



NOISE MANAGEMENT PLAN

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Malabar Coal Management System Standard

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1 COMMITMENT AND POLICY

1.1 Background

Maxwell Ventures (Management) Pty Ltd, a wholly owned subsidiary of Malabar Coal Ltd (Malabar) owns and operates the Maxwell Infrastructure site located on Thomas Mitchell Drive, Muswellbrook. The Maxwell Infrastructure site (formerly Drayton Mine) includes the open cut workings, rehabilitation, coal handling and preparation facilities and the Antiene rail spur and loop. The Maxwell Infrastructure site is bordered by Mt Arthur Coal (MAC) to the west with Macquarie Generation's Bayswater Power Station adjoining the eastern and southern boundaries. The Antiene rural residential area exists to the north of the site.

Open cut coal extraction and mining activities commenced at the Maxwell Infrastructure site in 1983 and ceased in October 2016. The Maxwell Infrastructure site is currently in the closure phase of the operation with rehabilitation activities and some ancillary activities such as grading of roads and maintenance of equipment occurring.

1.2 Purpose

The purpose of this Noise Management Plan (NMP) is to ensure that statutory requirements are met, and to outline the controls to be implemented for the management of noise aspects associated with the Maxwell Infrastructure site. This NMP is one of a series of Environmental Management Plans that together form the Environmental Management System for the Maxwell Infrastructure site.

1.3 Scope

This Plan applies to all activities within the Maxwell Infrastructure site. It addresses the relevant conditions of the Maxwell Infrastructure Project Approval PA 06_0202, Antiene Rail Spur Development Consent DA 106-04-00 as well as conditions of the Environmental Protection Licence (EPL) 1323.

As per Schedule 2, Condition 5 of PA 06_0202, no mining operations can take place on site after 31 December 2017. Mining operations includes all coal extraction, processing and transportation activities. As such, some conditions of DA 106-04-00 may not be applicable. However, the conditions associated with PA 06_0202 are anticipated to address all relevant aspects of DA 106-04-00.

1.4 Objectives

The objectives of this NMP are to:

- Identify the potential noise impacts;
- Ensure all relevant statutory requirements are met;
- Detail the controls that are implemented to minimise noise impacts;
- Detail the noise monitoring system to assess noise impacts;
- Provide a protocol to assess monitoring results against noise impact assessment criteria to evaluate compliance;
- Manage noise related community complaints in a timely and effective manner; and
- Detail the procedure for reporting noise impact assessment criteria exceedances to relevant stakeholders.

1.5 Statutory Requirements

Current statutory requirements are set out in Project Approval PA 06_0202 and Development Consent DA 106-04-00 and Environment Protection Licence (EPL) 1323. The various conditions that relate to noise management and where they are referenced in this document are detailed in **Appendix 1**.

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2 PLANNING

2.1 Potential Impacts

The key noise issues managed at the Maxwell Infrastructure site include noise from operating machinery and equipment. Activities associated with the closure phase of the operation include capping, shaping and rehabilitation of disturbed land. As per Schedule 2, Condition 5 of PA 06_0202, no coal handling, processing or train loading activities can occur after 31 December 2017. As such noise impacts are anticipated to be minimal with the noise monitoring program designed to reflect this.

2.2 Noise Model

In 2007, an Environmental Assessment (EA) for a mine extension was undertaken that included a comprehensive noise assessment of the site. The noise model that was used for the noise assessment is validated on an annual basis by an acoustic consultant. The noise model is validated by comparing actual attended noise monitoring data with the predictions made in the noise model under comparable meteorological conditions. If attended monitoring results are higher than those modelled in the 2007 EA, the acoustic consultant will review the results and model inputs to determine the cause of the variation. The results of this review will be reported in the Annual Environmental Management Report (AEMR).

2.3 Noise Impact Assessment Criteria

The impact assessment criteria for the Maxwell Infrastructure site are detailed in Schedule 3, Condition 1 of PA 06_0202 and outlined in **Table 1**. The criteria apply for all residences on privately owned land.

If Maxwell Infrastructure 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 of Planning and Environment (DPE) and the Office of Environment and Heritage (OEH), then Maxwell Infrastructure may exceed the noise limits in **Table 1** in accordance with the negotiated noise agreement.

Table 1. Impact Assessment Criteria

Land Number*	Day	Evening	Night	
	<i>L_{Aeq(15 min)}</i>	<i>L_{Aeq(15 min)}</i>	<i>L_{Aeq(15 min)}</i>	<i>L_{A1(1 min)}</i>
34	35	35	36	45
29	35	35	36	47
31	35	35	37	47
33, 86	35	35	38	45
32	35	35	40	47
71, 75	35	35	41	47
70	35	36	41	47
76	35	36	42	47
28	35	37	40	47
69	35	37	41	47
13	36	36	35	45
12	36	36	36	47
25	36	37	37	47
26	36	37	38	47
27	36	37	39	47
72	36	37	42	47
17	37	38	36	47
21, 22	38	38	38	45
18	38	39	38	47
20, 61	39	40	39	45

Land Number*	Day	Evening	Night	
	<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{Aeq}(15 min)</i>	<i>L_{A1}(1 min)</i>
14	40	39	38	47
19	40	40	39	47
16	41	41	39	47
23	35	35	35	47
All other privately-owned lands	35	35	35	45

* For land identification numbers, refer to the document titled "Drayton Mine Environmental Assessment, prepared by Hansen Bailey for Anglo Coal (Drayton Management) Pty Limited August 2007.

2.4 Land Acquisition Criteria

The land acquisition criteria for the Maxwell Infrastructure site are detailed in Schedule 3, Condition 2 of PA 06_0202 and outlined in **Table 2**. The criteria apply for all residences on privately owned land.

Table 2. Land Acquisition Criteria

Land Number	Day/Evening/Night
	<i>L_{Aeq}(15 min)</i>
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 percent of, any privately-owned land	40

2.5 Cumulative Noise Criteria

The cumulative noise criteria for the Maxwell Infrastructure site are detailed in Schedule 3, Condition 3 of PA 06_0202 and outlined below. The criteria apply for all residences on privately owned land.

- *L_{Aeq}* (11 hour) 50 dB(A) – Day
- *L_{Aeq}* (4 hour) 45 dB(A) – Evening
- *L_{Aeq}* (9 hour) 40 dB(A) – Night

The cumulative noise acquisition criteria for the Maxwell Infrastructure site are detailed in Schedule 3, Condition 4 of PA 06_0202 and outlined below. The criteria apply for all residences on privately owned land.

- *L_{Aeq}* (11 hour) 53 dB(A) – Day
- *L_{Aeq}* (4 hour) 48 dB(A) – Evening
- *L_{Aeq}* (9 hour) 43 dB(A) – Night

2.6 Noise Mitigation

The noise mitigation measures outlined in **Section 4.6** of the noise impact assessment of the EA have been completed. However, upon receiving a written request from the owner of:

- the following land – 14, 16, 19, 20, 21, 22, 28, 32, 33, 61, 69, 70, 71, 72, 75, 76, 86; or
- 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**,

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 landowner. These additional mitigation measures must be reasonable and feasible.

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Table 3. Noise Mitigation Criteria dB(A)

Land Number	L _{Aeq} (15 minute)
12, 17, 18, 23, 25, 26, 27, 29, 31	40
All other private land owners	38

3 IMPLEMENTATION

The Maxwell Infrastructure noise management system includes a comprehensive set of both proactive and reactive control measures and monitoring tools designed to minimise the generation of noise from mining activities.

Several noise mitigation measures were identified during the EA process to reduce noise generation during active mining operations. However, following the cessation of active mining and processing operations in October 2016 the mitigation measures that will continue to be implemented during the rehabilitation and closure phase of the project include:

- Only one loading unit would work in the north pit during the evening or night.
- A risk assessment will be undertaken for any night work in the north pit and signed off by the Operations Manager and Manager Environment and Community.
- All equipment on site will be maintained in proper and efficient condition.
- Noise levels will be monitored by the Open Cut Examiner (OCE) and operations modified or ceased to maintain noise levels below the impact assessment criteria.

Reactive noise management will mainly be in the form of a response to a community complaint, a noise related event or a measured exceedance of the impact assessment criteria. An investigation into the event will be conducted with the use of the real time noise monitoring equipment located in the Antiene rural residential area together with the location of equipment considering factors such as other noise sources, topography, location and meteorological conditions. In the event the noise source is related to activities at site, modifications to the sites equipment or work area will be undertaken.

4 MEASUREMENT AND EVALUATION

4.1 Noise Monitoring

The noise monitoring program includes a combination of continuous and attended monitoring measures which are carried out in accordance with the relevant requirements set out in the NSW Noise Policy for Industry (2017). Noise monitoring is undertaken in accordance with the statutory requirements associated with the Maxwell Infrastructure Development Consent conditions, EPL requirements and Australian Standards which specify required methods of sampling, analysis and frequency of monitoring.

Attended Noise Monitoring

To assess compliance with noise impact assessment criteria, land acquisition criteria, cumulative criteria and EIS/EA predictions for noise, Malabar Coal will undertake attended monitoring in the Antiene rural residential area. Measurement of the noise environment for compliance assessment is conducted by an acoustic consultant at five (5) locations to the north of the site (refer to **Figure 1**). The compliance assessment for the remaining residential sites are determined by the acoustic consultant using the noise model to extrapolate from the measured values.

Attended noise monitoring will be performed every six months and will be conducted for day, evening and night time periods (refer to **Section 8** for applicable monitoring times) to assess the site against the limits set out in the Development Consents and EPL. The noise monitoring consultant will plan to target noise monitoring to occur on nights where forecast meteorological conditions are expected to be within Development Consent and EPL requirements for noise monitoring to minimise data exclusions due to adverse weather conditions.

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Noise monitoring locations will be reviewed and, where necessary, modified over the life of operations according to monitoring results, physical changes in mining operations or following the acquisition of private property by Malabar Coal or neighbouring mining operations.

Real Time Noise Monitoring

Real-time noise monitoring at the Maxwell Infrastructure site involves the use of a BarnOwl system. One (1) Barnowl unit is located in the Antiene rural residential area (refer **Figure 1**) and is considered representative of the noise levels in the Antiene rural residential area. The system carries out 24-hour directional noise monitoring, and records and maintains noise emission files. The system continually feeds the noise data back to a central repository on a real time basis to allow the site to respond to high level noise events or community complaints.

Meteorological Monitoring

Meteorological monitoring is undertaken at the Maxwell Infrastructure site in accordance with the Development Consents. The meteorological monitoring provides the site with information to allow for the most appropriate response to changes in weather conditions. The parameters monitored at the meteorological station are as follows:

- Wind Speed and Direction
- Temperature
- Relative Humidity
- Rainfall
- Barometric Pressure
- Sigma Theta

One (1) meteorological station is located to the north of the site near the CHPP (refer to **Figure 1**). The weather station has been installed and operated in accordance with the requirements of Australian Standard AS2922-1987 Ambient Air – Guide for the siting of sampling units.

Certain meteorological conditions including temperature inversions and wind may increase noise levels by focusing sound-wave propagation paths at a single point.

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Figure 1. Noise Monitoring Locations

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4.2 Compliance Assessment

Attended noise monitoring is used to quantify and describe the acoustic environment around the site. The results of the attended noise monitoring are recorded, analysed and compared with the noise criteria defined in Project Approval PA 06_0202 to assess compliance.

In the event an attended noise monitoring result is identified as an exceedance of the performance criteria outlined in Schedule 3 of the Project Approval, the steps in **Table 4** will be followed.

Table 4. Steps Following a Performance Criteria Exceedance

Performance Criteria Exceedance Steps
Step 1
The acoustic technician will contact the mine and advise that a noise monitoring reading has exceeded the noise criteria and is attributable to the mine operation.
Step 2
Within 75 minutes of the exceedance a second 15-minute reading is to be taken by the acoustic technician at the same monitoring location.
Step 3
If the second reading is under the criteria, the consultant will record the result as a pass and move to the next monitoring site.
Step 4
If the second reading exceeds the criteria and is attributable to the mine operation and is taken in valid meteorological conditions, the consultant will record that the site has failed and is deemed as a 'noise affected period' and considered a noise non-compliance incident at that site and move to the next monitoring site in accordance with the noise monitoring schedule. Note: An additional noise monitoring test is to be scheduled at the site within 1 week.
Step 5
An environmental incident investigation will be performed to determine the causes for the non-compliance. Affected landowners, DPE (the Secretary) and the EPA will be advised of the incident in accordance with condition 3 and 4 of Schedule 5 of PA 06_0202 which is detailed in Section 4.3

To determine the impact of the Maxwell Infrastructure on sleep arousal the attended noise surveys include the assessment of the $L_{A1,1\text{minute}}$ noise levels generated by the mine. The measured $L_{A1,1\text{minute}}$ noise levels are then compared with the relevant sleep arousal criteria to assess compliance of the mine with the relevant Project Approval and EPL criteria.

4.3 Incident Notification

If monitoring results identify an exceedance of the criteria outlined in **Table 1**, Maxwell Infrastructure will notify the DPE and EPA. Notification will be undertaken within 24 hours of detecting the exceedance. Outcomes of the investigation will be provided to DPE and the EPA in the form of a written report within six days of detecting the exceedance. The report will provide the following information:

- describe the date, time, and nature of the exceedance / incident;
- identify the cause (or likely cause) of the exceedance / incident;
- describe what action has been taken to date; and
- describe the proposed measures to address the exceedance / incident.

Any affected landowners will be notified following the outcomes of the investigation and report to the DPE and EPA. Details of any non-compliances will also be included in the Annual Environmental Management Report (AEMR).

4.4 Cumulative Noise Management

Both Maxwell Infrastructure and MAC use the Antiene Rail Spur to transport coal to the Port of Newcastle. Historically, noise complaints have commonly involved train movements as the likely source of noise due to the close proximity of the rail spur to the Antiene rural residential area. In the

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event a landowner has a concern regarding cumulative noise emissions in excess of the cumulative criteria detailed in **Section 2.5**, the following protocol is applied:

- The parties jointly consult with the affected landowner to determine the nature of the landowner's concerns.
- The parties investigate site practices at the respective operations and determine the likely cause of any noise limit exceedance.
- If required, attended noise monitoring will be conducted at the affected residence to determine noise impacts.
- If required, the parties investigate with the landowner any amelioration of noise impacts.

Maxwell Infrastructure is not presently transporting coal. If Maxwell Infrastructure receives a noise complaint regarding rail noise during this period of inactivity, it will be forwarded to MAC for follow up. In the event Malabar Coal were to recommence coal handling, processing and transporting operations following the granting of a future development consent, the NMP will be updated in consultation with nearby mines and submitted to the secretary for approval.

4.5 Corrective Action

Table 5 summarises the potential noise issues that may arise and the appropriate corrective action(s) that will be taken.

Table 5. Corrective Actions

Issue	Action(s)
Exceedance of noise criteria	Investigation of exceedance, undertaking mitigating measures where applicable. Report exceedance to regulatory agencies, senior management and notify impacted residents as required.
Community complaint	Investigation of complaint, taking mitigating measures into account where applicable and provide feedback to complainant. Report complaint to senior management. Provide feedback to production personnel, where relevant. If the complaint relates to another site, the Manager E&C will contact the other site and advise of the nature and results of the investigation.

4.6 Noise Mitigation

All noise mitigation measures have been completed for the site. In the event noise monitoring is recorded above the levels detailed in **Table 3**, the site will advise the residents of their entitlements and implement reasonable and feasible noise mitigation measures in accordance with the requirements of PA 06_0202 if the site has not already completed this.

In the event Maxwell Infrastructure and the landowner cannot agree on the measures to be implemented or there is a dispute about the implementation of these measures, either party may refer the matter to the Director-General for resolution.

4.7 Land Acquisition

In the event monitoring results demonstrate that noise generated by the project exceed the criteria in **Table 2** at any residence on privately-owned land, or on more than 25 percent of any privately-owned land, Malabar, upon receiving a written request from the landowner, will acquire the land in accordance with the procedures in conditions 8-10 of Schedule 4 of PA 06_0202.

4.8 Complaints Handling

In the event that a complaint or enquiry is received regarding noise, it is immediately investigated and managed in accordance with Malabar Coal's Community Complaints and Enquiries procedure. 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:

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- 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, methods to manage the source of the complaint and minimise the chance of a recurrence or the potential to generate further complaints.

All enquiries and/or complaints are recorded in a database and are presented on a quarterly basis at the Community Consultative Committee (CCC) as well as on an annual basis in the AEMR.

4.9 Continuous Improvement

Maxwell Infrastructure will continuously investigate and implement reasonable and feasible noise mitigation measures on site. Feedback from the noise monitoring results and noise complaints may be used to assess noise impacts and determine where improvements or mitigation measures are required. These measures will be reported on in the AEMR.

5 REVIEW AND IMPROVEMENT

5.1 Review Schedule

This NMP will be reviewed in accordance with the Maxwell Infrastructure Environmental Management Strategy, that is:

- Every three years;
- Following an independent environmental audit, with findings relevant to this Plan;
- Following an environmental incident or community complaint relevant to the control measures outlined in this Plan; or
- Following relevant outcomes from a risk assessment or change management process.

If any significant modifications to the NMP are required as an outcome of the review, relevant government agencies will be consulted regarding the changes and the revised Plan will be submitted to DPE for approval. Minor changes such as formatting edits may be made with version control on the Malabar Coal website www.malabarcoal.com.au.

5.2 Reporting

Environmental monitoring data summaries, compliance with consent and licence conditions and any other required modifications to noise monitoring at Maxwell Infrastructure will be reported in the AEMR. Summaries will be made available to the public via the Malabar Coal website (<http://malabarcoal.com.au/maxwell-infrastructure-downloads>) and noise monitoring results will also be presented at CCC meetings.

Malabar Coal will provide copies of the approved NMP to the EPA, Muswellbrook Shire Council (MSC) and the CCC within fourteen days of approval, or as otherwise agreed to by the Director-General.

5.3 Training and Communication

Generic noise management training is provided to all employees and contractors through the Site Familiarisation process. From time to time, workforce communication and toolbox talks allow for discussion of the objectives and requirements of this and any other relevant Management Plans.

To ensure the effective implementation of noise management controls, all Maxwell Infrastructure personnel involved in the supervisory and operator roles will undertake a more detailed awareness training package.

5.4 Records Management

All noise monitoring data is maintained in accordance with the Environmental Management Strategy and maintained on the premise for a period of at least 4 years.

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6 REVISION STATUS

A summary of the document history is outlined below in **Table 6**.

Table 6. Document Revision Status

Issue	Issue Date	Review Team	Details of Change
0.0	2008		Development of the Noise Monitoring Program document.
0.1	Oct 2012		This document was adapted from the existing Noise Monitoring Program 2008. There was a document control issue which was not identified, and the document was therefore not added to the Drayton Safety, Health, Environment & Community Management System (SHECMS) for tracking.
0.2	June 2014		This document was updated and sent to DPE for approval (received 11 June 2014). There was a document control issue which was not identified, and the document was therefore not added to the SHECMS for tracking.
1.0	Dec 2015		<p>This document supersedes the previous document titled 'Noise Monitoring Program', 2008.</p> <p>This document is the original version of the Noise Management Plan according to the site document control system, although previous versions exist as noted above. The previous versions were not properly document controlled. This version will be added to SHECMS once approved by the General Manager.</p> <p>Reference to NSW Department of Planning and Infrastructure was changed to NSW DPE but the document is otherwise unchanged from the version approved by DPE in June 2014.</p>
2.0	July 2017	B York / N Dobbins M Lord D Pisters	<p>This review has been conducted to address comments made by the DPE following its review of the December 2015 version of the NMP. The review includes the following:</p> <ul style="list-style-type: none"> • Update to reflect current operational status and proposed site activities; • Removal of supplementary attended monitoring as a standard monitoring procedure; • Removal of the section on "Unattended Monitoring Alert Received". This change reflects current site activities and the small project team remaining on site; and • Update responsibilities on site, following the cessation of mining and processing operations of Drayton Mine in October 2016.
3.0	Aug 2018	G Cook D McLaughlin R Hayes	<p>This management plan was revised in response to the following</p> <ul style="list-style-type: none"> • Change of ownership of the site to Malabar Coal. • Change in responsibilities. • Change in operational aspects at the Maxwell Infrastructure site. • Changes in the management of noise related activities and controls. • Removal of a Barnowl noise monitoring location. • Change in frequency of attended noise monitoring to six-monthly due to reduced activities. • Change in the number of attended noise monitoring locations from 8 to 5.

7 RESPONSIBILITIES

Table 7 outlines the responsibilities associated with this management plan.

Table 7. Responsibilities

Position	Responsibilities		
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Operations Manager	<ul style="list-style-type: none"> • Provide adequate resources for the implementation of this Plan
Manager Environment and Community	<ul style="list-style-type: none"> • Oversee the implementation of the NMP. • Coordinate monitoring in accordance with this Plan. • Notify regulatory authorities and affected landholders of any noise related exceedance and undertake the associated reporting. • Coordinate periodic reviews of this Plan. • Ensure all personnel are trained in accordance with this Management Plan.
Environmental Coordinator	<ul style="list-style-type: none"> • Assist the Manager Environment and Community as required in implementation of this Plan. • Assist the Manager Environment and Community with investigations of noise criteria exceedances, incidents or complaints. • Liaise with the Manager Environment and Community to maintain the environmental hotline. • Coordinate the implementation of the noise monitoring program in accordance with this Plan. • Coordinate the management of records and reporting of noise monitoring results in accordance with this plan. • Manage noise related complaints in accordance with the complaints management procedure. • Provide training to all relevant personnel
Mining Supervisor / Open-Cut Examiner (OCE)	<ul style="list-style-type: none"> • Respond to potential exceedances of noise criteria as identified by the continuous monitoring system. • Assist the Environment and Community Coordinator with investigations into noise exceedances, incidents or complaints.
All Personnel	<ul style="list-style-type: none"> • Comply with the requirements of this Plan. • Report any equipment which is generating excessive noise to the OCE.

8 DEFINITIONS

Term	Definition
AEMR	Annual Environmental Management Report
AS	Australian Standards
CCC	Community Consultative Committee
CHPP	Coal Handling Preparation Plant
DC	Development Consent
Day	Defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays.
DPE	NSW Department of Planning and Environment
E&C	Environment and Community
EA	Environmental Assessment
EPA	NSW Environmental Protection Authority
EPL	Environment Protection Licence
Evening	Defined as the period of 6pm to 10pm.
INP	NSW Noise Policy for Industry
L_{Aeq}	Equivalent A-weighted continuous sound level
L_{Amax}	Maximum A-weighted sound level
L_{A1}	One percentile A-weighted sound level
L_{A10}	Tenth percentile A-weighted sound level
L_{A50}	Fiftieth percentile A-weighted sound level
L_{A90}	Ninetieth percentile A-weighted sound level
MAC	Mt Arthur Coal
MSC	Muswellbrook Shire Council
Night	Defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am on Sundays and Public Holidays.
NMP	Noise Management Plan
OCE	Open Cut Examiner
OEH	Office of Environment and Heritage
PA	Project Approval (Development Consent)
SMS	Short Message Service
Toolbox Talk	A forum where information is presented to the crews

- Project Approval 06-0202 – Drayton Mine Extension (inc Mod 1 and Mod 2)
- Development Consent 106-04-00 – Drayton Rail Loop and Antiene Rail Spur
- Drayton Mine Environmental Assessment 2007
- Drayton Mine Environmental Assessment Modification 1 (2009)
- Drayton Mine Environmental Assessment Modification 2 (2012)
- Environment Protection Licence 1323
- The Protection of the Environment Operations Act, 1997 (PoEO Act)
- Environmental Planning and Assessment Act, 1979 (EP&A Act)
- NSW Noise Policy for Industry (2017)

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Appendix 1 - Statutory Requirements for Noise Management

Statutory Requirements for Project Approval PA 06_0202

Condition	Details	Reference
Schedule 3 Condition 1	<p>Noise Impact Assessment Criteria</p> <p>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.</p> <p><i>(Table 1: refer to Table 1 in section 2.3 of this management plan for details)</i></p> <p>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 OEH, then the Proponent may exceed the noise limits in Table 1 in accordance with the negotiated noise agreement</p>	<p>Section 2.3 Section 3 & Section 4.2</p>
Schedule 3 Condition 2	<p>Land Acquisition Criteria</p> <p>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.</p> <p><i>(Table 2: refer to Table 2 in section 2.3 of this management plan for details)</i></p>	<p>Section 2.4 & Section 4.7</p>
Schedule 3 Condition 3	<p>Cumulative Noise Criteria</p> <p>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"> ➤ LAeq (11 hour) 50 dB(A) – Day ➤ LAeq (4 hour) 45 dB(A) – Evening ➤ LAeq (9 hour) 40 dB(A) – Night 	<p>Section 2.5 & Section 4.4</p>
Schedule 3 Condition 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"> ➤ LAeq (11 hour) 53 dB(A) – Day ➤ LAeq (4 hour) 48 dB(A) – Evening ➤ LAeq (9 hour) 43 dB(A) – Night 	<p>Section 2.5 & Section 4.4</p>
Schedule 3 Condition 5	<p>Noise Mitigation</p> <p>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>	<p>Section 2.6 & Section 4.6</p>

Condition	Details	Reference
<p>Schedule 3 Condition 6</p>	<p>Upon receiving a written request from the owner of:</p> <ul style="list-style-type: none"> ➤ The following land: 14,16,19,20,21,22,28,32,33,61,69,70,71,72,75,76,86; or ➤ 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, <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.</p> <p>(Table 3: refer to Table 3 in section 2.3 of this management plan for details)</p> <p>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>	<p>Section 2.6 & Section 4.6</p>
<p>Schedule 3 Condition 7</p>	<p>Continuous Improvement</p> <p>The proponent shall:</p> <ol style="list-style-type: none"> a) Implement all reasonable and feasible noise mitigation measures; b) Investigate ways to reduce the noise generated by the project, including maximum noise levels which may result in sleep disturbance; and c) Report on these investigations and the implementation and effectiveness of these measures in the AEMR. 	<p>Section 4.9</p>
<p>Schedule 3 Condition 8</p>	<p>Noise Management Plan</p> <p>The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must:</p> <ol style="list-style-type: none"> a) Be submitted to the Director-General by 31 October 2012 for approval; b) Describe the measures that would be implemented (including real-time noise management system that employs both reactive and proactive mitigation measures) to ensure; <ul style="list-style-type: none"> ➤ Best management practice is being employed; ➤ Compliance with the relevant conditions of this approval; c) Describe the proposed noise management system in detail; d) Include a noise monitoring program that: <ul style="list-style-type: none"> ➤ Uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the project; ➤ Adequately supports the proactive and reactive noise management system on site; ➤ Includes a protocol for determining exceedances of the relevant conditions of this approval; ➤ Evaluates and reports on the effectiveness of the noise management on site; ➤ Provides for the annual validation of the noise model for the project; and e) Include a protocol that has been prepared in consultation of nearby mines (including Mt Arthur mine) to minimise the cumulative noise impacts of the mines. 	<p>This NMP</p> <p>Section 6 Section 3</p> <p>Section 4 Section 4</p> <p>Section 4.4</p>

Table 8: Statutory Requirements for Development Consent DA 106-04-00.

Note: The noise criteria outlined in the Drayton Rail Loop and Antiene Rail Spur Development Consent (106-04-00) are overridden by the conditions in the Project Approval PA 06_0202 where inconsistencies exist.

Condition	Details	Reference																		
<p>Section 5.3.1</p>	<p>Noise Levels</p> <p>(a) Not applicable as only relate to first three years of operation.</p> <p>(b) After three years from the date of this consent, the applicant shall cooperate with the relevant mining operators to limit the cumulative noise contributions from the Drayton rail loop and Antiene rail spur such that these noise levels in conjunction with the total cumulative noise contributions from the operations of the Drayton coal mine, Bayswater rail loading facility and rail loop, Bayswater mine and the Antiene rail spur, and proposed Mount Arthur North project if approved, do not exceed the dB(A) Leq(9 hour/4 hour/11 hour) noise limits in Table 2 at any non-mine owned dwellings (refer also condition 10.1). The applicant shall also ensure that the noise levels from the Drayton rail loop and Antiene rail spur alone do not exceed the dB(A) Leq(15 minute) noise limits also shown in Table 2 after three years from the date of this consent.</p> <p style="text-align: center;">Table 2: Noise limits</p> <table border="1" data-bbox="347 748 1246 913"> <thead> <tr> <th data-bbox="347 748 651 819">Night Time (10pm – 7am)</th> <th data-bbox="651 748 954 819">Evening Time (6pm – 10pm)</th> <th data-bbox="954 748 1246 819">Day Time 7am – 6pm)</th> </tr> </thead> <tbody> <tr> <td data-bbox="347 819 651 869">40 Leq(9 hour) dB(A)</td> <td data-bbox="651 819 954 869">40 Leq(4 hour) dB(A)</td> <td data-bbox="954 819 1246 869">40 Leq(11 hour) dB(A)</td> </tr> <tr> <td data-bbox="347 869 651 913">38 Leq(15 minute) dB(A)</td> <td data-bbox="651 869 954 913">38 Leq(15 minute) dB(A)</td> <td data-bbox="954 869 1246 913">38 Leq(15 minute) dB(A)</td> </tr> </tbody> </table> <p>(c) Notwithstanding condition 5.3.1 (b) above, the Director-General may otherwise agree to a request from the applicant to maintain the noise criteria of Table 1, provided that the Director- General is satisfied that the applicant can justify that it cannot achieve the noise criteria in Table 2 by:</p> <ul style="list-style-type: none"> (i) Providing full detail of whatever means are required to achieve the noise levels in Table 2, and a quantitative analysis of the cost effectiveness of such means to the satisfaction of the EPA. (ii) Following the analysis at (i) above, the applicant is required to determine, to the satisfaction of the EPA, the best alternative mitigation measures that might not achieve the levels in Table 2, but are considered reasonable and feasible and will be put in place by the applicant. <p>(d) Notwithstanding sub clauses (a), (b) and (c) above, the area of noise affectation for the cumulative operation of the Drayton rail loop, Antiene rail spur, Drayton coal mine, Bayswater rail loading facility and rail loop, Bayswater mine, Antiene rail spur, and proposed Mount Arthur North project if approved, is defined by demonstrated exceedance of noise levels at any non-mine owned dwellings of the dB(A) Leq(9 hour/4 hour/11 hour) noise limits shown in Table 3 below. The area of noise affectation for the Drayton rail loop and Antiene spur is defined by demonstrated exceedance of noise levels at any non-mine owned dwellings of the dB(A) Leq(15 minute) noise limits also shown in Table 3 below.</p> <p style="text-align: center;">Table 3: Noise Affectation Criteria</p> <table border="1" data-bbox="347 1554 1246 1720"> <thead> <tr> <th data-bbox="347 1554 651 1626">Night Time (10pm – 7am)</th> <th data-bbox="651 1554 954 1626">Evening Time (6pm – 10pm)</th> <th data-bbox="954 1554 1246 1626">Day Time 7am – 6pm)</th> </tr> </thead> <tbody> <tr> <td data-bbox="347 1626 651 1675">45 dB(A)L eq(9hour)</td> <td data-bbox="651 1626 954 1675">45 dB(A)L eq(4hour)</td> <td data-bbox="954 1626 1246 1675">45 dB(A)L eq(11hour)</td> </tr> <tr> <td data-bbox="347 1675 651 1720">43 dB(A)L eq(15 minute)</td> <td data-bbox="651 1675 954 1720">43 dB(A)L eq(15 minute)</td> <td data-bbox="954 1675 1246 1720">43 dB(A)L eq(15 minute)</td> </tr> </tbody> </table> <p>(e) In the event that a landowner or occupier considers that noise from the project at their dwelling is in excess of:</p> <ul style="list-style-type: none"> ➤ The noise levels depicted in Table 1 within the first three years from the date of this consent; or ➤ The noise levels depicted in Table 2 after the first three years from the date of this consent (or as agreed by the Director-General); or ➤ The noise levels depicted in Table 3; or ➤ That a landowner considers that the noise levels depicted in Table 3 is being exceeded over more than 25% of their vacant land, and the Director- 	Night Time (10pm – 7am)	Evening Time (6pm – 10pm)	Day Time 7am – 6pm)	40 Leq(9 hour) dB(A)	40 Leq(4 hour) dB(A)	40 Leq(11 hour) dB(A)	38 Leq(15 minute) dB(A)	38 Leq(15 minute) dB(A)	38 Leq(15 minute) dB(A)	Night Time (10pm – 7am)	Evening Time (6pm – 10pm)	Day Time 7am – 6pm)	45 dB(A)L eq(9hour)	45 dB(A)L eq(4hour)	45 dB(A)L eq(11hour)	43 dB(A)L eq(15 minute)	43 dB(A)L eq(15 minute)	43 dB(A)L eq(15 minute)	<p>Section 2.5 & Section 4.4 Noise limits used from PA 06_0202.</p> <p>Refer to noise limits in PA 06_0202.</p> <p>Refer to noise limits in PA 06_0202.</p> <p>Refer to PA 06_0202 & Section 4</p>
Night Time (10pm – 7am)	Evening Time (6pm – 10pm)	Day Time 7am – 6pm)																		
40 Leq(9 hour) dB(A)	40 Leq(4 hour) dB(A)	40 Leq(11 hour) dB(A)																		
38 Leq(15 minute) dB(A)	38 Leq(15 minute) dB(A)	38 Leq(15 minute) dB(A)																		
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43 dB(A)L eq(15 minute)	43 dB(A)L eq(15 minute)	43 dB(A)L eq(15 minute)																		

Condition	Details	Reference
	<p>General is satisfied that an investigation is required, the Applicant shall upon the receipt of a written request:</p> <ul style="list-style-type: none"> ➤ Consult with the landowner or occupants affected to determine their concerns. ➤ Make arrangements for and bear the costs of, in consultation with the owners of Bayswater rail loading facility and rail loop, appropriate independent noise investigations in accordance with the noise management plan, and to the satisfaction of the Director-General, to quantify the impact and determine the source of the effect and contribution of the Drayton rail loop and Antiene rail spur. ➤ Modify the coal transportation activity in accordance with a noise reduction plan prepared as part of the noise management plan, if exceedances are demonstrated to result from the coal transportation activity. This shall include: <ul style="list-style-type: none"> ➤ Introduction of additional controls, either on noise emission from individual sources on the site or on site operations or modify operations, to ensure that the criteria in the Table 2 above are achieved. ➤ With the agreement of the landowner, undertaking of noise control at the dwelling to achieve acceptable internal noise levels. ➤ Entering into an agreement with the owner of Bayswater rail loading facility and rail loop and the landowner, or provide such other forms of benefit or amelioration as may be agreed between the parties as providing acceptable amelioration/benefit for the noise levels experienced. ➤ Conduct follow-up investigations to the satisfaction of the Director-General, where necessary. <p>(f) If the independent noise investigations in sub-clause (e) above confirm that noise limits in Table 3 are being exceeded, the Applicant shall at the written request of the owner acquire the relevant property. Acquisition shall be in accordance with the procedures set out in Condition 10.2 and 10.3.</p> <p>(g) If continued complaints and noise investigations confirm that noise limits in Table 1 and/or 2 are being exceeded, but are less than the noise levels in Table 3, the Applicant shall continue to negotiate with the owner of the Bayswater rail loading facility and rail loop and the landowner until an acceptable resolution is reached.</p> <p>(h) Further independent investigations shall cease if the Director-General is satisfied that the relevant consent limits are not being exceeded and are unlikely to be exceeded in the future.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The noise emission limits in this condition apply for adverse weather conditions. "Adverse" weather conditions means the presence of winds up to 3 metres per second, and/or temperature inversions for up to 4 degrees C per 100 metres. 2. Vacant land in this condition means the whole of the lot in a current plan registered at the Land Titles Office as at the date of this consent that does not have a dwelling situated on the lot and is permitted to have a dwelling on that lot. 	<p><i>Refer to PA 06_0202 & Section 4.7</i></p> <p><i>Refer to PA06_0202 & Section 4</i></p> <p><i>Section 4</i></p>
<p>Section 5.3.2</p>	<p>Noise Management Plan</p> <p>(a) The Applicant shall within three months of the date of this consent, prepare a Noise Management Plan for the Drayton rail loading facility and Antiene rail spur, to the satisfaction of the Director-General. The Plan shall be prepared in consultation with the owner of Bayswater rail loading facility with the aim of achieving a consistent approach in the preparation of the Drayton rail loading facility noise management plan. The Plan shall:</p> <ul style="list-style-type: none"> ➤ Include details of the conduct of noise investigations at three monthly intervals (unless otherwise agreed by the Director-General) to evaluate, assess and report the both the Leq (15 minute) (project alone) and Leq(9 hour/4 hour/11 hour) (cumulative) noise emission levels due to normal coal transport operations under adverse weather conditions. ➤ Include details of the proposed methodologies including establishing the Drayton rail loop and Antiene rail spur operating configuration; determining survey intervals; weather conditions and seasonal variations; selecting variations, locations, periods and times of measurements. ➤ Outline the design of any noise monitoring and noise modelling or other studies including the means for determining the noise levels emitted by the operations. ➤ Particularly focus on the management of night-time noise (10.00pm – 7.00am) for each year of operation. 	<p><i>This NMP</i></p>

Condition	Details	Reference
	<ul style="list-style-type: none"> ➤ Identify noise affected properties and the relevant noise limits consistent with the EIS, the additional noise information requested by the EPA and supplied by Umwelt (Australia Pty Limited) in a letter dated 15 June 2000; with results of extended noise monitoring and in a letter dated 20 July 2000 and accompanying report titled "Response to EPA Submission of 5 July 2000; and the Drayton Coal Pty Ltd Response to Summary of Submissions received from DUAP on 2 June 2000, prepared by Umwelt (Australia) Pty Ltd, August 2000. ➤ Specify the procedures for a noise-monitoring program for the purpose of undertaking independent noise investigations, in consultation with the owners of Bayswater mine, as necessary. ➤ Outline the procedure to notify property owners and occupiers likely to be affected by noise from the operations. ➤ Establish a protocol for handling noise complaints that include recording, reporting and acting on complaints. ➤ Record appropriate mechanisms for community consultation. ➤ Outline mitigation measures to be employed on the site to limit noise emissions. ➤ Identify longer-term strategies directed towards mitigating noise levels that exceed the noise criteria in Table 2 under adverse meteorological conditions. ➤ Outline measures to be used to reduce the impact of intermittent, low frequency and tonal noise (including any truck reversing alarms). ➤ Specify measures to be taken to document any higher level of impacts or patterns of temperature inversions, and detail actions to quantify and ameliorate enhanced impacts if they lead to exceedance of the relevant noise criteria. ➤ Survey and investigate noise reduction measures, if required, from plant and equipment annually, subject to noise monitoring results and/or complaints received, and report in the AEMR at the conclusion of the first 12 months of operations and set targets for noise reduction taking into consideration valid noise complaints in the previous year. The Report shall also include remedial measures to achieve compliance with the specified noise goals. ➤ Include details of the integration of this plan with the existing Drayton mine Noise Management Plan, and its inter-relationship with the Bayswater rail facility noise management plan. <p>(b) Prior to the commencement of operations, the applicant shall ensure cladding is added to the northern side of the Drayton Coal Handling Facility, extending from ground level to the top of the conical section of both loading bins, with an internal facing of absorbing material and vibration isolated from the existing structure as described in the EIS.</p> <p>(c) The Applicant shall also:</p> <ul style="list-style-type: none"> ➤ Make copies of the Plans available to the EPA, MSC and CCC within fourteen days of approval, or as otherwise agreed to by the Director-General; and ➤ Include a summary of noise monitoring results in the AEMR. 	<p>Completed prior to operations commencing</p> <p>Section 5.2</p>
<p>Section 5.3.3</p>	<p>Noise Monitoring</p> <p>(a) The levels of noise emitted from the premises must be monitored for 72 hrs every 3 months unless otherwise agreed by the Director-General at locations agreed to in consultation with the EPA. The monitoring must determine the LAeq, 9hour, LAeq, 15min, LA10, 15min, LA90, 15min, and LA1, 1min and include an assessment of the impact of operational noise on adjoining residents.</p> <p>(b) Noise monitoring at the specified locations must be undertaken during daytime (7.00am- 6.00pm), evening (6.00pm-10.00pm) and night-time (10.00pm- 7.00am).</p>	<p>Condition superseded by PA 06_0202 Refer to Section 4.1</p> <p>Refer to EPL 1323 for monitoring times</p>

Table 9: Environmental Protection Licence 1323

Condition	Details	Reference
L3.1	<p>Noise generated at the premises must not exceed the noise limits presented in the table below. The noise limits in the table below represent the noise contribution from the premises.</p> <p>(Refer to Table 1 in section 2.3 of this management plan for details)</p> <p>Note: LAeq means the equivalent continuous noise level - the level equivalent to the energy average of noise levels occurring over a measurement period.</p> <p>Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays.</p> <p>Evening is defined as the period of 6pm to 10pm.</p> <p>Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am on Sundays and Public Holidays.</p> <p>These limits do not apply if the licensee has an approved agreement with the relevant owner/s of these residences to generate higher noise levels.</p> <p>Land identification numbers refer to the document titled "Drayton Mine Project Approval Modification Environmental Assessment, Table 1 & Figure 4, prepared by Hansen Bailey for Anglo Coal (Drayton Management) Pty Limited and dated July 2009</p>	<p>Section 2.3, Section 3 & Section 4.6</p>
L3.2	<p>To determine compliance with the LAeq(15 minutes) noise limits in condition L3.1 must be measured at, or computed for, the most affected point on or within the residential boundary, or at the most affected point within 30m of the dwelling (rural situations) where the dwelling is more than 30m from the boundary.</p> <p>Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.</p> <p>The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall be applied to the measured noise levels where applicable</p>	<p>Section 4.1</p>
L3.3	<p>To determine compliance with the LA1(1 minute) conditions L3.1 noise from the premises is to be measured at 1m from the dwelling facade.</p> <p>Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.</p>	<p>Section 4.1</p>
L3.4	<p>The Noise emission limits identified in condition L3.1 apply under metrological conditions of: - Wind speed up to 3m/s at 10 meters above ground level; or - Temperature inversion conditions of up to 3 degrees/100m and wind speed up to 2m/s at 10 meters above the ground.</p>	<p>Section 4.1</p>

Appendix 2 – Regulatory correspondence regarding this Noise Management Plan



Planning Services
Resource Assessments
Contact: Jack Murphy
Phone: 8217 2018
Email: jack.murphy@planning.nsw.gov.au

Mr Glenn Cook
Environmental Coordinator
Malabar Coal Limited
Thomas Mitchell Drive
Muswellbrook NSW 2333

Email: gcook@malabarcoal.com.au

Dear Mr Cook,

**Maxwell Infrastructure (PA 06_0202 and DA 106-04-00)
Noise Management Plan**

I refer to your email dated 16 October 2018, submitting the revised Noise Management Plan for approval.

The Department has reviewed this plan and considers that it meets condition 8 of Schedule 3 of PA 06_0202 and condition 5.3.2 of Schedule 2 of DA 106-04-00. Consequently, the Secretary has approved this plan.

Please ensure a finalised copy of this plan is made available on the company's website.

Should you have any enquiries in relation to this matter, please contact Jack Murphy at the details above.

Yours sincerely,

A handwritten signature in blue ink that reads 'Megan Dawson' followed by the date '16/10/18'.

Megan Dawson
A/Director
Resource Assessments
As nominee of the Secretary

Department of Planning & Environment
320 Pitt Street Sydney NSW 2000 | GPO Box 38 Sydney NSW 2001 | www.planning.nsw.gov.au

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