

# Drayton Management System Standard

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## Noise Monitoring Program

<b>Author:</b>	<b>Name</b>	<b>Pam Simpson</b>		
	<b>Title</b>	<b>Environment Coordinator</b>		
	<b>Signature</b>		<b>Date</b>	

<b>Reviewer:</b>	<b>Name</b>	<b>Peter Forbes</b>		
	<b>Title</b>	<b>S&amp;SD Manager</b>		
	<b>Signature</b>		<b>Date</b>	

<b>Authoriser:</b>	<b>Name</b>	<b>Mark Heaton</b>		
	<b>Title</b>	<b>General Manager</b>		
	<b>Signature</b>		<b>Date</b>	

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# Revisions

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1	June 2008	P Simpson	P Forbes	M Heaton

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# Document Information

## 1 PURPOSE

The purpose of this monitoring program is to provide a framework for noise management and monitoring to be conducted at Drayton. This plan applies to the area within the current approval area as detailed in the 2007 Environmental Assessment and addresses the relevant conditions of the Project Approval and the relevant commitments as detailed in the Environmental Assessment.

## 2 SCOPE

Anglo Coal Drayton Mine is an open cut coal mine located 13km south of Muswellbrook in the Upper Hunter of NSW. Open cut coal extraction and mining activities commenced in 1983 and will continue to 2017.

Drayton's key infrastructure and mining equipment consists of a single dragline, excavators and truck fleet, associated heavy earthmoving equipment, coal processing plant and rail loading facilities. The mine operates 24 hours per day, seven days per week.

Key potential noise sources from the project have been identified to include mobile and fixed mining equipment and coal handling and processing facilities.

Anglo Coal Drayton Mine was granted project approval by the NSW Department of Planning on 1<sup>st</sup> February 2008 to further extend current mining operations until 2017, incorporating increased production and additional infrastructure. This management plan applies to the whole of the current approval area, mobile fleet and coal handling and processing facilities.

This procedure particularly describes the following:

- Statutory requirements regarding noise monitoring;
- Methods and procedure for noise monitoring;
- Noise monitoring protocol for evaluating compliance with relevant noise impact assessment and land acquisition criteria;
- Drayton's complaints response protocol; and
- Noise management strategies to be implemented at Drayton.

## 3 DEFINITIONS

**AEMR** Annual Environment Management Report

**S&SD Manager** Safety and Sustainable Development Manager

## 4 STATUTORY REQUIREMENTS

This plan has been developed in accordance with the requirements of the NSW Department of Planning for the Drayton Mine Extension (MP 06\_0202) issued in 2008.

Conditions regarding noise monitoring are as follows:

Condition	Condition Details	Reference
S3.8	<i>The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Director-General. This program must:</i> a) <i>Be prepared generally in consultation with DECC;</i>	5.6

	<ul style="list-style-type: none"> <li>b) Be submitted to the Director-General for approval within 6 months of this approval; and</li> <li>c) Include: <ul style="list-style-type: none"> <li>➤ A combination of real-time and supplementary attended monitoring measurements; and</li> <li>➤ A noise monitoring protocol for evaluating compliance with the noise impact assessment and land acquisition criteria in this approval.</li> </ul> </li> </ul>	
S3.1	<p><b>Noise Impact Assessment Criteria</b>  The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.  (Table 1: refer to Table 1 in section 5.6.1 of this monitoring plan for details)  However, if the Proponent has a written negotiated noise agreement with any landowner of the land listed in Table 1, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the noise limits in Table 1 in accordance with the negotiated noise agreement.</p>	5.6.1
S3.2	<p><b>Land Acquisition Criteria</b>  If the noise generated by the project exceeds the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, the proponent shall upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 8-10 of Schedule 4.  (Table 2: refer to Table 2 in section 5.6.1 of this monitoring plan for details)</p>	5.6.1
S3.3	<p><b>Cumulative Noise Criteria</b>  The proponent shall take all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other mines does not exceed the following amenity criteria at any residence on privately-owned land or on more than 25 percent of any privately-owned land</p> <ul style="list-style-type: none"> <li>➤ <math>L_{Aeq}</math> (11 hour) 50 dB(A) – Day</li> <li>➤ <math>L_{Aeq}</math> (4 hour) 45 dB(A) – Evening</li> <li>➤ <math>L_{Aeq}</math> (9 hour) 40 dB(A) – Night</li> </ul>	5.6.1
S3.4	<p>If the noise generated by the project combined with the noise generated by other mines exceeds the following amenity criteria at any residence on privately-owned land or on more than 25 percent of any privately owned land, then upon receiving a written request from the landowner, the proponent shall acquire the land on as equitable basis as possible with the relevant mines in accordance with the procedures in conditions 8-10 of Schedule 4:</p> <ul style="list-style-type: none"> <li>➤ <math>L_{Aeq}</math> (11 hour) 53 dB(A) – Day</li> <li>➤ <math>L_{Aeq}</math> (4 hour) 48 dB(A) – Evening</li> <li>➤ <math>L_{Aeq}</math> (9 hour) 43 dB(A) - Night</li> </ul>	5.6.1
S3.5	<p><b>Noise Mitigation</b>  Within 12 months of this approval, unless otherwise agreed by the Director General, the proponent shall implement the noise mitigation measures outlined in Section 4.5 of the noise impact assessment of the EA (Appendix 6)</p>	5.6.4
S3.6	<p>Upon receiving a written request from the owner of:</p> <ul style="list-style-type: none"> <li>➤ The following land: 14,16,19,20,21,22,28,32,33,61,69,70,71,72,75,76,86; or</li> <li>➤ Any residence on privately owned land where subsequent noise monitoring shows the noise generated by the project is greater than or equal to the relevant criteria in Table 3,</li> </ul> <p>The proponent shall implement additional noise mitigation measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the land owner.  (Table 3: refer to Table 3 in section 5.6.1 of this monitoring plan for details)  These additional mitigation measures must be reasonable and feasible.</p> <p>If within 3 months of receiving this request from the landowner, the proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.</p> <p>Within 3 months of this approval, the proponent shall notify all applicable landowners that they are entitled to receive additional noise mitigation measures.</p>	5.6.1
S3.7	<p><b>Continuous Improvement</b>  The proponent shall:</p> <ul style="list-style-type: none"> <li>a) Implement all reasonable and feasible noise mitigation measures;</li> <li>b) Investigate ways to reduce the noise generated by the project, including maximum noise levels which may result in sleep disturbance; and</li> <li>c) Report on these investigations and the implementation and effectiveness of these measures in the AEMR.</li> </ul>	5.6.5 5.6.6
S3.8	<p><b>Monitoring</b>  The proponent shall prepare and implement a noise monitoring program for the project to the satisfaction of the Director-General. This program must:</p> <ul style="list-style-type: none"> <li>a) Be prepared in consultation with DECC</li> <li>b) Be submitted to the Director-General within 6 months of this approval; and</li> <li>c) Include: <ul style="list-style-type: none"> <li>➤ A combination of real time and supplementary attended monitoring measures; and</li> <li>➤ A noise monitoring program for evaluating compliance with the noise impact assessment and land acquisition criteria in this approval.</li> </ul> </li> </ul>	5.6.3

## **5 PROCEDURAL REQUIREMENT**

### **5.1 Responsibilities**

#### **Safety & Sustainable Development (S&SD) Manager**

The S&SD Manager is responsible to:

- Develop and implement noise monitoring protocols for evaluating compliance with noise impact assessments and land acquisition criteria;
- Approving revisions of this monitoring program; and
- Planning for adequate resources to implement this management plan.

#### **Environment Coordinator**

The Environment Coordinator is responsible to:

- Monitor, collect and analyse data regarding noise monitoring
- Coordinate noise monitoring programs
- Report noise monitoring data as required
- Implement a real time noise monitoring system

#### **Mine Manager**

The Mine Manager is responsible to:

- Implement noise control measures with regard to equipment mobilization and mining operations.

### **5.2 Audit/Review Schedule**

This management plan is to be reviewed at least every three years or as otherwise directed by the Director-General of NSW Department of Planning (DoP). The review process is to reflect independent environmental audit findings, changes in environmental legislation, standards and guidelines, and changes in technology or operational procedures.

In accordance with Project Approval (06\_0202), at the end of year two of the development, and every three years thereafter, Drayton will commission an independent environmental audit to the satisfaction of Director-General of DoP. The audit will include an assessment of the adequacy of all management plans. Where necessary, following the audit this management plan may be updated and action taken to improve noise management practices at Drayton.

This procedure has been originally prepared in consultation with the NSW Department of Planning and the Department of Environment and Climate Change.

### **5.3 Records Management**

All records of environmental monitoring will be kept on file in the S&SD department for the duration of the life of mine.

### **5.4 Revision Status**

Not applicable – Version 1.

### **5.5 References And Relationship With Other Environmental Documentation**

Environmental monitoring at Drayton is conducted in accordance with the following approvals/Acts or regulatory conditions:

- Environmental Planning and Assessment Act, 1979 (EP&A Act) administered by the NSW Department of Planning (DoP) and associated project approval conditions (Ref MP 06\_0202).

- Anglo Coal Drayton Mine Environmental Assessment 2007.
- NSW Industrial Noise Policy

Drayton's Environment Protection Licence (1323) now also incorporates the conditions of consent as issued by the NSW Department of Planning.

## 5.6 Documents

### 5.6.1 Noise Assessment Criteria

Schedule 3 of Drayton's Project Approval details the noise impact assessment criteria upon which the noise assessment applies. This assessment references the Environmental Assessment which was completed in accordance with the NSW Industrial Noise Policy (INP). Noise assessment criteria was undertaken using the principles of the INP which require the background noise levels to be measured in the absence of the influence of the Drayton. Mining noise, low frequency noise and sleep disturbance were assessed in the Environmental Assessment.

Analysis under the INP require that inversions are to be assessed when they occur for over 30% of the time, however the Drayton environmental assessment concluded that temperature inversions only occurred in the area for up to 20% of the time. Drayton's assessment was therefore based on the INP default inversion strength of 3°/100m in order to remain conservative and consistent with previous environmental assessments. To this effect, compliance measurements will be assessed under the following prevailing weather conditions.

Table 1: Prevailing weather conditions for Noise Assessment Criteria

Period	Condition
Day (7:00am – 6:00pm)	3m/s winds from the south-east or north-west 25°C temperature 60% relative humidity -2.0°C/100m lapse representing a typical sunny day
Evening (6:00pm – 10:00pm)	3m/s winds from the south-east or north-west 15°C temperature 70% relative humidity -1.0°C/100m lapse representing adiabatic conditions
Night (10:00pm – 7:00am)	No wind 10°C temperature 80% relative humidity 3.0°C/100m temperature inversion

Noise levels will be extracted from the Drayton BarnOwl system for the above conditions and results will be included in the AEMR and will be compared to the noise assessment levels upon which the mining operation should not exceed.

In addition to the use of the real time noise monitoring Barn Owl system, noise emission assessments will be undertaken as detailed in section 5.6.3 of this plan at representative locations (land numbers) from Table 2. If noise emissions at these representative locations are found to be in non compliance with the levels specified in Table 2 for a period of one day continuous due to mining influences, additional noise monitoring will be conducted at neighbouring properties, subject to approval from the landowner to do so.

Table 2: Noise Impact Assessment Criteria dB(A)

Land Number	Day	Evening	Night	Night
	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15min)	L <sub>A1</sub> (1 min)
34 – Davis	35	35	36	45
29 – Wallman	35	35	36	47
31 – Summerville	35	35	37	47
33 – Fisher & Dennis	35	35	38	45
86 – Wild Group	35	35	38	45
32 – Cross	35	35	40	47
71 – Hunter	35	35	41	47
75 – Sharman	35	35	41	47
70 – Jones	35	36	41	47
76 – Horder	35	36	42	47
28 – Bird	35	37	40	47
69 – Clifton	35	37	41	47
13 – Jacobsen	36	36	35	45
12 – Newton	36	36	36	47
25 – Collins	36	37	37	47
26 – Baxter	36	37	38	47
27 – De Boer	36	37	39	47
72 – Robertson	36	37	42	47
17 – Page	37	38	36	47
21 – Reynolds	38	38	38	45
22 – Halloran	38	38	38	45
18 – Page	38	39	38	47
20 – Osborn	39	40	39	45
61 – Skinner	39	40	39	45
14 – Drayton	40	39	38	47
19 – Duck	40	40	39	47
16 – Doherty	41	41	39	47
23 - Jackson	35	35	35	47
All other privately owned land	35	35	35	45

Condition 2 - Schedule 3 details the criteria for potential land acquisition relating to noise emissions. These are reflected in Table 3. If a written request is received from any of the identified properties regarding noise emissions, Drayton will undertake the requirements outlined in conditions 8-10 - Schedule 4.

Table 3: Land acquisition criteria dB(A)

Land Number	Day / Evening / Night
	L <sub>eq</sub> (15 min)
12,14,16,17,18,19,23,25,26,27,28,29,31,32,69,70,71,72,75,76	42
All other private land owners not listed in Table 1 or on more than 25% of any private owned land	40

Conditions 3 and 4 - Schedule 3 requires Drayton to take all reasonable and feasible measures to ensure noise generated by the project combined with the noise generated by other mines does not exceed the amenity criteria as detailed in Table 4 below.

If Drayton receives a written request from any of the landowners listed in Table 4, and where noise monitoring can substantiate the noise levels being experienced at the locations as exceeding those levels continuously in Table 4, Drayton shall implement additional noise mitigation measures at the residence, in consultation with the land owner. Any noise mitigation measures however will be reasonable and feasible and dependent upon current production levels at the time of the written request. Mitigation measures may include double glazing of windows, installation of air conditioning, erection of noise barrier etc.

Table 4: Noise Mitigation criteria dB (A)

Land Number	$L_{eq}(15 \text{ min})$
12, 17, 18, 23, 25, 26, 27, 29, 31	40
All other private land owners	38

If, however, the landowner and Drayton cannot reach agreement on the measures to be implemented or if there is a dispute about the implementation of these measures, then the matter can be referred to the Director-General for resolution.

Cumulative noise relates to noise emissions from other mining and industrial sources. Drayton shall ensure that noise generated from the mining operation, when combined with other identified sources, does not exceed the amenity criteria at any residence or privately owned land or on more than 25% of any privately owned land such as detailed in Table 5.

Table 5: Cumulative Noise Limits

Period	Level
Day	$L_{Aeq}(11 \text{ hour})$ 50 dB(A)
Evening	$L_{Aeq}(4 \text{ hour})$ 45 d(BA)
Night	$L_{Aeq}(9 \text{ hour})$ 40 dB(A)

If the above levels are exceeded, Drayton shall implement feasible measures to ensure noise levels generated are minimised. If noise emission levels from Drayton and other mining operations exceed  $L_{Aeq}(11 \text{ hour})$  53 dB(A) during the day,  $L_{Aeq}(4 \text{ hour})$  48 d(BA) during evenings and  $L_{Aeq}(9 \text{ hour})$  43 dB(A) during night conditions at any residence on privately owned land or on 25% of any privately owned land, and on receiving a written request from the land owner, Drayton, in consultation with the other mining operations shall acquire the land on an equitable basis with the other mines in accordance with the requirements outlined in Schedule 4 – conditions 8-10.

### 5.6.2 Noise Sources

Potential noise sources from the Project during operations include open cut mining operations, particularly the operation of mobile equipment in the open cut area, haul roads and overburden dumps and the Coal Handling and Preparation Plant (CHP) including conveyors, bins and handling equipment.

Table 6 details a summary of the modelled noise sources and sound power levels as detailed in the environmental assessment. These are the values upon which the levels pertaining to the Drayton operation are currently based. These values represent a baseline upon which future assessments will be compared to for assessment purposes.

Table 6: Summary Of The Modelled Noise Sources And Sound Power Levels

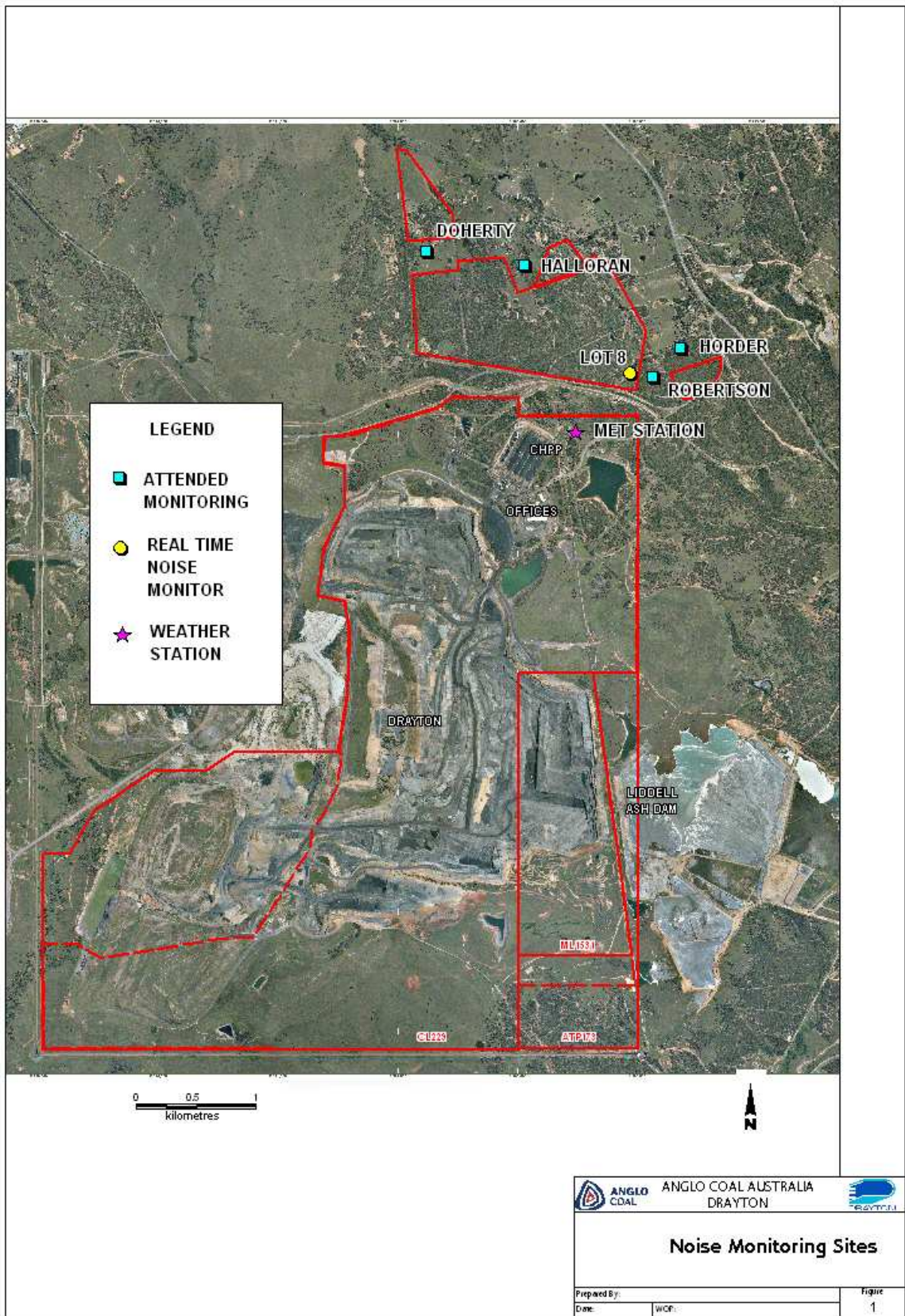
Plant & Equipment	Sound Power Level, dB(L) re 1pW (Source Anglo Coal Drayton Mine Environmental Assessment 2007)										
	31.5	63	125	250	500	1k	2k	4k	8k	Lin	A
Dragline	102	100	98	91	93	94	89	82	56	105.9	97.0
Excavator EX5500	124	125	121	116	115	116	113	110	103	129.2	120.2
Excavator EX3500	122	124	120	114	110	112	112	106	102	127.6	117.3
Loader L1400	124	121	119	114	109	113	111	104	100	127.2	117.0
Loader L1100	121	117	122	113	107	108	109	103	96	125.8	114.6
Dozer D11	120	121	121	111	111	110	108	107	101	126.0	115.7
Dozer D10	120	121	121	111	111	110	108	107	101	126.0	115.7
Drill	104	96	115	106	112	111	111	109	96	119.4	116.8
Truck 789 uphill	115	111	119	118	117	113	113	106	99	124.5	119.4
Truck 789 flat ground	118	119	121	119	116	106	107	104	96	126.0	116.8
Grader	114	115	117	115	112	102	103	100	92	122.0	112.8
Water cart	116	117	119	117	114	104	105	102	94	124.0	114.8
Rubber Tyre Dozer	121	117	122	113	107	108	109	103	96	125.8	114.6
Primary Sizer	114	108	109	107	107	103	98	92	84	117.2	108.0
Secondary Sizer	112	108	105	104	104	99	92	83	71	115.0	104.3
Tertiary Sizer	118	111	112	111	112	112	109	103	94	121.6	115.9
Transfer Station	114	111	110	101	101	98	95	87	76	117.1	103.4
Transfer to overland conveyor	91	95	96	91	90	89	85	82	71	100.8	93.4
CTU north face	110	105	105	105	105	105	104	100	91	114.7	109.9
CTU west face	116	112	107	105	101	103	103	91	80	118.4	107.8
Existing reclaimer	100	99	107	106	105	103	98	99	85	112.4	107.8
New reclaimer	105	105	103	100	100	98	96	91	83	110.6	103.0
Stockyard conveyor 400m	122	113	110	102	98	97	96	91	84	122.8	103.1
Overland Conveyor 400m	100	101	105	105	108	105	101	95	84	112.9	109.4
Train Loadout	110	100	97	97	98	99	101	100	94	112.0	106.3

Noise emissions from train loading and transport are administered under a separate project approval and do not come under the conditions of this approval.

### 5.6.3 Noise Monitoring Program

Drayton has a well developed noise monitoring program that was established at the commencement of mining operations. This involves a combination of attended monitoring, unattended monitoring and independent monitoring. All results of this monitoring have been analysed and summarised in the respective Annual Environment Management Reports.

Noise monitoring will be undertaken utilising both routine and real time monitoring thus allowing for noise to be closely observed during mining operations. Figure 1 illustrates the location of all noise monitoring covered in this monitoring plan, with the following sections providing more concise details of each monitoring process.



### **5.6.3.1 Attended Monitoring**

Attended noise monitoring is undertaken on a monthly basis at the locations shown in Figure 1. Attended monitoring will be undertaken at selected representative residences that are typical of noise receptors from the mining operation. These residences have been chosen from Table 1 as being representative receivers in locations around the mining operation.

These residences include:

- Horder residence (Land number 76), located on Thomas Mitchell Drive;
- Robertson residence (Land Number 72), located on Thomas Mitchell Drive;
- Halloran residence (Land Number 22) located on Pamger Drive; and
- Doherty residence (Land Number 16) located on Balmoral Road.

Parameters to be measured include  $L_{eq}$ ,  $L_{Amax}$ ,  $L_{A1}$ ,  $L_{A10}$ ,  $L_{A50}$  and  $L_{A90}$  being measured over a 15 minute period. During each period, all noise will be quantified and characterised.

During the attended monitoring, the following information will be recorded:

- Operators name;
- Location of the attended monitoring
- Recording intervals
- Climatic conditions (ie wind speed and direction, rainfall, cloud cover, visibility)
- Statistical notes identifying the principal influencing noise sources
- Instrument calibration details.

During any twelve month period, attended monitoring will be conducted at various times of the day, evening and night to assess noise emissions throughout a 24 hour period.

All monitoring data will be collated and presented in the Annual Environment Management Report.

Attended monitoring will also be undertaken if Drayton receives in excess of three complaints during a shift from three separate and independent sources. This will be undertaken at the residences of concern. This shall establish levels of exposure at each location. This data shall also be compared to the real time monitoring information as being supplied by the Drayton real time BarnOwl system.

### **5.6.3.2 Independent Monitoring**

Independent noise monitoring will be undertaken if required, on an as needs basis to supplement the operator attended monitoring to quantify the overall ambient noise amenity criteria for the Project. This will be undertaken if required to assess noise impacts on land owners that are not subject to the attended monitoring program. Results of any independent monitoring assessments will also be reported in the Annual Environment Management Report.

### **5.6.3.3 Real Time Noise Monitoring**

A real time noise monitoring system has been installed at Lot 8 Antiene. This system supplements the attended monitoring program data collection. This system operates on a continual basis and is located in close proximity to Drayton's near neighbours. Information relating to noise emissions is readily available to key personnel instantaneously should an enquiry be received. This station enables proactive management to minimise noise emissions from the site.

Results of the real time noise monitoring system will be summarised and presented in the Annual Environment Management Report.

#### **5.6.3.4 Meteorological Information**

Drayton has an established on line meteorological station which records the following parameters on a 5 minute basis:

- Temperature
- Relative Humidity
- Wind Direction
- Wind Velocity
- Rainfall

The location of this station is shown on Figure 1. This data is also presented in the Annual Environment Management Report for cross referencing purposes for noise and other environmental parameters being reported.

#### **5.6.3.5 Data Management**

All results of noise monitoring will be maintained in an onsite database for assessment. This information will be utilised to further investigate noise emissions from the mining operation.

#### **5.6.3.6 Noise Trigger Management**

Drayton has adopted a noise trigger management protocol as follows:

- Additional attended monitoring will be undertaken at the affected residence immediately if Drayton receives in excess of three complaints during a shift from three separate and independent sources. This will be undertaken at the residences of concern. This shall establish levels of exposure at each location. This data shall also be compared to the real time monitoring information as being supplied by the Drayton BarnOwl system.
- Additional monitoring shall be undertaken immediately if the Barn Owl system exceeds the background criteria and mining noise is audible at the station. This does not include train noise however as the Rail Spur is governed by a separate approval.

#### **5.6.4 Noise Monitoring Protocol**

The following standard noise protocol will comprise of the following components:

- Source identification
- Management strategy
- Implementation
- Review and assess

##### *Source Identification*

This involves the identification of activities and equipment as detailed in Table 6 likely to cause excessive noise generation. Consideration will be given to equipment being utilised, timing of the activity, location of the activity, prevailing weather conditions and results of monitoring data. The outcomes of the assessment of these issues will determine if there is a potential for an exceedence of the levels indicated in the project approval conditions and if it is necessary to implement additional management strategies.

##### *Management Strategy*

This component of the protocol involves the determination of the noise control and management measures that will be utilised to minimise noise emissions based on the results of the source identification stage. From the monitoring data and by comparison to the levels in Table 6, potential noise control and management measures as defined in Section 5.6.5 and Section 5.6.9 may be identified.

### *Implementation*

This component involves the implementation of the noise control and management measures as determined as being the most appropriate measures to be implemented.

### *Review*

This component of the protocol will assess the noise control and management measures implemented. During this assessment, a comparison against the criteria outlined in the Project Approval conditions will be undertaken.

### **Noise Monitoring Assessment**

Noise monitoring shall be conducted as detailed in section 5.6.3 and will be assessed against the criteria detailed in section 5.6.1 and Section 5.6.2. If in the event of an exceedence, an assessment will be conducted to determine:

- The timing of the exceedence;
- Location of the exceedence;
- Influences of non mine related noise from the data including the consideration of the location of other noise sources, highway traffic, animal influences, human activities;
- Climatic conditions at the time of the exceedence – wind speed, wind direction

Based on the above criteria, if the exceedence is determined to be due to Drayton operations, appropriate management strategies will be implemented. Details of actions implemented will be documented in the Annual Environment Management Report.

### **5.6.5 Noise Control and Management Measures**

Several noise mitigation measures were identified during the environmental assessment process, to reduce noise generated by the mining operation and associated equipment. Table 7 details noise control measures to be implemented, the status of each implementation and who is responsible for the implementation of each measure.

Table 7: Noise Control Measures and Implementation Program

Measure	By Who	Current Status
Only one loading unit (excavator or front end loader) would work in the North Pit during the evening or night	Mine Manager	Implemented
North and East pit trucks would dump in shielded locations during evening and night	Mine Manager	Implemented
North pit prestrip haul roads would be shielded by pit walls or a berm in the direction of residences, during evening and night	Technical Services Manager	Implemented
Loading units within the North Pit prestrip would be located in a shielded area below natural ground surface during the evening and night	Mine Manager	Implemented
Coal haul road from the South Pit would be realigned to the lowest possible elevation with minimal long straight sections of road directly in line with a residence and effective shielding with earth berms along the sides of the road	Technical Services Manager	Completed
The proposed ROM stockpile south of the workshop would have a 5m wall or equivalent berm on the northern side and	Mine Manager	New ROM not constructed as yet therefore condition not applicable at this stage

returned along part of the eastern and western sides to minimise noise from the loader and trucks working on the stockpile		
A 4m berm and/or wall would be constructed along the eastern side of the coal haul road from the ROM stockpile to meet the existing ROM hopper wall, including returns along side roads to minimise the effect of gaps in the barrier	Mine Manager	New ROM not constructed as yet therefore condition not applicable at this stage
A sound power limit of 103 dB(A) each for the three new reclaimers and one ROM coal stacker	Mine Manager	No new reclaimers or stackers have been installed as yet.
Steel sheeting would be installed on the northern face of the secondary crusher building after the removal of the rotary breaker and installation of the new screen and crusher	Mine Manager	Steel sheeting not installed as yet however independent noise assessment has confirmed noise levels are 6 dB(A) lower than previous to the installation. It was not considered necessary to install steel sheeting at this stage. No complaints have been received relating to crusher noise emissions.
Upgraded exhaust mufflers on some trucks with the exception of the south pit overburden fleet	Maintenance & Engineering Manager	Noise attenuation to exhaust systems has been completed on some units. All trucks will be fully converted by end of Q1 2010.

Details of the effectiveness of these mitigation measures will be assessed and presented in the Annual Environment Management Report.

### 5.6.6 Reporting Requirements

Drayton will prepare an AEMR as required by the Project Approval. This report shall be completed by the site Environmental Coordinator in consultation with relevant site personnel and shall be submitted within the designated time frame as directed by the DECCW in the site Environmental Protection Licence.

The report shall:

- Identify the standards and performance measures that apply to Drayton;
- Describe all works undertaken in the previous 12 months;
- Describe the proposed works for the following 12 months;
- Include a summary of complaints received during the past year and compares these with those from previous years;
- Include a summary of the monitoring results for the previous year;
- Include an analysis of these monitoring results against environmental assessment criteria, previous years performance and predictions of the environmental assessment;
- Identify trends in monitoring results;
- Identify any non compliances during the previous year; and
- Describe any actions that are being undertaken to ensure ongoing compliance.

### **5.6.7 Complaints Handling**

If a complaint or enquiry is received, it will be immediately investigated. Details such as complainant name, contact details, nature of concern, date, time and method of receipt are recorded. While details of the enquiry vary depending on the nature and source of the enquiry, the following actions may result:

- Confirmation of whether the complainant would like the matter raised as a complaint or an enquiry
- Identify further details which may assist in determining the cause of the complaint
- Carry out an inspection of the site or conduct an assessment of monitoring results to identify the source
- Identify if there is an exceedance or non compliance with any consent or licence condition
- Identify, where necessary and practical, implement methods to manage the source of the complaint and minimise the chance of a recurrence or further complaints.

A follow up call is also made to the complainant after which time, all details pertaining to the incident are known and corrective actions have been determined to manage the issue.

All enquiries and/or complaints are recorded in an enquiries database and are presented in the AEMR.

### **5.6.8 Handling Exceedences**

If an exceedance of approval conditions or environment protection licence conditions occurs, Drayton shall report the exceedance to the respective authority within 24 hours of the exceedance becoming known. This will be the responsibility of the S&SD Manager who has the authority given to him by the Site General Manager.

If an exceedance is identified, an internal investigation will be undertaken and findings will be forwarded to the respective authority. Actions arising from the investigation relating to management and control measures will be implemented within the time frames as determined by the investigation. Additional noise assessments will be included to monitor the implementation of these measures and actions. The time frames determined in the investigation will be fair and reasonable to ensure the exceedance is managed effectively.

Any monitoring that is undertaken will be completed under the meteorological conditions as detailed in Section 5.6.1 of this monitoring plan. Influencing or extraneous noise will be identified and will be excluded from the assessment results. Extraneous noise will include all noise not related to mining, such as traffic, wind, birds, residential noise or rilling activities. Details of any exceedences will also be included in the AEMR.

### **5.6.9 Further Commitments and Measures To Be Implemented**

Drayton is committed to managing noise emissions from the operations to eliminate offsite disturbances by implementing the following processes.

- Mine planning schedules are developed to ensure no active dumping occurs at exposed locations during adverse weather conditions, where noise can be exacerbated toward neighbouring communities.
- Noise barriers have been installed at the Rail Load Out and Dump Hopper locations to minimise noise emissions.
- Noise awareness training has been developed for coordinators to instruct them on how to interrogate noise monitoring systems during evening and night operations.

- Flow chart as illustrated in Figure 2, details the process of when operations will be ceased due to environmental noise complaints and the process for subsequent investigations to determine the source of the noise. Training of coordinators is being undertaken to ensure all coordinators are familiar with the process to cease operations.
- All trucks and L1400 loaders will be fitted with noise attenuation mufflers to further reduce noise emissions for these units. This commitment goes beyond the commitments made within the Drayton Environmental Assessment by including all trucks in the noise attenuation in addition to the inclusion of L1400 loaders as well.

**PROCESS FOR CEASING OPERATIONS FOLLOWING ENVIRONMENTAL COMPLAINT REGARDING NOISE**

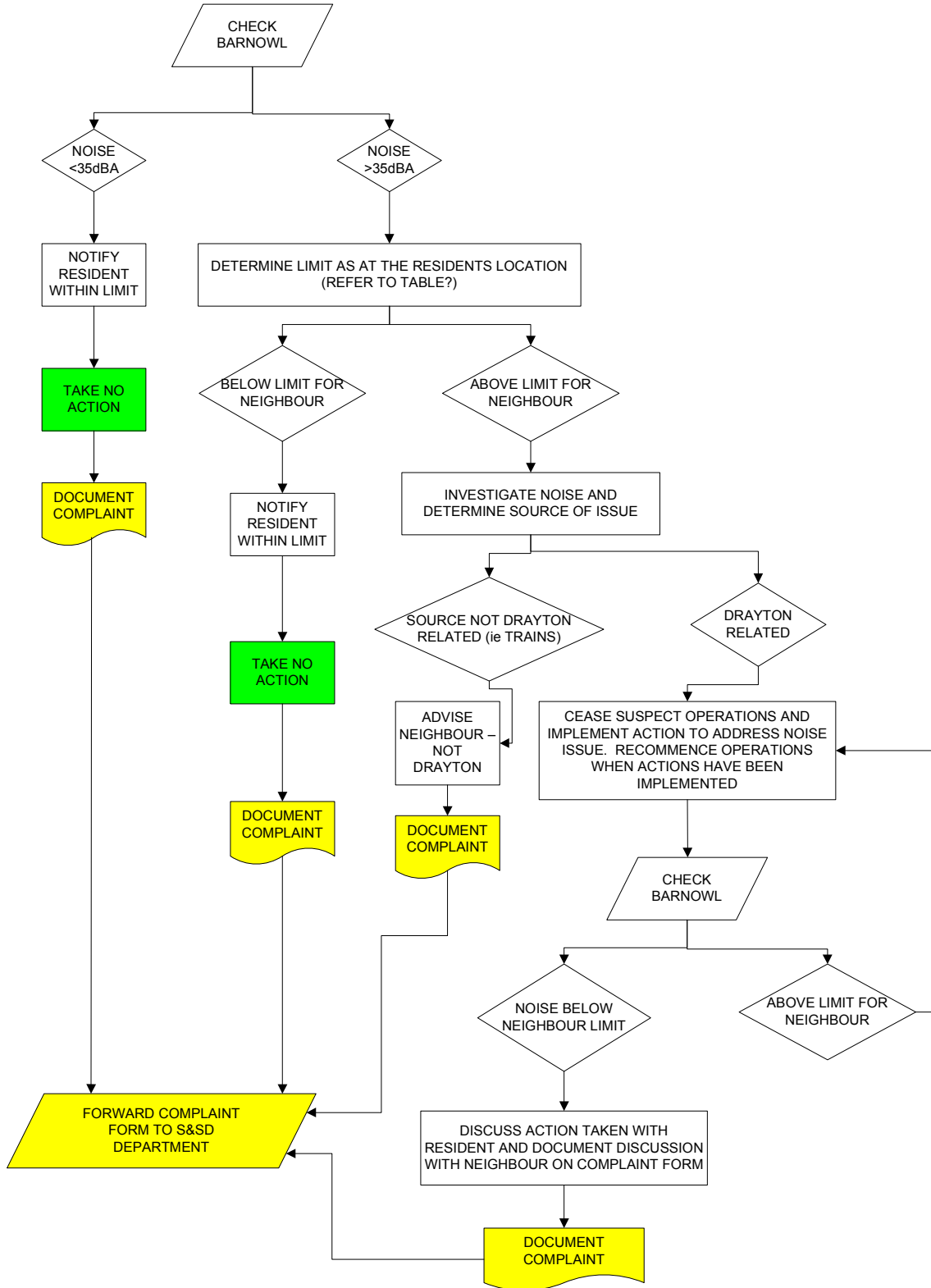


Figure 2 Process for ceasing operations due to noise complaint

## **6 APPENDICES**

- Appendix 1 - Environmental Signoff
- Appendix 2 - Regulatory Correspondence

## Environmental Signoff

PROCEDURE TITLE: Noise Monitoring Program

### PERSONS RESPONSIBLE (AS LISTED)

NAME: Peter Forbes

POSITION: S&SD Manager

SIGNATURE FOR SIGN OFF: \_\_\_\_\_

DATE:

NAME: Pam Simpson

POSITION: Environment Coordinator

SIGNATURE FOR SIGN OFF: \_\_\_\_\_

DATE:

## Regulatory Correspondence



Mitchell Bennett  
 Head Regional Operations Unit - Hunter Region  
 Department of Environment and Climate Change NSW  
 PO Box 488G  
 NEWCASTLE NSW 2300

Anglo Coal (Drayton Management) Pty Ltd

Direct Fax +61 (0)2 6542 0369  
 Direct Line +61 (0)2 6542 0298

7<sup>th</sup> July 2008

Dear Sir

It is a requirement of Drayton's Project Approval Conditions as issued by the Department of Planning for the Drayton Mine Extension (Ref 06\_0202) to prepare a Noise Monitoring Program and an Air Quality Management and Monitoring Plan in consultation with the Department of Environment and Climate Change (DECC).

Drayton request that the DECC review the attached Noise Monitoring Program and Air Quality Management and Monitoring Plan and respond accordingly with any comments.

Comments would greatly be appreciated by 23<sup>rd</sup> July 2008, to enable finalisation and submission of the plan for approval by the Department of Planning's requirement of 1<sup>st</sup> August 2008.

If you wish to discuss the attached document please feel free to contact me on 6542 0298 or by email to [pam.simpson@anglocoal.com.au](mailto:pam.simpson@anglocoal.com.au)

Yours sincerely

Pam Simpson  
 Environment Coordinator

Anglo Coal (Drayton Management) Pty Ltd  
 Thomas Mitchell Drive, Muswellbrook 2333, Australia  
 Private Mail Bag No. 9, Muswellbrook 2333, Australia  
 Tel +61 (0)2 6542 0200 Fax +61 (0)2 6542 5009 [www.anglocoal.com.au](http://www.anglocoal.com.au)  
 cover call 02 6542 0200



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Our reference : DCC08/46489 LIC08/570  
Contact : Mitchell Bennett, 02 4908 6806

Anglo Coal (Drayton Management) Pty Ltd  
PMB 9  
MUSWELLBROOK NSW 2333

- 4 NOV 2008

Attention: Ms Pam Simpson

Dear Ms Simpson

**Spontaneous Combustion Management Plan and Noise Monitoring Program –  
Drayton Coal Mine**

I refer to your letters dated 11 June, 7 July and 30 September 2008 and the attached copies of the Spontaneous Management Plan and Noise Monitoring Program. I apologise for the delay in responding.

**Spontaneous Combustion Management Plan**

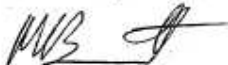
The Department of Environment and Climate Change (DECC) encourages the preparation of strategies, programs and plans as useful tools for industry to ensure that it meets the environmental objectives specified in legislation. In relation to spontaneous coal combustion, Drayton needs to ensure that it complies with Section 129 of the *Protection of the Environment Operations Act (1997)* which prohibits the emission of offensive odours from the premises.

**Noise Monitoring Program**

Drayton Coal Mine is the subject of Environment Protection Licence 1323. This licence currently contains no noise limit nor any requirement to monitor noise. I therefore suggest that you contact the Department of Planning regarding any noise monitoring requirements that they may have.

Please contact Mitchell Bennett on 02 4908 6806 if you wish to discuss this matter.

Yours sincerely



**MITCHELL BENNETT**  
**Head Regional Operations Unit – Hunter Region**  
**Environment Protection and Regulation**

The Department of Environment and Conservation NSW is now known as  
the Department of Environment and Climate Change NSW

PO Box 488G, Newcastle NSW 2300  
117 Bull Street, Newcastle West, NSW 2302  
Tel: (02) 4908 6800 Fax: (02) 4908 6810  
ABN 30 841 387 271  
[www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

Department of **Environment and Climate Change** NSW