inversions, when sound would bend downwards over the barrier.

The EPA considers that, while the above two measures may not be practicable at this time, they should not be discarded, and should be reviewed at various stages in the future to determine whether further noise reductions can be practicably achieved.

At this time, it is the EPA's view that WPC have implemented reasonably practicable measures and cannot practicably comply with the noise regulations or with the Ministerial Conditions.

4. Consultation

There are five existing occupied, habitable dwellings in the Buckingham townsite which are not owned by WPC. WPC has held discussions with the residents over the years with regard to the provision of acoustic treatment to the houses as an ameliorative measure. The rationale for this measure is that the major noise impacts occur at night time during the winter, when residents would be indoors with windows closed. However, the lightweight construction of most of these houses would make acoustical treatment difficult and expensive. While some residents have expressed interest in acoustic treatment, a range of other potential ameliorative options has emerged from these discussions.

A meeting was held in September 2002 between the DEP and the five residents of the Buckingham townsite. It was also attended by a Buckingham landowner who currently

resides in Collie. The residents and landowner indicated their individual preferences for ameliorative measures, and expressed a strong desire to be recompensed equally, to an amount of \$100,000 each. As a result, Wesfarmers Premier Coal has agreed to fund a range of noise ameliorative packages by means of a one-off payment of \$100,000 to each of the five existing households, but not to the landowner.

The EPA notes that the funding is intended to be put towards one of four types of ameliorative measures which have been identified, as follows:

1. Acoustical treatment of existing residence to achieve acceptable internal noise levels;
2. Extension of existing residence with acoustical treatment to achieve acceptable internal noise levels;
3. Purchase/rent of alternative residence away from Buckingham to enable alternative accommodation during the noisy part of the year; or
4. Relocation beyond the area affected by the mine, with existing house to remain vacant.

The EPA's view is that all of the above provide for some escape or complete escape from the noise, and are acceptable forms of amelioration of the noise impacts for those residents who are currently impacted.

The EPA has identified the following principles which may need to be included in the arrangements between WPC and the residents –

- Where an existing resident wished to build a second house, there should be no requirement for a second compensation package;
- Where a resident sold an existing (untreated) house, the new owner would require notification, but should not receive compensation; and
- Where a resident sold an acoustically treated house, there should be a means of certifying that the house had been treated to an acceptable standard.

The EPA notes that the amelioration package has not been offered to the landowner who does not live in Buckingham, since he is not currently impacted. The EPA considers that the issues of possible loss of the amenity and development potential of the affected land are matters to be resolved through the planning system. The EPA does not see a need for planning issues to be addressed through the noise regulation 17 approval process.

The EPA is therefore of the view that the amelioration package provides a good basis for a noise regulation 17 approval.

4. Outline of noise regulation 17 approval

The EPA considers that, should an approval be granted, the approval should contain the following features:

1. Appropriate new L_{A10} and L_{A-max} noise limits

The existing noise emissions from November 2000 to October 2001 exceeded 50 dB(A) for about 3% of the Day, Evening and Night hours during the worst month, and never exceeded 55 dB(A). As mining operations approach slightly closer to Buckingham over the next few years, a 55 dB(A) limit would cause WPC to operate at best practice at all times of the day. In terms of the impact on residents, acoustic treatment can readily reduce the highest levels meeting this limit to an acceptable internal level of 30dB(A) in bedrooms.

The EPA considers that L_{A-max} noise level limits should also apply, and recommends 70 dB(A) for week days, in line with the amended Ministerial Conditions (see Appendix A). The EPA recommends 65 dB(A) for evenings, Sundays and night time, which represents an increase of 10 dB(A) and 15 dB(A) over the L_{A-max} noise level limits in the Ministerial Conditions, for evenings/Sundays and night time, respectively. This increase is considered necessary to accommodate normal fluctuations in the mine noise emissions.

The corresponding maximum internal level in an acoustically treated house providing 25dB(A) noise reduction would be 40dB(A) at night, which is considered to be below the threshold for sleep disturbance, and therefore acceptable. For an untreated house, the highest night time internal L_{A10} noise levels would probably be in the range 40 – 45 dB(A), and the highest L_{A-max} noise levels would be 50 – 55 dB(A), depending whether the windows were open or closed. The EPA would not consider these levels to be acceptable in this situation without ameliorative measures.

As a result of the reasonably constant and continuous nature of the noise emitted from the mine site, the EPA does not consider that L_{A-1} assigned levels, as specified in the noise regulations, will be required as part of an approval.

2. Reporting requirement

The noise level limits should be accompanied by an annual reporting requirement, involving reporting of the monitored levels obtained from the WCL monitoring site at Buckingham, to the requirements of the DEP. The monitoring results would be assessed at the end of each year, and if noise levels were found to be of concern (for example by comparison with the results in Table 2 above), then a more detailed report could be required. WPC may then be notified to report in more detail on factors unusually influencing noise emissions during that season, including for example –

- weather conditions which may have influenced sound propagation, eg. incidence of temperature inversions;
- the total sound power level of the fleet operating at the noisiest times, based on the stationary noise test data;
- the approximate location of the fleet at these times; and
- practicable noise reduction measures in place at these times, and reasons why noise could not be reduced further.

The purpose of this requirement would be to ensure best practice at all times.

3. Review of the operation and effectiveness of the Approval

The EPA is of the view that it should be WPC's objective to achieve compliance with the noise regulations within the next 10 years, and that best practice noise control measures should continue to be implemented to this end. Accordingly, a noise regulation 17 approval should incorporate a provision that a major review of its operation and effectiveness, should be carried out by the EPA, commencing 10 years after Gazettal of the approval.

The purpose of the review would include, but not be limited to –

- examining trends in the numbers of hours for which the L_{A10} assigned noise levels as given in Table 1 of the noise regulations (for zero influencing factor) were exceeded over each season of each year, where the exceedances may be attributed to WPC operations, based on data from the WPC monitoring station;
- reviewing any other environmental noise monitoring data of relevance;
- examining trends in the sound power levels of both the significant individual plant items and the cumulative plant used by WPC in their Premier Coal Mine operations;
- reviewing noise control measures that have been introduced over the period; and
- reviewing changes in residential occupancy and the effectiveness of noise amelioration arrangements made with residents.

5. Conclusion and Recommendation

The EPA concludes that –

- the current noise emission levels from the Wesfarmers Premier Coal Mine are likely to exceed both the levels set in the (amended) Ministerial Statement and the prescribed standard in the noise regulations, when determined at the nearby Buckingham townsite;
- while noise reduction measures have been implemented, particularly in terms of purchase of quieter plant, the nature and effect of the prevailing meteorological conditions on sound propagation means it is unlikely to be reasonably practicable for Wesfarmers Premier Coal to achieve compliance with the prescribed standard; and
- an amelioration package offered by Wesfarmers Premier Coal to the affected residents in Buckingham is capable of providing some escape or complete escape from the noise.

The EPA recommends that a variation to the prescribed standard in the noise regulations be granted in accordance with the attached preliminary drafting instructions. (See Appendix B).

Appendix A

Details of Noise Limits

Appendix A1 – Noise Conditions in Ministerial Statement

The Minister's *Statement to Amend Conditions Applying to a Proposal – Premier Coal Mine Expansion, Collie* (Statement 310) was published on 5 April 1993.

“Condition 6 is amended to read as follows:

6 Noise Limits

The proponent should conduct operations so that noise emissions do not unreasonably impact on the surroundings.

6-1 The proponent shall ensure that noise emissions do not exceed -

- 40 dB $L_{A10\%}$ 1 hour slow and 50 dB $L_{A\ max}$ slow between 2200 hours and 0700 hours on any day when measured on any noise-sensitive premises;*
- 45 dB $L_{A10\%}$ 1 hour slow and 55 dB $L_{A\ max}$ slow between 1900 hours and 2200 hours on any day, and between 0700 hours and 1900 hours on Sundays and gazetted public holidays, when measured on any noise-sensitive premises;*
- 50 dB $L_{A10\%}$ 1 hour slow and 70 dB $L_{A\ max}$ slow between 0700 hours and 1900 hours on Monday to Saturday inclusive, when measured on any noise-sensitive premises; and*
- 65 dB L_A slow when measured at or near the boundary of premises that are not noise-sensitive premises (other industries);*

where such emissions would result in the noise level present at the affected premises exceeding the ambient noise level present at any time by more than 5dB L_A slow.

6-2 The proponent shall ensure that noise emissions from those activities which are of concern to occupiers of noise-sensitive premises do not exhibit tones, amplitude and frequency modulation, and impulsiveness of a nature which increases the intrusiveness of the noise.

6-3 The proponent shall conduct noise surveys and assessments in consultation with the Environmental Protection Authority.”

Appendix A2 – Assigned levels in regulations

Table 1 - Assigned Levels derived from Table 1 of Regulation 8 of the *Environmental Protection (Noise) Regulations 1997*

Type of premises receiving noise	Time of day	Assigned level, dB		
		L _A 10 (slow)	L _A 1 (slow)	L _A max (slow)
Noise sensitive premises, at locations within 15 metres of a building directly associated with a noise sensitive use.	0700 to 1900 hours Monday to Saturday	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays.	35 + influencing factor	45 + influencing factor	55 + influencing factor
Noise sensitive premises, at locations further than 15 metres from a building directly associated with a noise sensitive use.	All hours	60	75	80
Commercial Premises	All hours	60	75	80
Industrial and utility premises	All hours	65	80	90

“L_A max assigned level” means an assigned level which, measured as a L_A Slow value, is not to be exceeded at any time;

“L_A 1 assigned level” means an assigned which, measured as a L_A Slow value, is not to be exceeded for more than 1% of the representative assessment period;

“L_A 10 assigned level” means an assigned which, measured as a L_A Slow value, is not to be exceeded for more than 10% of the representative assessment period; and

“influencing factor” means the influencing factor determined under Schedule 3 of the regulations.

Note: The influencing factor in the Buckingham townsite is likely to be zero.

Appendix B

Preliminary Drafting Instructions for a Noise Regulation 17 Approval

**PRELIMINARY DRAFTING INSTRUCTIONS
FOR A NOISE REGULATION 17 APPROVAL**

AUTHORITY:

The Approval would be granted by the Minister for the Environment under regulation 17 (7) of the *Environmental Protection (Noise) Regulations 1997* after receiving a report from the Authority for the purposes of the regulation.

PREAMBLE:

The Approval would contain a Preamble, which outlined that this Approval is given on the basis that –

- a) Premier Coal is expected to implement best practice in terms of implementation of measures to reduce noise emissions as far as is reasonably practicable at all times;
- b) Premier Coal should implement best practice with a view towards achieving compliance with the standard prescribed in regulation 7(1) over a period of 10 years from commencement;
- c) the Authority should be requested to conduct a review of the operation and effectiveness of the Approval, beginning 10 years after commencement, which would include, but not be limited to –
 - examining trends in the numbers of hours for which particular noise levels were exceeded over each season of each year, where the exceedances may be attributed to operations at the mine site;
 - reviewing any other environmental noise monitoring data of relevance;
 - reviewing the details of any abnormal events;
 - examining trends in the noise emission levels of both the significant individual plant items and the cumulative plant used by Premier Coal at the mine site;
 - reviewing noise control measures that have been introduced over the period; and
 - reviewing changes in residential occupancy and the effectiveness of any noise amelioration arrangements made with residents.

CITATION:

The Approval may be cited as the *Environmental Protection (Premier Coal Mine Noise Emissions) Approval 2003*.

COMMENCEMENT:

The Approval would come into operation on the day of publication in the *Gazette*.

INTERPRETATION:

(1) The following terms may need definition:

“**abnormal event**” means an unexpected event the occurrence of which is beyond the immediate control of, and could not reasonably have been foreseen by, Premier Coal (such as an accident or emergency, a breakdown of plant or equipment or extreme weather conditions);

“**assigned level**” means a noise level determined under clause 6;

“**construction work**” has the same meaning as in regulation 13, and includes operations such as vegetation clearing and topsoil removal at the commencement of a new mining area, and construction of perimeter bunds to act as noise barriers;

“**commencement**” means the day on which the Approval comes into operation;

“**commercial premises**” has the same meaning as in regulation 2(1);

“**Director**” means the Director of the Environmental Regulation Division, Department of Environmental Protection;

“**impulsiveness**” has the same meaning as in regulation 9;

“**industrial and utility premises**” has the same meaning as in regulation 2(1)

“ **$L_{A \max}$ assigned level**” means an assigned level which, measured as a $L_{A \text{ Slow}}$ value, is not to be exceeded at any time;

“ **$L_{A 10}$ assigned level**” means an assigned which, measured as a $L_{A \text{ Slow}}$ value, is not to be exceeded for more than 10% of any period of 4 hours;

“ **$L_{A \text{ Slow}}$** ” has the same meaning as in regulation 2(1);

“**mine site**” means the premises known as Premier Coal Mine occupying Mining Lease ML 262 SA;

“**modulation**” has the same meaning as in regulation 9;

“**noise-sensitive premises**” has the same meaning as in regulation 2(1);

“**Premier Coal**” means the body corporate known as Wesfarmers Premier Coal Ltd, ABN 21 008 672 599;

“**regulation**” means regulation of the *Environmental Protection (Noise) Regulations 1997*;

“**tonality**” has the same meaning as in regulation 9.

(2) To the extent that there is any inconsistency between this Approval and the Minister’s Statement No. 310 published on 6 April 1993, the Approval should prevail.

GRANT OF APPROVAL:

Under regulation 17 (7), approval would be granted to Premier Coal to allow the noise emitted from the mine site to exceed or vary from the standard prescribed in regulation 7(1).

CONDITIONS OF APPROVAL:

For the purposes of the Grant of Approval, regulations 7(1) and (2), 8(2) and 9(3) would not apply in relation to the noise emitted from the mine site while the Approval is in force and is being complied with.

However, the Approval would be granted on the condition that –

- a) noise emitted from the mine site complies with the maximum permitted noise levels (below);
- b) Premier Coal reduces noise emissions from the mine site as far as is practicable;
- c) Premier Coal complies with the reporting requirements (below); and
- d) Premier Coal complies with the requirements relating to abnormal events (below).

MAXIMUM PERMITTED NOISE LEVELS

Noise emitted from the mine site, when received at a premises of a kind referred to in column 1 of an item in the Table in Schedule 1, at a time of day referred to in column 2 of the item, should be required not to exceed any of the assigned levels specified opposite the time of day in column 3 of the item (see Schedule 1).

PERMITTED TONALITY, IMPULSIVENESS AND MODULATION

Noise emitted from the mine site, when received at premises referred to in column 1 of an item in the Table in Schedule 1, should be required to be free, for at least 90% of any period of 4 hours, from any tonality, impulsiveness and modulation.

DETERMINING LEVELS OF NOISE EMISSION

For the purpose of assessing the level or character of noise emitted from the mine site, the following would not be taken into account –

- a) noise emissions of a kind referred to in regulation 3 (that is, noise from trains, aircraft or the propulsion and braking systems of vehicles on public roads);
- b) noise emitted as a result of construction work carried on at the mine site;
- c) noise emitted by safety warning devices attached to plant or equipment for the purpose of ensuring that Premier Coal complies with its obligations under the *Occupational Safety and Health Act 1984*.

NOISE FROM ABNORMAL EVENTS

An emission of noise that contravened the requirements for maximum permitted noise levels or for tonality, impulsiveness and modulation, would be taken not to breach a condition of the Approval if –

- a) the emission was the result of an abnormal event;
- b) where the emission exceeded the maximum permitted noise levels, it was accidental or unintended;

- c) Premier Coal took all reasonable and practicable measures to stop the emission as soon as was reasonably practicable; and
- d) Premier Coal notified the Director of the occurrence of the abnormal event within 21 days after the day on which it occurred, or within any further time allowed by the Director on the application of Premier Coal.

ABNORMAL EVENTS REGISTER

Premier Coal should be required to keep an abnormal events register for the purposes of this Approval.

REPORTING REQUIREMENTS

Premier Coal should be required to provide a report to the Director, in a form approved by the Director, not later than one month after the end of each year from commencement, containing the following information for the previous year –

- a) noise levels, determined from the results of monitoring carried on at its Buckingham monitoring station, to be likely to be attributable to operations carried on at the mine site;
- b) noise emission levels of significant individual plant items and cumulative plant items which have been in use at the mine site;
- c) noise reduction measures which have been implemented at the mine site.

Where requested by the Director, Premier Coal would be required to provide more detailed reporting data for any period of the reporting year as specified by the Director.

SCHEDULE 1 – MAXIMUM PERMITTED NOISE LEVELS

Table

Type of premises receiving noise	Time of day	Assigned level (dB)	
		L _{A 10}	L _{A max}
Noise sensitive premises, at locations within 15 metres of a building directly associated with a noise sensitive use.	0700 to 1900 hours Monday to Saturday	55	70
	All other times	55	65
Commercial premises	All hours	60	80
Industrial and utility premises	All hours	65	90