

# MAC-ENC-PRO-056

## NOISE MONITORING PROGRAM

### Document Owner

---

Donna McLaughlin, Environment Superintendent

### Document Approver

---

Rob Hayes, Environment Manager

### Revision History

---

Version No.	Date Published	Details
1.2	30/3/2012	Draft provided to DP&I incorporating DP&I comments.
1.3	19/4/2012	Unattended noise monitoring removed as a compliance measure. Frequency of attended noise monitoring program increased. Cumulative noise results added to attended noise monitoring. Triggers for an investigation to determine compliance added to attended noise monitoring data analysis section. Commitment added to publish attended noise monitoring results on website, replacing commitment to publish analysed results every 2 months.
1.4	15/5/2012	Addition of periodic comparison of unattended noise monitoring results to attended noise monitoring results at the same location to assess the accuracy of unattended monitoring.
Final	6/6/2012	Approved by the Department of Planning & Infrastructure on 6/6/2012.
2.1	21/5/2013	Minor monitoring location changes
Final	27/5/2013	Approved by the Department of Planning & Infrastructure on 27/5/2013.

## Contents

1.0	Introduction.....	3
2.0	Project Setting and Overview .....	3
2.1	Site Details.....	3
2.2	Current Approvals.....	4
3.0	Assessment Criteria .....	4
3.1	Noise Impact Assessment Criteria.....	4
3.2	Land Acquisition Criteria.....	5
3.3	Cumulative Noise Criteria.....	6
3.4	Traffic Noise Impact Assessment Criteria.....	6
3.5	Additional Noise Mitigation Measures.....	7
3.6	Operating Conditions.....	7
3.7	Statement of Commitments .....	8
4.0	Monitoring Methodology .....	8
4.1	Unattended Monitoring Method .....	8
4.2	Attended Monitoring Method – Operational Noise.....	9
4.3	Meteorological Monitoring .....	9
4.4	Traffic Noise Impact Assessment .....	10
5.0	Monitoring Frequency.....	10
6.0	Monitoring Locations .....	10
7.0	Data Analysis and Reporting.....	13
7.1	Data Analysis Attended Monitoring.....	13
7.2	Reporting.....	13
8.0	References.....	14
	Appendix 1: Receiver Location (Appendix 5 of Project Approval) .....	15
	Appendix 2: Residential Assessment Zones (Appendix 5 of Project Approval).....	16
	Appendix 3: Correspondence Records .....	17

## Tables

Table 1: Project Approval "Table 2: Noise Impact Assessment Criteria dB(A)" .....	5
Table 2: Project Approval "Table 3: Land Acquisition criteria dB(A) LAeq (15min)" .....	5
Table 3: Project approval "Table 4: Cumulative noise impact assessment criteria dB(A) LAeq (period)" .....	6
Table 4: Project Approval "Table 5: Cumulative noise land acquisition dB(A) LAeq (period)" .....	6
Table 5: Project Approval "Table 6: Traffic noise impact assessment criteria dB(A)".....	6
Table 6: Project Approval "Table 7: Land subject to additional noise mitigation upon request" ...	7
Table 7: Noise Monitoring Locations.....	10

## Figures

Figure 1: Noise Monitoring Locations.....	12
Figure 2: Receiver locations.....	15
Figure 3: Residential Assessment Zones.....	16

## 1.0 Introduction

This Noise Monitoring Program describes operational noise monitoring and analysis, required to ensure compliance with procedures described in the Mt Arthur Coal *MAC-ENC-MTP-032 Noise Management Plan*.

This document details the following:

- Monitoring methodology;
- Monitoring locations;
- Monitoring frequency;
- Data analysis; and
- Reporting.

Traffic noise level changes over time due to planned operations at Mt Arthur Coal are, at worst, predicted to result in an increase of less than 2 dB, which should not be humanly detectable. If a complaint is received regarding traffic noise, Mt Arthur Coal will conduct an investigation to identify Mt Arthur Coal's contribution to the noise and determine if mitigation actions are required.

## 2.0 Project Setting and Overview

### 2.1 Site Details

Hunter Valley Energy Coal Pty Limited operates the Mt Arthur Coal Mine Complex which consists of open cut and underground mining operations, a rail loop and associated rail loading facilities. The operations are located in the Upper Hunter Valley, NSW approximately five kilometres south west of Muswellbrook. The Mt Arthur Underground operation has not commenced. This monitoring program will be reviewed and updated prior to the commencement of underground operations.

Open cut mining is conducted via a multi-bench, multi-strip shovel and excavator operations, which provide for the greatest operational flexibility and efficiency in the staged recovery of the coal resource at Mt Arthur Coal.

Coal handling and processing is undertaken at the centralised coal handling and preparation plant. A range of infrastructure, including administration offices, bathhouses, workshops and storage facilities, supports approved mining operations at Mt Arthur Coal. Product coal is transported via the rail loading facility for export and via conveyor to Macquarie Generation for domestic power generation. Mining activities occur 24 hours per day 7 days per week.

Potential noise sources from the Mt Arthur Coal Complex include:

- coal exploration drilling activities;
- topsoil recovery using excavators, dozers and trucks;
- drill and blast activities;
- open cut mining using predominantly electric rope shovels, hydraulic excavators and haul trucks;

- haul road maintenance using dozers and graders;
- overburden shaping utilising dozers;
- coal processing;
- coal transport by overland conveyor and rail;
- land rehabilitation activities;
- maintenance activities.

Below are some specific characteristics of mining noise relevant to Mt Arthur Coal:

1. Mining noise is typically inaudible during the day period, particularly once the ground heats up (daytime is usually a compliance period);
2. Received levels of mining noise usually varies greatly from one night to the next at any receptor location;
3. Different meteorological conditions from one night to the next are the primary cause of different received levels at receptors (received levels vary substantially because of different weather conditions, not because of changes to operations);
4. Mining noise from a large open cut operation, received at a receptor, is typically a continuum with minor event noises that are usually not very emergent (a constant low frequency noise);
5. The received mining noise spectrum generally does not have any significant content (if any) above 1000 Hertz; and
6. Other noise sources at a receptor location can often be considerably louder than received mining noise. This is particularly true for noise events (dogs, cows, cars etc.), which influence the total  $L_{Aeq}$ . Consequently, low pass (LP)  $L_{Aeq}$  can be used to more accurately measure mining noise.

## 2.2 Current Approvals

Mt Arthur Coal has an approval extraction amount of 36 million tonnes per annum (mtpa). The most current Project Approval associated with mining operations is the *Mt Arthur Coal Mine - Open Cut Consolidation Project, Application Number 09\_0062* (approved 24 September 2010). Reference should be made to Appendix 1 of the *MAC-ENC-MTP-032 Noise Management Plan* for a full list of Project Approval and EPL conditions associated with noise. The Mt Arthur Underground operation has not commenced. This management plan will be reviewed and updated prior to the commencement of underground operations.

## 3.0 Assessment Criteria

### 3.1 Noise Impact Assessment Criteria

#### **NOISE**

##### **Impact Assessment Criteria**

2. *The Proponent shall ensure that the noise generated by the Mt Arthur mine complex does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land or on more than 25 per cent of any privately-owned land, except where such exceedance is predicted in the EA. For these properties, the Proponent shall comply with the noise level predictions in the EA.*

However, these noise limits do not apply if the Proponent has an agreement with the relevant owner/s of these residences/land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

**Table 1: Project Approval "Table 2: Noise Impact Assessment Criteria dB(A)"**

<b>Location</b>	<b>Day (LAeq(15min))</b>	<b>Evening (LAeq(15min))</b>	<b>Night (LAeq(15min))</b>	<b>Night (LA1(1min))</b>
A – Antiene Estate	37	40	38	45
B – Skelletar Stock Route, Thomas Mitchell Drive, Denman Road East	39	38	37	45
C – Racecourse Road	41	40	39	45
D – Denman Road North-west, Roxburgh Vineyard (north-east), Roxburgh Road	37	36	35	45
E – South Muswellbrook	39	39	39	45
F – Denman Road West, Roxburgh Vineyard (west)	37	36	35	45
G – East Antiene	41	40	39	45

Notes:

- To interpret the locations referred to Table 2, see the applicable figures in Appendix 5. (**Appendix 2 of this Program**)
- Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.

## 3.2 Land Acquisition Criteria

### Land Acquisition Criteria

3. If the noise generated by the Mt Arthur mine complex exceeds the criteria in Table 3 at any residence on privately-owned land or on more than 25 per cent 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 7-8 of schedule 4.

**Table 2: Project Approval "Table 3: Land Acquisition criteria dB(A) LAeq (15min)"**

<b>Location</b>	<b>Day</b>	<b>Evening</b>	<b>Night</b>
A – Antiene Estate	42	45	43
B – Skelletar Stock Route, Thomas Mitchell Drive, Denman Road East	44	43	42
C – Racecourse Road	46	45	44
D – Denman Road North-west, Roxburgh Vineyard (north-east), Roxburgh Road	42	41	40
E – South Muswellbrook	44	44	44
F – Denman Road West, Roxburgh Vineyard (west)	42	41	40
G – East Antiene	46	45	44

Notes:

- To interpret the locations referred to Table 3, see the applicable figures in Appendix 5.
- Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.
- For this condition to apply, the exceedance of the criteria must be systemic.

### 3.3 Cumulative Noise Criteria

#### Cumulative Noise Criteria

4. Except for the noise-affected land in Table 1, the Proponent shall implement all reasonable and feasible measures to ensure that the noise generated by the Mt Arthur mine complex combined with the noise generated by other mines and industries does not exceed the criteria in Table 4 at any residence on privately-owned land or on more than 25 per cent of any privately-owned land.

**Table 3: Project approval "Table 4: Cumulative noise impact assessment criteria dB(A) LAeq (period)"**

Location	Day	Evening	Night
All privately-owned land	50	45	40

Note: Cumulative noise is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.

5. If the cumulative noise generated by the Mt Arthur mine complex combined with the noise generated by other mines exceeds the criteria in Table 5 at any residence on privately-owned land or on more than 25 per cent 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 7-8 of schedule 4.

**Table 4: Project Approval "Table 5: Cumulative noise land acquisition dB(A) LAeq (period)"**

Location	Day	Evening	Night
All privately-owned land	55	50	45

Note: The cumulative noise generated by the Mt Arthur mine complex combined with the noise generated by other mines is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.

### 3.4 Traffic Noise Impact Assessment Criteria

#### Traffic Noise Impact Assessment Criteria

6. The Proponent shall take all reasonable and feasible measures to ensure that the traffic noise generated by the Mt Arthur mine complex does not exceed the traffic noise impact assessment criteria in Table 6, except where such an exceedance is predicted in the EA. For these properties, the Proponent shall comply with the noise levels predicted in the EA.

**Table 5: Project Approval "Table 6: Traffic noise impact assessment criteria dB(A)"**

Road	Day / Evening (LAeq(1 hour))	Night (LAeq(1 hour))
Thomas Mitchell Drive, Denman Road (east of Thomas Mitchell Drive)	60	55
Denman Road (west of Thomas Mitchell Drive)	55	50

Note: Traffic noise generated by the Mt Arthur mine complex is to be measured in accordance with the relevant procedures in the Office of Environment and Heritage (OEH) Environmental Criteria for Road Traffic Noise.

### 3.5 Additional Noise Mitigation Measures

#### **Additional Noise Mitigation Measures**

7. Upon receiving a written request from the owner of any residence:
  - (a) on the noise affected land listed in Table 1;
  - (b) on the land listed in Table 7;
  - (c) on any other privately-owned land where subsequent operational noise monitoring shows the noise generated by the Mt Arthur mine complex exceeds the noise limits in Table 2 by more than 2 decibels; and
  - (d) on Thomas Mitchell Drive or Denman Road where subsequent noise monitoring shows traffic noise levels generated by the Mt Arthur mine complex exceed the traffic noise criteria in Table 6, the Proponent shall implement reasonable and feasible noise mitigation measures (such as double glazing, insulation, and/or air conditioning) at any residence in consultation with the owner. 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.

**Table 6: Project Approval "Table 7: Land subject to additional noise mitigation upon request"**

<b>Receiver No.</b>	<b>Receiver</b>
11	Drake
12	Tubb
13	Turner & Upper Hunter Developers P/L
39,40	Buckley
41	Ray
42	Hallet & Campbell
49	Webber
94	Skinner
97	Clifton
98	Jones
99	Hunter (2 residences)
100	Sharman

Note: To interpret the locations referred to in Table 7, see the applicable figure in Appendix 5.

### 3.6 Operating Conditions

#### **Operating Conditions**

8. The Proponent shall:
  - (a) implement best noise management practice, which includes implementing all reasonable and feasible noise mitigation measures;
  - (b) ensure that the real-time noise monitoring and meteorological forecasting data are assessed regularly, and that mining operations are relocated, modified and/or suspended to ensure compliance with the relevant conditions of this approval; and
  - (c) regularly investigate ways to reduce the operational, low frequency, rail and road traffic noise generated by the project, and report on these investigations in the annual review (see condition 3 of schedule 5), to the satisfaction of the Director-General.

### 3.7 Statement of Commitments

The Statement of Commitments in Appendix 3 of the Project Approval, as it relates to this program, states that:

<i>Ref</i>	<i>Commitment</i>
6.	<i>Mt Arthur Coal shall ensure that Project noise at the northern boundary of the Woodlands property does not exceed the lowest intrusive noise criteria provide by the EPA/OEH's Industrial Noise Policy of an RBL of 30 dBA LAeq (15 minutes) plus 5 dBA.</i>

## 4.0 Monitoring Methodology

All monitoring must be conducted in accordance with OEH 'Industrial Noise Policy' (INP) guidelines and Australian Standard AS 1055 'Acoustics, Description and Measurement of Environmental Noise'.

Type 1 equipment, as defined in Australian Standard AS 1259.2 'Acoustics - Sound level meters - Integrating – Averaging', must be used for all attended and unattended monitoring.

Monitoring frequency is described in Section 5 of this document.

Unattended and attended monitoring locations are described in Section 6 and shown in Figure 1 of this document.

Noise monitoring, analysis and reporting is the responsibility of the Environmental Coordinator.

### 4.1 Unattended Monitoring Method

Continuous noise measurement is undertaken for management purposes using directional noise loggers capable of providing 1000 Hertz low pass (LP) data. These instruments are strategically positioned at four locations around the mine and log data in 15 minute intervals.

Directional LP  $L_{Aeq}$  for Mt Arthur Coal is logged. Mt Arthur Coal Directional  $L_{Aeq}$  results are the sum of directional values within an included angle that encompasses Mt Arthur Coal mining areas relevant for each monitoring location.

If, between 10.00pm and 7:00am, logged Mt Arthur Coal directional LP  $L_{Aeq (15\text{ minute})}$  exceed the impact assessment criteria for any two consecutive 15 minute period at any logger location per shift, SMS alerts are sent to the Open Cut Examiners (OCE) and an email alert sent to the Advisor Environment in accordance with *MAC-ENC-PRO-041 Real Time Monitoring Response*. Alarms will not be generated when wind speed is above 5 m/s or during periods of rainfall, as the environmental noise levels will not be representative.

Calibration of unattended equipment will take place annually on a rotational basis. During each calibration all microphones, preamplifiers and amplifiers will be replaced with recently calibrated equipment. Each site will be calibrated in accordance with AS 1055.1.



Unattended monitoring results will be periodically compared to attended noise monitoring results at the same location to assess the accuracy of unattended monitoring. The included angle parameters for measuring directional noise at each monitoring location will be reviewed every three years to ensure currency.

## 4.2 Attended Monitoring Method – Operational Noise

The duration of each measurement must be 15 minutes. Statistical data must be one-third octave.

The following information must be recorded during attended noise monitoring:

- time and date,
- location,
- name of person carrying out the monitoring
- serial number of equipment used
- noted sources and noise levels, direction and frequency from source of interest
- duration of monitoring
- measured noise levels including  $L_{Aeq}$ ,  $L_{Amax}$ ,  $L_{Amin}$ ,  $L_{A1}$ ,  $L_{A10}$ ,  $L_{A50}$  and  $L_{A90}$ , and
- Weather conditions including temperature, relative humidity, wind speed average, wind speed maximum, wind direction and estimated cloud cover.

Received levels from various noise sources must be noted during attended monitoring and particular attention paid to the extent of Mt Arthur Coal's contribution, if any, to measured levels. At each receptor location, Mt Arthur Coal's  $L_{Aeq(15\text{ minute})}$  and  $L_{A1(1\text{ minute})}$  (in the absence of any other noise) must be, where possible, measured directly, determined by frequency analysis, calculated based on number of events (of known level) and duration, or, a combination of those methods.

## 4.3 Meteorological Monitoring

One on-site Automatic Weather Station (AWS) is currently located within the Mt Arthur Coal Industrial Area, and complies with *AS2923-1987 Ambient Air – Guide for measurement of horizontal wind for air quality applications* and the *NSW Industrial Noise Policy*. This AWS provides representative weather data for the mine site including wind speed and direction, sigma theta, solar radiation, humidity, rainfall and temperature.

Real-time data from the station is made available to environmental personnel and the Open Cut Examiner to assist in operational monitoring and real time response.

Additionally, four AWS are situated around the mining operations area. These AWS provide representative weather data for the surrounding privately owned residential areas.

Weather data will be used to determine the validity of noise monitoring results in accordance with the NSW Industrial Noise Policy. Wind speed and rain data will be used for this purpose. Extreme temperature inversions will be considered G-class inversions, as determined by:

- Direct measurement of temperature differential between the WS09 (on-site AWS) and the WS10 (Wellbrook AWS) which have an elevation differential of approximately 100m, suitable for inversion monitoring; or

- the use of sigma theta and wind speed to categorise inversion strength, in accordance with Appendix E of the NSW Industrial Noise Policy.

#### 4.4 Traffic Noise Impact Assessment

To assess compliance with Schedule 3 Condition 6 of the Project Approval, Mt Arthur Coal will carry out a Traffic Noise Impact Assessment every three years. The purpose of this assessment will be to predict the current traffic noise generated by the Mt Arthur Mine Complex along Thomas Mitchell Drive and Denman Roads and compare the results from attended monitoring against the Mines noise consent condition as described in section 3.4.

### 5.0 Monitoring Frequency

There are four real time directional noise monitoring locations that monitor noise levels and the direction of that noise relative to the monitor 24 hours seven days per week.

To adequately sample the noise environment, monthly attended monitoring is required in conjunction with continuous unattended monitoring.

A monthly attended noise survey will comprise one night measurement at each location. Only one measurement per monitoring night is required at each location.

Attended monitoring is only conducted at night. This is because atmospheric conditions enhance noise propagation most during the night time period (offsite levels are likely to be highest then) and the same or lower criterion applies as for other times. Consequently, night period monitoring enables measurement of noise during worst case conditions that are most likely to contribute to a regulatory exceedance.

### 6.0 Monitoring Locations

Monitoring locations are as detailed in Table 7 and shown in Figure 1. Monitoring locations are located in each residential assessment zone specified in the Environmental Assessment and Project Approval 09\_0062 (shown in Appendix 2).

Temporary attended noise monitoring is undertaken on an as needs basis in response to changing circumstances such as community concerns, or new infrastructure.

**Table 7: Noise Monitoring Locations**

Site No.	Location	Type	Coordinates (MGA)	Purpose	Reason for Location
NP04	Balmoral Road	Attended	E. 304285 N. 6421976	Statutory	Determine noise levels east of operation (Zone A)

Site No.	Location	Type	Coordinates (MGA)	Purpose	Reason for Location
NP07	Racecourse	Attended	E. 299169 N. 6426451	Statutory	Determine noise levels north-north east of operation (Zone C)
NP10	South Muswellbrook	Attended	E. 301592 N. 6425956	Statutory	Determine noise levels north east of operation (Zone E)
NP12	Pamger Drive	Attended	E. 305525 N. 6422260	Statutory	Determine noise levels east of operation (Zone G)
NP13	Golden Highway	Attended	E. 292409 N. 6409175	Statutory	Determine noise levels south of the operation (Project Approval Statement of Commitment 7)
NP14	Roxburgh Road	Attended	E. 289305 N. 6423365	Statutory	Determine noise levels east of operation (Zone D)
NP15	Wellbrook	Attended	E. 290285 N. 6422256	Statutory	Determine noise levels east of operation (Zone D/F)
NP16	Skelletar North	Attended	E. 299747 N. 6426810	Statutory	Determine noise levels north east of operation (Zone B)
NC02	Racecourse	Unattended	E. 299169 N. 6426451	Internal use*	Determine noise levels north-north east of operation
NC04	South Muswellbrook	Unattended	E. 301592 N. 6425956	Internal use*	Determine noise levels north east of operation
NC05 <sup>^</sup>	Wellbrook	Unattended	E. 290285 N. 6422256	Internal use*	Determine noise levels north west of operation

\* Monitoring sites designated for internal use provide indicative audible levels to enhance noise management at Mt Arthur Coal. Data from these monitoring locations may not be included in statutory reporting.

<sup>^</sup> New unattended monitoring location to be installed and operational by 30 September 2013.

The actual measurement position at any site can vary but should comply with the requirements of Clause 6.2 of AS1055.1.

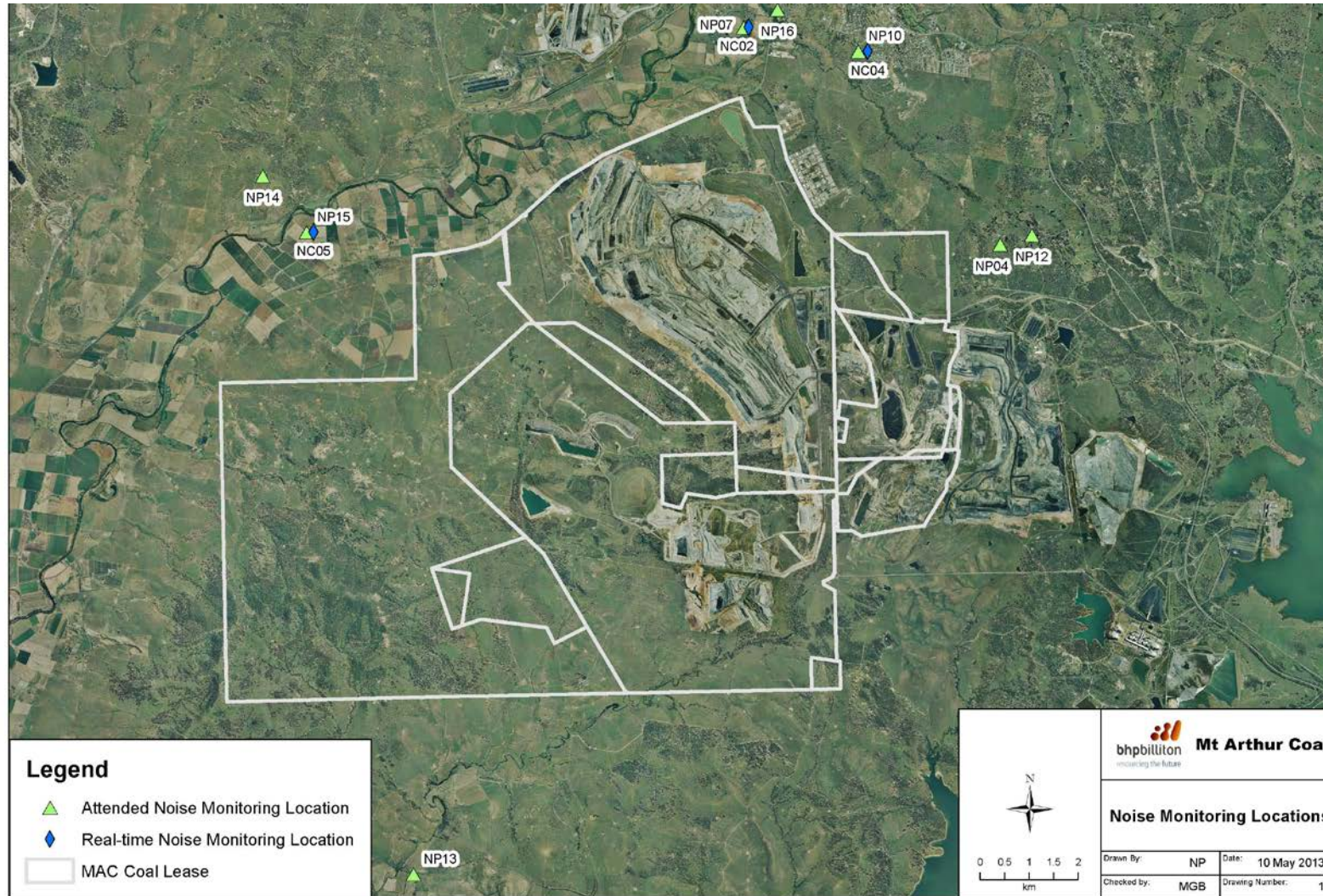


Figure 1: Noise Monitoring Locations

## 7.0 Data Analysis and Reporting

### 7.1 Data Analysis Attended Monitoring

Received levels from various noise sources will be noted during attended monitoring and particular attention paid to the extent of the Mt Arthur Coal contribution, if any, to measured levels. For each receptor location, the mine's  $L_{Aeq(15min)}$  and  $L_{A1(1min)}$  (in the absence of any other noise) should be quantified. This would usually be from direct measurement or determined by frequency analysis.  $L_{Aeq(15min)}$  will also be determined for all noise sources.

Assessment of impact is to include consideration of mining activity and atmospheric conditions during each measurement. Wind speed and/or estimated temperature inversion conditions may result in regulatory criteria not being applicable in accordance with the NSW Industrial Noise Policy.

$L_{Aeq(15min)}$  and  $L_{A1(1min)}$  results generated by Mt Arthur Coal will be compared to regulatory limits. If a result exceeds the limit by more than 2 dB an investigation will be carried out by a qualified and independent consultant to determine if regulatory criteria are exceeded in accordance with project approval and environmental protection licence conditions and the NSW Industrial Noise Policy. If an exceedance is confirmed the Exceedance Protocol outlined in *MAC-ENC-MTP-032 Noise Management Plan* shall be applied.

Cumulative  $L_{Aeq(15min)}$  results will be compared to cumulative noise limits for  $L_{Aeq(Period)}$ . If the  $L_{Aeq(15min)}$  result exceeds the  $L_{Aeq(Period)}$  limit by more than 2 dB an investigation will be carried out by a qualified and independent consultant to determine if regulatory criteria are exceeded in accordance with project approval and environmental protection licence conditions and the NSW Industrial Noise Policy. If an exceedance is confirmed the Exceedance Protocol outlined in *MAC-ENC-MTP-032 Noise Management Plan* shall be applied.

### 7.2 Reporting

Relevant noise monitoring results will be published in the AEMR as required by the relevant project approval conditions. The AEMR will be submitted to the relevant government authorities, the Community Consultative Committee and it will be made available for public information on Mt Arthur Coal's website.

The Annual Return for EPL 11457 requires annual environmental reporting in accordance with R1 Annual return document conditions. The Annual Return for EPL11457 will include a noise monitoring and complaints summary in accordance with condition R1.1.

Attended noise monitoring results will also be published regularly on the Mt Arthur Coal website.

## 8.0 References

Australian Standard (1997) AS10551-1997: Acoustics—Description and measurement of environmental noise Part 1: General procedures

Australian Standard (1990) AS 1259.2 Acoustics - Sound level meters - Integrating – Averaging  
Department of Environment, Climate Change and Water (12 November 2009) Environmental Protection Licence 11457

Department of Planning (2010), Minister of Planning's Project Approval document (dated 29 September 2010), Application Number 09-0062, Mt Arthur Coal Mine – Open Cut Consolidation Project.

Environment Protection Authority (January 2000) NSW Industrial Noise Policy  
Hansen Bailey (2009), Mt Arthur Coal Consolidation Project Environmental Assessment.  
URS (2007), The Mt Arthur North Coal Project Environmental Impact Statement.

### **Mt Arthur Coal EMS Documents**

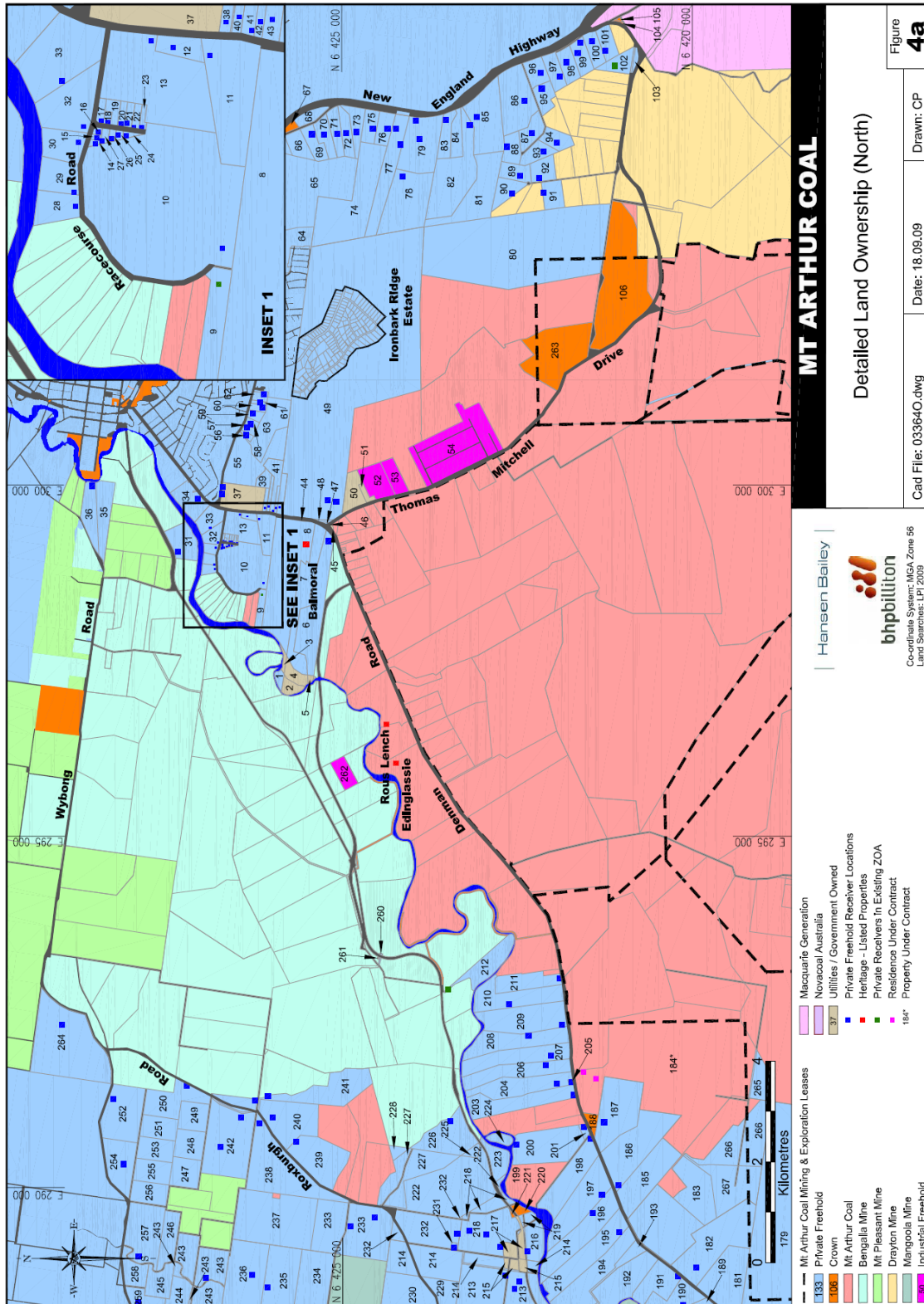
*MAC-ENC-MTP- 032 Noise Management Plan*

*MAC-ENC-PRO-008 Communication and Reporting*

*MAC-ENC-PRO-042 Community Complaints Handling, Response and Reporting*

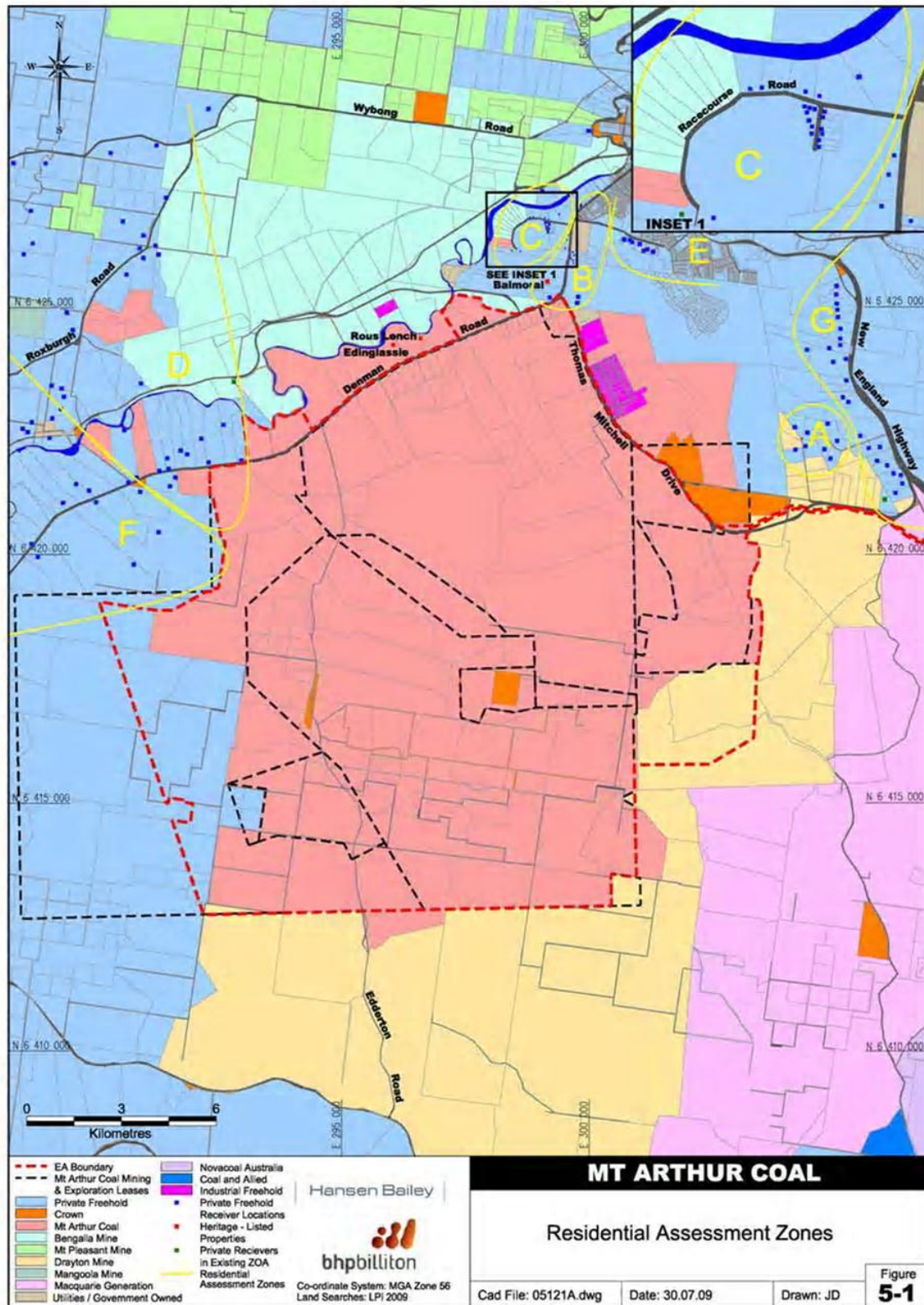
*MAC-ENC-PRO-041 Real Time Monitoring Response*

**Appendix 1: Receiver Location (Appendix 5 of Project Approval)**



**Figure 2: Receiver locations**

## Appendix 2: Residential Assessment Zones (Appendix 5 of Project Approval)



**Figure 3: Residential Assessment Zones**



## Appendix 3: Correspondence Records

### *Telephone correspondence on 16 March 2011, 3.38pm*

Steve Perkins from Mt Arthur Coal contacted Steve Clair from the Department of Environment, Climate Change and Water (now Office of Environment and Heritage) on 16 March 2011 and asked if Mt Arthur Coal could meet with him to review Management Plans. Steve Clair advised that the Department of Environment, Climate Change and Water does not provide comment on Management Plans. Steve Clair informed Steve Perkins that he could send the Management Plans to him for review, but that he would not submit any comments on the Management Plans.

### *Email correspondence on 31 March 2011, 9.06pm*

**From:** Perkins, Steven R (NSWEC)  
**Sent:** Thursday, 31 March 2011 9:06 PM  
**To:** 'steve.clair@environment.nsw.gov.au'  
**Subject:** Noise and Road Closure Management Plans  
**Attachments:** MAC-ENC-MTP-042 Noise Mgt Plan 110330.doc; MAC-ENC-PRO-056 Noise MonitoringProgram 110330\_SRP.DOC; MAC-ENC-MTP-024 Road Closure Management Final 110323.doc

Steve,

Please find attached the Mt Arthur Coal Noise Management Plan and associated Noise Monitoring Program for your review. Also, please find attached the Road Closure Management Plan which is a component of the Blast Management Plan sent to you earlier today.

Regards,  
Steve



**Steven Perkins**  
Environmental Superintendent  
Mt Arthur Coal  
NSW Energy Coal

**BHP Billiton**  
Thomas Mitchell Drive, Muswellbrook, 2333, NSW, Australia  
Mail To [Steven.R.Perkins@bhpbilliton.com](mailto:Steven.R.Perkins@bhpbilliton.com)  
Internet <http://www.bhpbilliton.com>  
Phone +61 2 6542 4874  
Mobile +61 408 220 765  
Please consider the environment before printing this email



Michael White  
General Manager Operations  
Mt Arthur Coal  
PMB 8  
MUSWELLBROOK NSW 2333

Contact: Ben Harrison  
Phone: 02 6575 3402  
Fax: 02 6575 3515  
Email: [benjamin.harrison@planning.nsw.gov.au](mailto:benjamin.harrison@planning.nsw.gov.au)  
Our ref: 10/20755

Dear Mr White,

**Mt Arthur Coal Mine – PA 09\_0062  
Environmental Monitoring and Management Plans**

Thank you for forwarding the following management plans required under project approval 09\_0062 for the Department's consideration:

- Noise Management Plan (Condition 9 of Schedule 3);
- Noise Monitoring Program (Condition 9(c) of Schedule 3);
- Road Closure Management Plan (Condition 17(d) of Schedule 3)
- Air Quality Management Plan (Condition 24 of Schedule 3);
- Air Quality Monitoring Program (Condition 24(c) of Schedule 3);
- Visual Impact Report (Condition 49 of Schedule 3)

The Department has reviewed these plans (as amended following previous correspondence) and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Director-General has approved the plans.

Could you please forward finalised copies of the above plans for the Department's records at your earliest convenience.

Should you have any enquiries on this matter please contact Ben Harrison on (02) 65753402.

Yours sincerely



*David Kitto 6/6/12*

David Kitto  
**Director**  
**Mining and Industry Projects**  
As delegate for the Director-General



Contact: Ben Harrison  
Phone: 02 6575 3402  
Fax: 02 6575 3515  
Email: [benjamin.harrison@planning.nsw.gov.au](mailto:benjamin.harrison@planning.nsw.gov.au)  
Our ref: 10/20755

Michael White  
General Manager Operations  
Mt Arthur Coal  
PMB 8  
MUSWELLBROOK NSW 2333

Dear Mr White,

**Mt Arthur Coal Mine – PA 09\_0062  
Environmental Monitoring and Management Plans**

Thank you for forwarding the following modified management plans required under project approval 09\_0062 for the Department's consideration:

- Blast Management Plan, inclusive of monitoring program (Condition 17, Schedule 3);
- Air Quality Management Plan inclusive of monitoring program (Condition 24, Schedule 3)
- Noise Management Plan, inclusive of monitoring program (Condition 9, Schedule 3)
- Environmental Management Strategy (Condition 1, Schedule 5)

The Department has reviewed these plans and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Director-General has approved the plans.

Could you please forward finalised copies of the above plans for the Department's records at your earliest convenience.

Should you have any enquiries on this matter please contact Ben Harrison on (02) 6575 3402.



Scott Brooks  
**Team Leader Compliance**

As Nominee for the Director-General

27-5-2013