

Rehabilitation Manager
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# **NOISE MANAGEMENT PLAN**

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#### ACRONYMS USED THROUGHOUT THIS DOCUMENT

AR	-	Annual Review (incorporates former Annual Environmental Management Report)
AS	-	Australian Standard
CCC	-	Community Consultative Committee
DPIE	-	Department of Planning, Industry and Environment
EA	-	Environmental Assessment
EPA	-	Environment Protection Authority
GSC	-	Gunnedah Shire Council
RR	-	Department of Regional NSW, Resource Regulator
NMP	-	Noise Management Plan
RCM	-	Rocglen Coal Mine
RTNMP	-	Road Traffic Noise Management Plan



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#### 1. INTRODUCTION

The Rocglen Coal Mine (RCM) is located approximately 28km north of Gunnedah, and 10km west of the former Canyon Coal Mine (formerly Whitehaven) (Figure 1). The mine site covers an area of approximately 460 hectares.

The mine was initially approved on the 15<sup>th</sup> April 2008 under PA 06\_0198 with a minor modification granted in May 2010 to address highwall stability issues. Whitehaven submitted a Project Application, and accompanying Environmental Assessment, under Part 3A of the *Environmental Planning and Assessment Act 1979* in March 2011. PA 10\_0015 was issued on the 27<sup>th</sup> September 2011 and allows for additional extraction of up to 5 million tonnes of coal at a maximum recovery rate of 1.5 million tonnes per annum.

A minor modification was approved in November 2014 relating to coal transport, and a further modification was approved in August 2015 allowing changes to coal reject haulage to the site. A third modification was approved in February 2017 to allow increased coal haulage during the 2017 calendar year.

RCM cease coal production in June 2019, with coal crushing and transport to the Whitehaven Gunnedah Coal Handling and Processing Plant (CHPP) concluding in July 2020. Reject haulage from the CHPP to RCM concluded in late 2019. No further haulage of coal rejects will be received at RCM as the mine is in final stages of rehabilitation. Closure operations are limited to day shift.

The NMP has been prepared with reference to relevant legislation, approvals and guidelines, follows the management plan requirements specified in Schedule 5, Condition 2 of PA 10\_0015, and is consistent with the following documents:

- Rocglen Coal Mine Extension Project Environmental Assessment February 2011 ("Extension EA") – specifically Section 7.3; and
- Appendix Q of the Extension EA Noise and Blasting Vibration Impact Assessment.

The NMP presents the relevant conditions of PA 10\_0015, and includes noise controls and management procedures to assist with compliance with the relevant noise criteria. The Rocglen Coal Mine Extension Environmental Assessment and previous Annual Environmental Management Reports (AEMRs)/Annual Reviews (ARs) for the site should be referred to for baseline data.

It should be noted that road noise monitoring and management measures associated with coal haulage, required under Schedule 3 Condition 2 and Schedule 3 Condition 4(c) of PA 10\_0015, are addressed in the Road Noise Management Plan. All coal haulage and receival of coal discard has ceased. There is no longer any bulk Road haulage associated with RCM.



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#### 2 NOISE IMPACT ASSESSMENT CRITERIA

#### 2.1 Noise Criteria

In order to manage the potential noise impacts, and in compliance with Schedule 3, Condition 4 of PA 10\_0015, this NMP has been developed.

Noise impact assessment criteria for the development were established in the Extension EA using relevant EPA guidelines. These criteria have been incorporated in PA 10\_0015 Schedule 3, Condition 1 which states:

The Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 1: Noise Criteria dB(A)

Location	Day	Evening	Night	
	LA <sub>eq (15 min)</sub>	LA <sub>eq (15 min)</sub>	LA <sub>eq (15 min)</sub>	LA1 (1 min)
All privately-owned land	35	35	35	45

Note: Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

However, these criteria do not apply if the proponent has a written agreement with the relevant landholder to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

These noise criteria should be considered in conjunction with Conditions L4.2 to L4.7 of EPL 12870 which discuss definitions, prevailing meteorological conditions, and legally binding agreements. The monitoring locations where the impact assessment criteria are assessed are specified in EPL 12870, as outlined in Section 2.2.

In addition to the above requirements, Condition 3 of Schedule 3 states:

The Proponent shall:

(a) Implement best practice noise management to minimise the operational, low frequency, and road traffic noise generated by the project;

(b) Minimise the noise impacts of the project during temperature inversions;

(c) Regularly assess the real time noise monitoring and meteorological forecasting data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval, to the satisfaction of the Secretary.

Condition 18 of Schedule 3, also relevantly states:

During the life of the project, the proponent shall ensure that there is a meteorological station operating in the vicinity of the site that:

(a) complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and

(b) is capable of continuous real time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy, or as otherwise agreed by EPA.



#### 2.2 General and Specific Noise Mitigation Measures

Modelling from the Rocglen Extension EA predicted acceptable noise impacts at all privately owned residents throughout the life of mine. As coaling and crushing operations have ceased, and the quantity of equipment working onsite has been reduced, the potential for noise exceedance has further reduced. The following general noise management measures will continue to be undertaken, these include:

- Closure operations have been restricted to daytime activities
- Site personnel will be required to pay due attention to site weather conditions and modify or stand down from operational activities if required by mine management;
- All equipment used on-site will be regularly serviced to ensure the sound power levels remain at or below the levels used in the modelling undertaken by Spectrum Acoustics, listed in Table 2, Appendix Q of the RCM Extension EA;
- Mid-high frequency broadband beepers are fitted to on-site mobile mining equipment;
- Contractors will be advised of noise compliance limits prior to their work commencing;
- The on-site road network will be maintained to limit vehicle body noise;
- Prior to being brought on site, all earthmoving equipment will be sound power tested to ensure that sound power levels are consistent with the previous assessments undertaken by Spectrum Acoustics; and
- Equipment with lower sound power levels will be used in preference to more noisy equipment.

Whitehaven will undertake routine consultation via the Community Consultative Committee (CCC), to ensure that any concerns relating to operations are addressed. The controls and management procedures will be reviewed in response to the results of noise monitoring, complaints or comments identified through Rocglen's consultation effort.

Figure 2 identifies the locations of nearby privately owned residences that may be impacted by operational noise. It should be noted that the nearest non-project related residence is the "Surrey" property. "Roseberry" is subject to a private agreement that enables noise levels above 35dB(A). "Surrey" to the south-east and "Retreat" to the north are the two nominated attended noise monitoring locations.



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Figure 2 Noise Monitoring Locations



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#### 3 MONITORING AND REPORTING

This section outlines the monitoring and reporting requirements to measure the impacts and environmental performance of the mine and the effectiveness of noise management measures.

#### 3.1 Monitoring Program

Attended noise monitoring will be undertaken on a required basis by an independent acoustic consultant. All attended noise monitoring will be conducted in accordance with the NSW Industrial Noise Policy, AS 1055.1-1997 'Acoustics – Description and Measurement of environmental noise – General Procedures', and will expressly monitor the modification factors referred to in the NSW Industrial Noise Policy.

#### 3.2 Monitoring Locations

Figure 2 presents the attended noise monitoring locations with monitor locations and land ownership details as follows:

"Surrey"; and

"Retreat".

"Retreat" provides a monitoring point that is directly north of operations and thereby within the prevailing wind directions characteristic of the area. Similarly, the "Surrey" monitoring point is located south east of operations and thereby also within wind directions characteristic of the area. The landholders of both properties have provided consent to the undertaking of noise monitoring at their properties.

#### 3.3 Monitoring Frequency

Attended noise monitoring will be undertaken during operational hours, when triggered by any of the following events:

- Significant change in operations, larger equipment brought on site
- Request from a member of the CCC
- Community Complaint
- On request of a regulator (EPA, DPIE)



#### 3.4 Monitoring Procedures

Attended noise surveys will be conducted as require by an independent acoustic consultant.

All noise investigations will be carried out in accordance with NSW EPA Noise Policy for Industry (2017), Environmental Noise Control Manual (ENCM) and applicable Australian Standards;

Noise levels will be measured in one-third octave bands using an instrument with IEC Type 1 characteristics as defined in Australian Standard AS IEC 61672.1 – 2004 "Electroacoustics – Sound Level Meters – Specifications". The instrument will have current calibration as per manufacturer's instructions, and field calibration will be confirmed before and after measurements with a sound level calibrator;

The instrument will be set to A-weighting, "fast" response and measurements of  $LA_{eq}(15 \text{ minute})$ ,  $LA_{max}$ ,  $LA_1$  (1 minute),  $LA_{10}$ ,  $LA_{90}$ ,  $LA_{min}$  will be taken at each location in Figure 2. Each measurement will be stored at a sampling rate of no greater than 5 seconds for further analysis;

Attended surveys will be conducted during the operation with measurements taken at each attended noise monitoring location in Figure 2, so that noise levels during the full range of operating times are monitored. This will comprise of:

- Triggered event (Section 3.3) requiring monitoring ;
- occur during operational each day period as defined in the NSW INP for a minimum of:
  - 1.5 hours during the day;
  - o occur for 3 consecutive operating days.

Field notes will be taken during each measurement, recording the time and duration of noise events, noise sources, instantaneous noise levels and the frequency range of identified site noise sources. Where a noise exceedance is detected, the noise monitor must notify the Environmental Officer of the exceedance and obtain relevant information as to the possible source of the exceedance, i.e. malfunctioning equipment, additional activity contributing to noise levels etc. to ensure appropriate reporting and action on the exceedance. If necessary, the management safeguards and ameliorative actions in Section 4 will be initiated;

Extraneous noise sources will be filtered from the measured signal using robust methods approved by EPA and DP&E and the LAeq (15-minute) level attributable to RCM activities will be identified and compared with the relevant criteria. The methods used to filter extraneous noise sources will be on the basis of expert advice from the recognised noise consultant; and Details regarding plant configuration, survey interval, weather conditions, extraneous noise sources, monitoring locations and times of measurement will be recorded for inclusion in the noise monitoring report.

The site meteorological station is capable of continuous real-time measurement of sigma theta and identify the stability class prevalent in real time. This will allow Whitehaven to identify temperature inversions and minimise noise impacts of the project accordingly.



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#### 3.5 Reporting

A summary of noise monitoring results will be reported to the CCC via the Environment Monitoring Report. This report will be periodically uploaded onto the company's website.

Each year, the results of the noise monitoring program will be summarised and presented in the Annual Review. Reporting will also include an analysis of the monitoring results against the exceedance criteria, previous monitoring results and predictions made in the EA.

Reporting requirements for exceedances, complaints, and non-compliances are specified in Section 4.

#### 4 MANAGEMENT OF EXCEEDANCES, COMPLAINTS AND NON-COMPLIANCE

#### 4.1 Noise Compliance Criteria Exceedance

If noise levels from the mine exceed the levels outlined in Section 2, as measured from attended noise monitoring events, advice will be sought from the acoustic consultant to verify the source of the elevated noise and identify options to address noise related impacts. Such actions may include:

- Additional testing to confirm the elevated noise is systemic in nature;
- Changes to operational procedure or equipment type; and
- The installation of sound attenuation measures to plant and equipment, where necessary.

Where it is identified that the above options cannot achieve compliance with noise criteria, RCM will undertake negotiations with the affected landowners with a view to entering into private agreements.

It should also be noted that under the following meteorological conditions, noise compliance criteria do not apply:

(a) wind speeds >3m/s at 10m above the ground; or

(b) Stability category F temperature inversion conditions and wind speeds >2m/s at 10m above ground level; or

(c) Stability category G temperature inversion conditions.

These weather conditions will be identified based on the observations from the site weather station.

#### 4.1.1 Notification Requirements

In the event of a noise exceedance, the EPA and DPIE will be notified in accordance with the requirements of PA 10\_0015.

As required by Schedule 4 Condition 2(a) of PA 10\_0015, as soon as practical after obtaining attended monitoring results showing an exceedance of the noise criteria, RCM shall notify the affected landholder and/or tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the project is complying with the relevant criteria again.



#### 4.2 Complaints

Whilst all endeavours will be made by RCM to avoid adverse noise impacts on local landowners / residents, it is acknowledged that from time to time such impacts may occur. In order to ensure an appropriate and consistent level of reporting, response and follow-up to any complaints is adopted by RCM, the following complaints management protocol will be followed:

- A publicly advertised telephone complaints line will be in place to receive complaints during operating hours and record complaints at other times.
- Each complaint received will be recorded on a Complaints Register, which will include the following details:
- The date and time of complaint.
- Any personal details the complainant wishes to provide or if no such details are provided a note to that effect.
- The nature of the incident that led to the complaint.
- The action taken by RCM in relation to the complaint, including any follow- up contact with the complainant.
- If no action was taken by RCM, the reason why no action was taken.

The Environmental Officer will be responsible for ensuring that an initial response is provided within 24 hours of receipt of a complaint (except in the event of complaints recorded when the mine is not operational).

Data from the site weather station and the real time noise monitoring unit will be obtained for the time applicable to the complaint for use in determination of cause and identification of future remedial actions.

Additional measures will be undertaken as required to address the complaint.

This may include visiting the complainant, or inviting the complainant to the mine site.

Once the identified measures are undertaken, the Environmental Officer will sign off on the relevant complaint within the Complaints Register.

If necessary, follow-up monitoring will take place to confirm the source of the complaint is adequately mitigated.

A copy of the Complaints Register will be kept by RCM and made available to the

CCC and the complainant (on request). A summary of complaints received every

12 months will be provided in the Annual Review, as well as being made available on the Whitehaven Coal website.

Based on the nature of individual complaints, specific contingency measures may be implemented to the (reasonable) satisfaction of the complainant. The Environmental Officer retains responsibility to ensure that complaints received are properly recorded and addressed appropriately.



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#### 4.4 Unpredicted Impact Protocol

In the event that unpredicted or unforeseen noise impacts are identified, the following protocol (Table 2) will be adopted.

Step	Procedure
1	Review the unpredicted impact including consideration of: Any relevant monitoring data, and Current mine activities as well as activities in the vicinity of the issue.
2	Commission an investigation by an appropriate specialist into the unpredicted impact, if considered appropriate.
3	Develop appropriate ameliorative measures based on the results of the above investigations, in consultation with relevant government departments.
4	Implement additional monitoring, where relevant, to measure the effectiveness of the improvement measures.

#### 5 DOCUMENT REVIEW AND CONTINUOUS IMPROVEMENT

This document will be reviewed in accordance with the requirements of Condition 4 Schedule 5 of PA 10\_0015.

RCM will investigate and implement ways to improve the environmental performance of the project over time. This will be achieved by keeping abreast of best practice in the industry for noise monitoring and controls and reporting on outcomes of noise monitoring annually in the Annual Review.