Ulan Coal Mines

Environmental Noise Monitoring

Prepared for Ulan Coal Mines Pty Limited

June 2025

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Ulan Coal Mines Pty Limited

E250111 RP3

June 2025

Version	Date	Prepared by	Reviewed by	Comments
V1	16 July 2025	Ingrid Smith	Ryan Bruniges	Draft
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5 August 2025

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1 Introduction

1.1 Background

EMM Consulting Pty Ltd (EMM) was engaged by Ulan Coal Mines Pty Limited (UCMPL) to conduct a six-monthly noise survey around the Ulan Complex. The complex is a combination of both open cut (currently in care and maintenance) and two underground mining operations at Ulan, NSW. The purpose of the survey is to quantify and describe the existing acoustic environment around UCMPL and compare results with relevant limits.

There were four attended monitoring locations during this survey. Attended environmental noise monitoring was done during the evening and night periods of 18 and 19 June 2025. Ulan Public School is in recess indefinitely and not in use. As noise limits are only applicable at Ulan Public School when in use, monitoring was not done at this location for this survey.

1.2 Attended monitoring locations

Site monitoring locations are detailed in Table 1.1 and shown on Figure 1.1. It should be noted that Figure 1.1 shows actual monitoring positions, not necessarily the location of residences.

Table 1.1 Attended noise monitoring locations

Descriptor	Project Approval ID	Coordinates (MGA 55) [1]	
		Easting	Northing
NM2	60	764142	6438097
NM3	274	758658	6425529
NM4/EPL26 [2]	Ulan School	758354	6425063
NM6	1	765276	6431949
NM7/EPL24	254	753971	6438598

Notes: 1. As indicated in Section 4.1.1 of the UCMPL Noise Monitoring Program.

2. Noise criteria for Ulan School are "when in use". Ulan School is currently in recess and not in use. Monitoring was not conducted at this location for this survey.

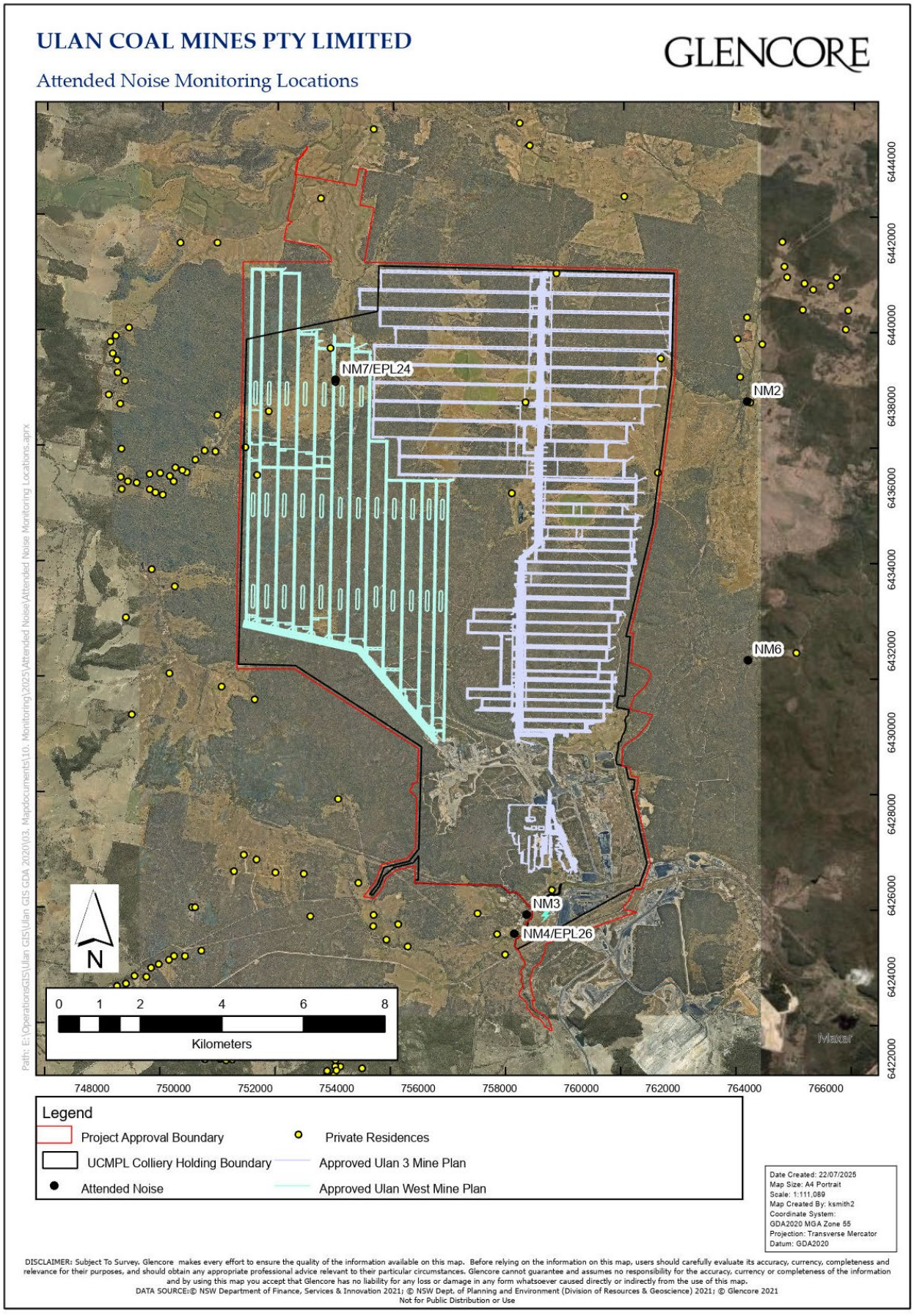

Figure 1.1 Attended noise monitoring locations

1.3 Terminology and abbreviations

Some definitions of terms and abbreviations which may be used in this report are provided in Table 1.2.

Table 1.2 Terminology and abbreviations

Term/descriptor	Definition
dB(A)	Noise level measurement units are decibels (dB). The "A" weighting scale is used to approximate how humans hear noise.
L_{Amax}	The maximum root mean squared A-weighted noise level over a time period.
L_{A1}	The A-weighted noise level which is exceeded for 1%of the time.
$L_{A1,1minute}$	The A-weighted noise level which is exceeded for 1% of the specified time period of 1 minute.
L_{A10}	The A-weighted noise level which is exceeded for 10% of the time.
L_{Aeq}	The energy average A-weighted noise level.
L_{A50}	The A-weighted noise level which is exceeded for 50% of the time, also the median noise level during a measurement period.
L_{A90}	The A-weighted noise level exceeded for 90% of the time, also referred to as the "background" noise level and commonly used to derive noise limits.
L_{Amin}	The minimum A-weighted noise level over a time period.
L_{Ceq}	The energy average C-weighted noise energy during a measurement period. The "C" weighting scale is used to take into account low-frequency components of noise within the audibility range of humans.
SPL	Sound pressure level. Fluctuations in pressure measured as 10 times a logarithmic scale, with the reference pressure being 20 micropascals.
Hertz (Hz)	The frequency of fluctuations in pressure, measured in cycles per second. Most sounds are a combination of many frequencies together.
AWS	Automatic weather station used to collect meteorological data, typically at an altitude of 10 metres
VTG	Vertical temperature gradient in degrees Celsius per 100 metres altitude.
Sigma-theta	The standard deviation of the horizontal wind direction over a period of time.
IA	Inaudible. When site noise is noted as IA then there was no site noise at the monitoring location.
NM	Not Measurable. If site noise is noted as NM, this means some noise was audible but could not be quantified.
Day	Monday – Saturday: 7 am to 6 pm, on Sundays and Public Holidays: 8 am to 6 pm.
Evening	Monday – Saturday: 6 pm to 10 pm, on Sundays and Public Holidays: 6 pm to 10 pm.
Night	Monday – Saturday: 10 pm to 7 am, on Sundays and Public Holidays: 10 pm to 8 am.

Appendix A provides further information that gives an indication as to how an average person perceives changes in noise level, and examples of common noise levels.

2 Noise limits

2.1 Project approval

The most recent project approval for UCMPL is Project Approval 08_0184 (MOD 6, 22 May 2025). Schedule 3 of the UCMPL project approval details specific conditions relating to noise generated by UCMPL. Relevant sections of the UCMPL project approval are reproduced in Appendix B.1.

This approval covers current and proposed mining of the Ulan Complex and incorporates both underground and open-cut mining operations undertaken 24 hours a day, 7 days per week. The open-cut operation is currently in care and maintenance.

2.2 Environment protection licence

UCMPL holds Environmental Protection Licence (EPL) No. 394 issued by the Environment Protection Authority (EPA) most recently on 18 July 2023. Relevant sections of the EPL are reproduced in Appendix B.2.

2.3 Noise management plan

Noise monitoring requirements are detailed in the UCMPL Noise Management Plan (NMP, 1 August 2023). Section 3 details criteria and Section 4 details the noise monitoring program, including monitoring locations and methodology. Relevant sections of the NMP are reproduced in Appendix B.3.

2.4 Noise limits

Impact assessment criteria for Ulan Complex during the reporting period are detailed in Table 2.1. Criteria are based on the NMP and are consistent with the project approval and the EPL.

Table 2.1 Noise impact limits, dB [1]

Location	Project Approval ID	Day $L_{Aeq,15minute}$	Evening $L_{Aeq,15minute}$	Night $L_{Aeq,15minute}$	Night $L_{A1,1minute}$
NM2	60	35	35	35	45
NM3	274	NA	NA	NA	NA
NM4/EPL26 [2]	Ulan School		35 (internal) – When in use		NA
NM6	1	35	35	35	45
NM7/EPL24	254	38	38	37	45

Notes: 1. NA indicates criteria are not applicable.

2. Ulan School is currently in recess and not in use. Monitoring was not conducted at this location for this survey.

As detailed in Condition 3 of Schedule 3 of the project approval, noise acquisition criteria for Ulan Complex are detailed in Table 2.2 for any residence on privately-owned land.

Table 2.2 Noise acquisition criteria, dB

NMP Descriptor	Day $L_{Aeq,15minute}$	Evening $L_{Aeq,15minute}$	Night $L_{Aeq,15minute}$
All privately owned land	40	40	40

As detailed in Condition 4 of Schedule 3 of the project approval, cumulative noise criteria for Ulan Complex are detailed in Table 2.3 for any residence on privately-owned land.

Table 2.3 UCMPL cumulative noise criteria, dB

NMP Descriptor	Day $L_{Aeq,period}$	Evening $L_{Aeq,period}$	Night $L_{Aeq,period}$
All privately owned land	50	45	40

As detailed in Condition 5 of Schedule 3 of the project approval, cumulative noise acquisition criteria for Ulan Complex are detailed in Table 2.4 for any residence on privately-owned land.

Table 2.4 UCMPL cumulative noise acquisition criteria, dB

NMP Descriptor	Day $L_{Aeq,period}$	Evening $L_{Aeq,period}$	Night $L_{Aeq,period}$
All privately owned land	55	50	45

2.5 Meteorological conditions

Section L5.3 from the EPL states that noise limits apply under all meteorological conditions except for the following:

- wind speeds greater than 3 metres/second at 10 metres above ground level, or
- stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level, or
- stability category G temperature inversion conditions.

2.6 Additional requirements

The NSW EPA 'Industrial Noise Policy' (INP 2000) was replaced by the 'Noise Policy for Industry' (NPfI) in October 2017. Noise conditions in the EPL and project approval still reference the INP exclusively, so monitoring has been conducted in accordance with the INP.

For assessment of modifying factors, the NPfI immediately superseded the INP, as outlined in the EPA document 'Implementation and transitional arrangements for the Noise Policy for Industry' (2017). Therefore, assessment and reporting of modifying factors have been done in accordance with Fact Sheet C of the NPfI.

Monitoring and reporting have been done in accordance with the EPA 'Approved methods for the measurement and analysis of environmental noise in NSW' issued in January 2022.

3 Methodology

3.1 Overview

Attended environmental noise monitoring was done in general accordance with Australian Standard AS1055 'Acoustics, Description and Measurement of Environmental Noise' and relevant NSW EPA requirements and the UCMPL NMP. Meteorological data was obtained from the Ulan Complex automatic weather station (AWS) which allowed correlation of atmospheric parameters with measured noise levels.

3.2 Attended noise monitoring

During this survey, six-monthly attended monitoring was done during two consecutive evening and night periods. The duration of each measurement was 15 minutes. Atmospheric condition measurement was also done at each monitoring location.

Measured sound levels from various sources were noted during each measurement and particular attention was paid to the extent of site's contribution (if any) to measured levels. At each monitoring location, the site-only $L_{Aeq,15minute}$ and L_{Amax} were measured directly or determined by other methods detailed in Section 7.1 of the NPfI.

The terms 'Inaudible' (IA) or 'Not Measurable' (NM) may be used in this report. When site noise is noted as IA, it was inaudible at the monitoring location. When site noise is noted as NM, this means it was audible but could not be quantified. All results noted as IA or NM in this report were due to one or more of the following:

- Site noise levels were very low, typically more than 10 dB below the measured background (L_{A90}), and unlikely to be noticed.
- Site noise levels were masked by more dominant sources that are characteristic of the environment (such as breeze in foliage or continuous road traffic noise) that cannot be eliminated by monitoring at an alternate or intermediate location.
- It was not feasible or reasonable to employ methods, such as to move closer and back calculate. Cases may include rough terrain preventing closer measurement, addition/removal of significant source to receiver shielding caused by moving closer, and meteorological conditions where back calculation may not be accurate.

If exact noise levels from site could not be established due to masking by other noise sources in a similar frequency range but were determined to be at least 5 dB lower than relevant limits, then a maximum estimate of site noise may be provided. This is expressed as a 'less than' quantity, such as <20 dB or <30 dB.

For this assessment, the measured L_{Amax} has been used as a conservative estimate of $L_{A1,1minute}$. The EPA accepts sleep disturbance analysis based on either the $L_{A1,1minute}$ or L_{Amax} metrics, with the L_{Amax} representing a more conservative assessment of site noise emissions.

3.3 Modifying factors

All measurements were evaluated for potential modifying factors in accordance with the NPfI. Assessment of modifying factors is undertaken at the time of measurement if the site was audible and directly quantifiable. If applicable, modifying factor penalties have been reported and added to measured site-only L_{Aeq}.

Low-frequency modifying factor penalties have only been applied to site-only L_{Aeq} if the site was the only contributing low-frequency noise source. Specific methodology for assessment of each modifying factor is outlined in Fact Sheet C of the NPfI.

3.4 Instrumentation

Equipment used to measure environmental noise levels is detailed in Table 3.1. Calibration certificates are provided in Appendix C.

Table 3.1 Measurement equipment

Item	Serial number	Calibration due date	Relevant standard
Rion NA-28 sound level meter	701424	21/05/2027	IEC 61672-1:2002
Pulsar 105 calibrator	78226	04/03/2026	IEC 60942:2003
Brüel & Kjær Type 2250 sound level meter	3008201	12/07/2025	IEC 61672-1:2013
Svantek SV36 calibrator	138019	26/07/2025	IEC 60942:2017
Rion NA-28 sound level meter	01070590	27/05/2026	IEC 61672-1:2002
Pulsar 105 calibrator	96080	04/03/2026	IEC 60942:2017

4 Results

4.1 Total measured noise levels and atmospheric conditions

Total noise levels measured during each 15-minute attended measurement are provided in Table 4.1.

Table 4.1 Total measured noise levels, dB – June 2025 [1]

Location	Start date and time	L_{Amax}	L_{A1}	L_{A10}	L_{Aeq}	L_{A50}	L_{A90}	L_{Amin}
NM2	18/06/2025 19:44	44	38	32	29	24	20	18
NM2	18/06/2025 23:48	52	36	30	27	24	23	21
NM2	19/06/2025 19:47	48	43	35	31	22	18	17
NM2	19/06/2025 23:35	52	31	23	23	19	19	18
NM3	18/06/2025 20:53	53	51	50	49	49	49	47
NM3	19/06/2025 01:15	59	55	53	52	52	51	50
NM3	19/06/2025 20:07	54	50	49	48	47	47	46
NM3	20/06/2025 00:55	57	53	52	52	51	51	50
NM6	18/06/2025 19:15	51	35	30	27	23	19	18
NM6	19/06/2025 00:19	45	30	26	23	22	21	20
NM6	19/06/2025 19:19	46	43	37	33	28	24	22
NM6	20/06/2025 00:02	48	32	23	23	22	21	19
NM7/EPL24	18/06/2025 20:59	50	34	32	30	29	26	24
NM7/EPL24	18/06/2025 22:45	45	39	38	34	33	30	28
NM7/EPL24	19/06/2025 21:44	50	34	31	29	28	26	24
NM7/EPL24	19/06/2025 22:00	47	33	32	30	30	28	26

Notes: 1. Levels in this table are not necessarily the result of activity at site.

Atmospheric condition data measured by the operator during each measurement using a hand-held weather meter is shown in Table 4.2. The wind speed, direction and temperature were measured at approximately 1.5 metres above ground. Attended noise monitoring is not done during rain, hail, or wind speeds above 5 m/s at microphone height.

Table 4.2 Measured atmospheric conditions – June 2025

Location	Start date and time	Temperature °C	Wind speed m/s	Wind direction ° magnetic north [1]	Cloud cover 1/8s
NM2	18/06/2025 19:44	12	<0.5	-	0
NM2	18/06/2025 23:48	7	<0.5	-	0
NM2	19/06/2025 19:47	6	<0.5	-	0
NM2	19/06/2025 23:35	8	<0.5	-	0
NM3	18/06/2025 20:53	2	<0.5	-	0
NM3	19/06/2025 01:15	4	<0.5	-	0
NM3	19/06/2025 20:07	4	<0.5	-	0
NM3	20/06/2025 00:55	1	<0.5	-	0
NM6	18/06/2025 19:15	12	<0.5	-	0
NM6	19/06/2025 00:19	1	<0.5	-	0
NM6	19/06/2025 19:19	9	<0.5	-	0
NM6	20/06/2025 00:02	2	<0.5	-	0
NM7/EPL24	18/06/2025 20:59	9	<0.5	-	0
NM7/EPL24	18/06/2025 22:45	4	<0.5	-	0
NM7/EPL24	19/06/2025 21:44	5	<0.5	-	2
NM7/EPL24	19/06/2025 22:00	5	<0.5	-	2

Notes: 1. "-" indicates calm conditions at monitoring location.

4.2 Site only noise levels

4.2.1 Modifying factors

There were no modifying factors, as defined in the NPfI, applicable during the survey.

4.2.2 Monitoring results

Table 4.3 provides site noise levels in the absence of other sources, where possible, and includes weather data from the site AWS. Limits are applicable if weather conditions were within specified parameters during each measurement.

Table 4.3 Site noise levels and limits – June 2025

Location	Start date and time	Wind		Stability class	Limits apply? [1]	Limits, dB [1]		Site levels, dB [2,3]		Exceedances, dB [1,3]	
		Speed m/s	Direction [4]			$L_{Aeq,15minute}$	$L_{A1,1minute}$	$L_{Aeq,15minute}$	$L_{A1,1minute}$	$L_{Aeq,15minute}$	$L_{A1,1minute}$
NM2	18/06/2025 19:44	1.2	223	E	Yes	35	-	IA	-	Nil	-
NM2	18/06/2025 23:48	0.7	228	F	Yes	35	45	<25	<25	Nil	Nil
NM2	19/06/2025 19:47	0.9	232	E	Yes	35	-	IA	-	Nil	-
NM2	19/06/2025 23:35	1.1	233	E	Yes	35	45	<25	<25	Nil	Nil
NM3	18/06/2025 20:53	1.0	220	F	Yes	N/A	-	49	-	N/A	-
NM3	19/06/2025 01:15	0.9	216	E	Yes	N/A	N/A	52	58	N/A	N/A
NM3	19/06/2025 20:07	1.0	228	D	Yes	N/A	-	48	-	N/A	-
NM3	20/06/2025 00:55	0.8	246	F	Yes	N/A	N/A	51	51	N/A	N/A
NM6	18/06/2025 19:15	1.3	230	D	Yes	35	-	IA	-	Nil	-
NM6	19/06/2025 00:19	0.8	236	D	Yes	35	45	<20	<20	Nil	Nil
NM6	19/06/2025 19:19	1.0	233	E	Yes	35	-	26	-	Nil	-
NM6	20/06/2025 00:02	1.4	218	E	Yes	35	45	<25	<25	Nil	Nil
NM7/EPL24	18/06/2025 20:59	1.0	220	F	Yes	38	-	30	-	Nil	-
NM7/EPL24	18/06/2025 22:45	0.7	230	D	Yes	37	45	33	39	Nil	Nil
NM7/EPL24	19/06/2025 21:44	1.0	225	F	Yes	38	-	28	-	Nil	-
NM7/EPL24	19/06/2025 22:00	0.7	252	D	Yes	37	45	30	37	Nil	Nil

Notes:
1. Noise limits are applicable if weather conditions were within parameters specified in Section 2.5. N/A indicates no limits are applicable at this location or limits were not applicable due to weather conditions.
2. Site-only $L_{Aeq,15minute}$ includes modifying factor penalties if applicable.
3. Site-only $L_{A1,1minute}$ based on measured site-only L_{Amax} as detailed in Section 3.2. There are no $L_{A1,1minute}$ limits during the evening period. "-" indicates that assessment was not required.
4. Degrees magnetic north, "-" indicates calm conditions.

5 Summary

EMM Consulting Pty Ltd (EMM) was engaged by Ulan Coal Mines Pty Limited (UCMPL) to conduct a six-monthly noise survey around the Ulan Complex. The complex is a combination of both open cut (currently in care and maintenance) and two underground mining operations at Ulan, NSW. The purpose of the survey is to quantify and describe the existing acoustic environment around UCMPL and compare results with relevant limits.

There were four attended monitoring locations during this survey. Attended environmental noise monitoring was done during the evening and night periods of 18 and 19 June 2025. Ulan Public School is in recess indefinitely and not in use. As noise limits are only applicable at Ulan Public School when in use, monitoring was not done at this location for this survey.

Noise levels from site complied with relevant limits at all monitoring locations during the June 2025 survey.

Appendix A
Noise perception and examples

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A.1 Noise levels

Table A.1 gives an indication as to how an average person perceives changes in noise level. Examples of common noise levels are provided in Figure A.1.

Table A.1 Perceived change in noise

Change in sound pressure level (dB)	Perceived change in noise
Up to 2	Not perceptible
3	Just perceptible
5	Noticeable difference
10	Twice (or half) as loud
15	Large change
20	Four times (or quarter) as loud

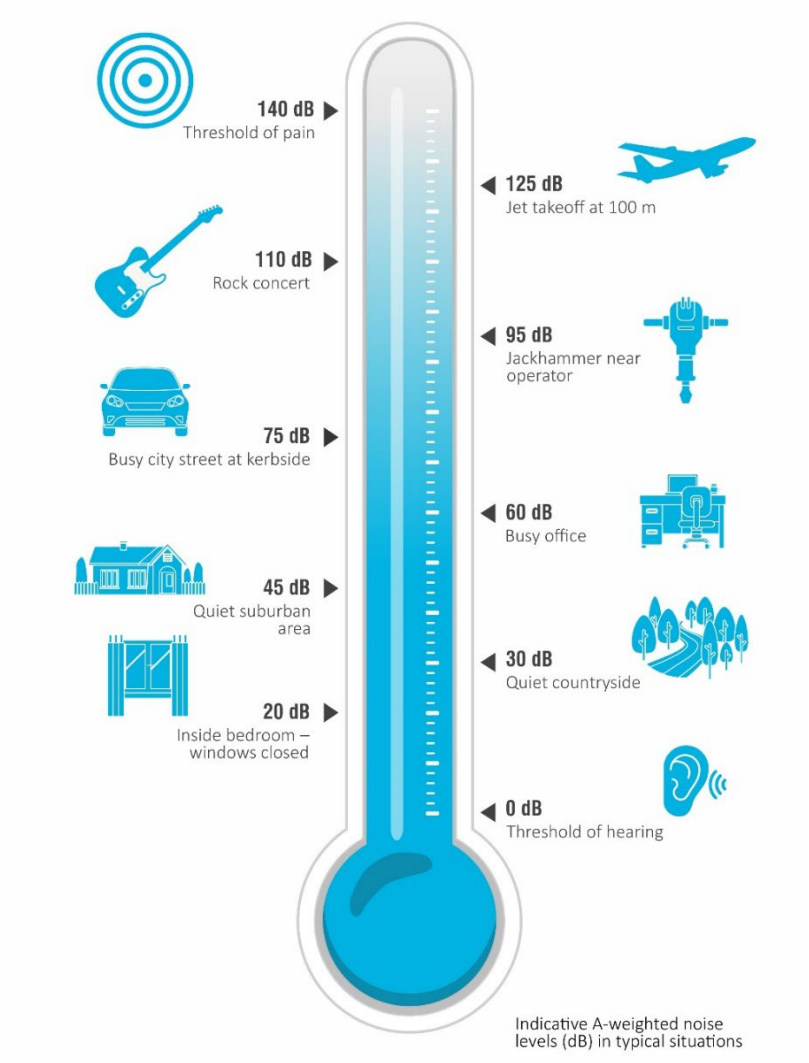

Figure A.1 Common noise levels

Appendix B
Regulator documents

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B.1 Project approval

CONSOLIDATED CONSENT

SCHEDULE 3
ENVIRONMENTAL PERFORMANCE CONDITIONS

ACQUISITION UPON REQUEST

1. Upon receiving a written request for acquisition from an owner of the land listed in Table 1, the Applicant must acquire the land in accordance with the procedures in Conditions 6 - 7 of Schedule 4.

Table 1: Land subject to acquisition upon request

Noise
93 - Rostherine Pty Ltd
274 - North-Eastern Wiradjuri Community Fund Ltd

Note: To interpret the locations referred to in Table 1, see the figure in Appendix 3.

The acquisition requirements in this condition do not apply to any of the land in the first column of Table 1 if it is subsequently rezoned for industrial development.

NOISE

Noise Criteria

2. Except for the noise-affected land referred to in Table 1, the Applicant must ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 2: Noise Criteria dB(A)

Location	Day	Evening	Night	
	$L_{Aeq\ (15\ min)}$	$L_{Aeq\ (15\ min)}$	$L_{Aeq\ (15\ min)}$	$L_{A1\ (1\ min)}$
254	38	38	37	45
All privately-owned land	35	35	35	45
Ulan Public School	35 (internal) When in use			-

Notes:
- *To identify the locations referred to in Table 2, see figure in Appendix 3; and*
- *Noise generated by the project 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 Applicant has a written agreement with the relevant landowner to exceed the criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Noise Criteria – Modification 4 Surface Facilities Activities

2A. The Applicant must ensure that noise generated during the construction of surface infrastructure construction activities as outlined in Modification 4 does not exceed the limits shown in Table 2A.

Table 2A: Noise criteria dB(A)

Location*	Day	Evening	Night	
	$L_{Aeq(15\ min)}$	$L_{Aeq(15\ min)}$	$L_{Aeq(15\ min)}$	$L_{A1\ (1\ min)}$
R39 and R40	41	38	38	52
All other privately-owned land	40	35	35	52

**To identify the locations R39 and R40 see the figure in Appendix 3.*

However, this criterion does not apply if the Applicant has a written agreement with the relevant landowner to exceed the criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Note:

- *The noise acquisition criteria specified in Schedule 3 Condition 3 do not apply for surface infrastructure construction activities outlined in Modification 4.*

Noise Acquisition Criteria

3. If the noise generated by the project exceeds the criteria in Table 3 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner, the Applicant must acquire the land in accordance with the procedures in Conditions 6 - 7 of Schedule 4.

Table 3: Noise acquisition criteria dB(A) $L_{Aeq\ (15min)}$

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

Notes:

- *Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.*
- *For this condition to apply, the exceedances of the criteria must be systemic.*

Cumulative Noise Criteria

4. Except for the noise-affected land referred to in Table 1, the Applicant must implement all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other mines in the area does not exceed the criteria in Table 4 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 4: Cumulative noise criteria dB(A) $L_{Aeq\ (period)}$

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.

Cumulative Noise Acquisition Criteria

5. If the noise generated by the project combined with the noise generated by other mines in the area exceeds the criteria in Table 5 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner, the Applicant must acquire the land on as equitable basis as possible with the relevant mines in accordance with the procedures in Conditions 6-7 of Schedule 4.

Table 5: Cumulative noise land acquisition criteria dB(A) $L_{Aeq\ (period)}$

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

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; and*
- *For this condition to apply, the exceedances of the criteria must be systemic.*

Additional Noise Mitigation Measures

6. Upon receiving a written request from the owner of any residence:
   (a) on the land listed in Tables 1 or 6; or
   (b) on privately-owned land where subsequent noise monitoring shows that the noise generated by the project is greater than or equal to $L_{Aeq\ (15\ minute)}$ 38 dB(A) on a systemic basis,

   the Applicant must implement additional noise mitigation measures (such as double glazing, insulation, and/or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible.

   If within 3 months of receiving this request from the owner, the Applicant and the owner 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 Secretary for resolution.

Table 6: Land where additional noise mitigation is available at the residence upon request

Location	Receiver
254	Geoffrey Mitchell & Mary Mitchell

Note: To identify the locations referred to in Table 6, see the figure in Appendix 3.

Rail Noise

7. The Applicant must seek to ensure that its rail spur is only accessed by locomotives that are approved to operate on the NSW rail network in accordance with noise limits L6.1 to L6.4 in RailCorp's EPL (No. 12208) and ARTC's EPL (No. 3142) or a Pollution Control Approval issued under the former *Pollution Control Act 1970*.

Operating Conditions

8. The Applicant must:
   (a) implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the operational, low frequency, rail, and road traffic noise generated by the project;
   (b) 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 consent; and
   (c) co-ordinate the noise management on site with the noise management at Moolarben and Wilpinjong mines to minimise the cumulative noise impacts of the mines,

   to the satisfaction of the Secretary.

Noise Management Plan

9. The Applicant must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:

   (a) be prepared in consultation with EPA and Council, and submitted to the Secretary for approval within 3 months of the date of final Orders being made by the Land and Environment Court in proceedings No. 10998 of 2010;

   (b) describe the noise mitigation measures that would be implemented to ensure compliance with conditions 2-8 of this schedule, including a real-time noise management system that employs both reactive and proactive mitigation measures;

   (c) include a noise monitoring program that:
   - uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the project; and
   - includes a protocol for determining exceedances of the relevant conditions of this consent;

   (d) include a protocol that has been prepared in consultation with the owners of the Moolarben and Wilpinjong mines for minimising and managing the cumulative noise impacts of the mines.

   The Applicant must implement the plan as approved by the Secretary.

   Note: The effectiveness of the Noise Management Plan is to be reviewed and audited in accordance with the requirements in Schedule 5. Following these reviews and audits, the plan is to be revised to ensure it remains up to date (see Condition 4 of Schedule 5).

B.2 Environmental protection licence

L5 Noise limits

L5.1 Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2.

POINT 24

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq (15 minute)	-	38
Evening	LAeq (15 minute)	-	38
Night	LAeq (15 minute)	-	37

POINT 24,25

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Night	LA1	-	45

POINT 25

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq (15 minute)	-	37
Evening	LAeq (15 minute)	-	37
Night	LAeq (15 minute)	-	36

POINT 26

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq (15 minute)	-	35
Evening	LAeq (15 minute)	-	35

POINT 36,37

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq (15 minute)	-	41
Evening	LAeq (15 minute)	-	38
Night	LAeq (15 minute)	-	38
Night	LA1	-	52

POINT 38

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq (15 minute)	-	35
Evening	LAeq (15 minute)	-	35
Night	LAeq (15 minute)	-	35
Night	LA1	-	45

POINT 39

Time period	Measurement parameter	Measurement frequency	Noise level dB(A)
Day	LAeq (15 minute)	-	40
Evening	LAeq (15 minute)	-	35
Night	LAeq (15 minute)	-	35
Night	LA1	-	52

Note: 1. The above noise limits do not apply at properties where the licensee has a written agreement with the landowner to exceed the noise limits.
2. The noise limits for licence point 26 identified in condition L5.1 are applicable when in use only and when measured internally.
3. The noise limits for licence points 36, 37 and 39 apply only during the construction of surface infrastructure

allowable under Project Approval 08_0184 MOD 4.

L5.2 For the purpose of Condition L5.1:

a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays;
b) Evening is defined as the period from 6pm to 10pm; and
c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays

L5.3 The noise limits set out in condition L5.1 apply under all meteorological conditions except for the following:

a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
c) Stability category G temperature inversion conditions.

L5.4 For the purpose of condition L5.3:

a) Data recorded by the meteorological station identified as EPA Licence Point 32 must be used to determine meteorological conditions; and
b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

L5.5 To determine compliance:

a) with the Leq(15 minute) noise limits in condition L5.1, the noise measurement equipment must be located:
i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
ii) within 30 metres of a dwelling façade, but not closer than 3 metres where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
iii) within approximately 50 metres of the boundary of a National Park or Nature Reserve

b) with the LA1(1 minute) noise limits in condition L5.1, the noise measurement equipment must be located within 1 metre of a dwelling façade.

c) with the noise limits in condition L5.1, the noise measurement equipment must be located:
i) at the most affected point at a location where there is no dwelling at the location; or
ii) at the most affected point within an area at a location prescribed by conditions L5.5(a) or L5.5(b).

L5.6 A non-compliance of L5.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

(a) at a location other than an area prescribed by condition L5.5(a) and L5.5(b); and/or
(b) at a point other than the most affected point at a location.

L5.7 For the purposes of determining the noise generated at the premises the modification factors in Fact Sheet C

of the Noise Policy for Industry (NSW EPA, 2017) must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

M9 Other monitoring and recording conditions

M9.1 To assess compliance with the noise limits in condition L5.1, attended noise monitoring must be undertaken in accordance with condition L5.5 and the Noise Management Plan approved by the Department of Planning, Industry and Environment as part of Project Approval 08_0184.

B.3 Noise management plan

3.1 Project Specific Criteria

3.1.1 Acquisition upon Request

Upon receiving a written request for acquisition from an owner of the land listed in **Table 3.1**, UCMPL shall acquire the land in accordance with the procedures in PA 08_0184[10].

Table 3.1 –Land subject to acquisition upon request

Property
93 - Rostherine Pty Ltd[1]
274 - North-Eastern Wiradjuri Community Fund Ltd

Note: *1Receiver 93 rezoned for an industrial/commercial development. The new occupier of the site now operates a commercial wholesale business and therefore the Conditions 6 - 7 of Schedule 4 do not apply.*

3.1.2 Operational Noise Criteria

Table 3.2 summarises noise conditions provided/referenced in **Sections 2.1** and **2.2** above.

Table 3.2 –Noise impact criteria dB

NMP Descriptor	Project Approval Property ID	EPA[3] Identification No	Day [1] $L_{Aeq,}$	Evening [1] $L_{Aeq,15minute}$	Night [1] $L_{Aeq,15minute}$	Night [1] $L_{A1,1minute}$
NM2	60	N/A	35	35	35	45
NM3	274	N/A	NA	NA	NA	NA
NM4[2]	Ulan Public School (internal)	Point 26	35	NA	NA	NA
NM6	1	N/A	35	35	35	45
NM7	254	Point 24	38	38	37	45

Notes: *1. NA indicates criteria are not applicable at this location during this time period.*

2. Internal noise criteria for Ulan Public School apply when in use.

3. EPA Point 25 (NM8) no longer monitored after purchase by UCMPL in 2018.

Table 3.3 –Cumulative noise criteria $L_{Aeq\ (period)}$ dB

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

Table 3.4 -- Noise acquisition criteria $L_{Aeq\ (15min)}$ dB

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

***Note:** For this condition to apply, the exceedances of the criteria must be systemic.*

Table 3.5 – Cumulative noise land acquisition criteria $L_{Aeq\ (period)}$ dB

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

***Note:** For this condition to apply, the exceedances of the criteria must be systemic.*

3.1.3 Construction Noise Criteria (MOD4 facilities)

The Proponent must ensure that noise generated during the construction of surface infrastructure activities as outlined in Modification 4 does not exceed the limits shown in **Table 3.6**.

Table 3.6 - Noise Criteria dB

Table 2A: Noise criteria dB(A)

Location*	Day	Evening	Night	
	$L_{Aeq(15\ min)}$	$L_{Aeq(15\ min)}$	$L_{Aeq(15\ min)}$	$L_{A1\ (1\ min)}$
R39 and R40	41	38	38	52
All other privately-owned land	40	35	35	52

**To identify the locations R39 and R40 see the figure in Appendix 3.*

4.1.1 Attended Noise Monitoring

Attended noise monitoring is carried out twice every six (6) months on dates as close together as weather permits (effectively one two-night survey at six monthly intervals) and is undertaken during the more critical evening and night periods, when noise criteria are at their most stringent and meteorological conditions are most likely favourable to noise enhancement.

This interval of monitoring has been determined suitable based on results of historical attended and real time noise monitoring which demonstrates low noise impact with no exceedance of noise criteria occurring since 2011.

Noise monitoring carried out at noise-sensitive locations will generally be carried out at 30 metres from the affected buildings subject to local access constraints. **Table 4.1** provides the locations of the attended noise monitoring (NM) sites:

Table 4.1 – Attended Noise Monitoring Sites

Noise Monitoring Site	Eastings	Northings	Property ID	Location
NM2	764142	6438097	60	5500 Ulan Road
NM3	758658	6425529	274	Ulan Village
NM4	758354	6425063	Ulan School	Ulan Village
NM6	765276	6431949	1	Ulan Road
NM7	753971	6438598	254	2461 Blue Springs Road

Notes: *NM1 was removed from the NMP due to the purchase of the property by UCMPL in May 2011. NM5 was removed from the NMP due to the purchase of the property by Moolarben Coal Mines (MCM) in November 2013. NM8 was removed from the NMP due to the purchase of the property by UCMPL in 2018.*

Attended noise monitoring is carried out by an independent appropriately qualified noise specialist. Records of routine equipment calibration and testing, in accordance with manufacturers specifications, are maintained by the noise specialist undertaking the monitoring.

Details of site activity and equipment usage will be noted during attended noise monitoring events. Reports prepared by a noise specialist following each noise monitoring event will include the following information, but not limited to:

- The locations and results of noise monitoring;
- Tabulation of noise measurement results (including L_{Amax}, L_{A1}, L_{A10}, L_{A90} and L_{Aeq}) together with notes identifying the principal noise sources and operations; and
- Summary of any measurement where UCMPL noise exceeded a criterion, and descriptions of the plant or operations causing this.

Acoustic instrumentation employed in the noise monitoring surveys will comply with the requirements of *AS 1259.2-1990 "Acoustics - Sound Level Meters. Part 2: Integrating -Averaging"*[20] and carry appropriate National Association of Testing Authorities, Australia (NATA) or manufacturer calibration certificates.

In the event an attended measured noise level is found to exceed PA 08_0184 criteria and is attributable to the mine operation the following steps are to be taken:

1. Noise specialist to record the reading, if measurement demonstrates that UCMPL has exceeded the criteria, proceed to Step 2.

[20] As amended from time to time.

2. If the reading exceeds criteria and is attributable to the mine operation and taken in valid meteorological conditions, then proceed to Step 3.
3. The noise specialist will record the result, note the site has failed and is deemed a '*noise affected night*' at that site. An additional monitoring test should be scheduled to be undertaken at the site within 1 week, and move on to the next monitoring site.

Upon receipt of the results, any result that exceeds a criterion, is attributable to the mine operation and taken in valid meteorological conditions shall be reported to DPE and EPA the following day in accordance with **Section 4.4.** The reporting should include detail of the affected community and action taken/planned to reduce noise.

All results from the Noise Monitoring Program are kept in accordance with the EMS[21] . Noise monitoring results that are required to be made publicly available by *EPL 394* are published on the Ulan Complex website at *http://www.ulancoal.com.au.*

In the event of unattended monitoring measurement demonstrating potential for non-compliance, additional attended monitoring will be performed to confirm whether there was an exceedance, as per **Section 4.3**. Additional locations and monitoring events may be undertaken where complaints have occurred if the complainant has agreed to the monitoring.

Appendix C
Calibration certificates

EMM
creating opportunities

C.1 Calibration certificates

Acoustic Research Labs Pty Ltd
Unit 36/14 Loyalty Rd
North Rocks NSW AUSTRALIA 2151
Ph: +61 2 9484 0800 A.B.N. 65 160 399 119
www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013

Calibration Certificate
Calibration Number C23471

Client Details	EMM Consulting Ground Floor Suite 01, 20 Chandos Street
Equipment Tested/ Model Number :	Type 2250
Instrument Serial Number :	3008201
Microphone Serial Number :	2888134
Pre-amplifier Serial Number :	16037
Firmware Version :	N/A

Pre-Test Atmospheric Conditions		**Post-Test Atmospheric Conditions**	
Ambient Temperature :	23.1 °C	**Ambient Temperature :**	24.3 °C
Relative Humidity :	44 %	**Relative Humidity :**	44.1 %
Barometric Pressure :	101.6 kPa	**Barometric Pressure :**	101.3 kPa

Calibration Technician :	Max Moore	**Secondary Check:**	Rhys Gravelle
Calibration Date :	12 Jul 2023	**Report Issue Date :**	17 Jul 2023

Approved Signatory : Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*N/A*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation test performed in accordance with IEC 61672-2:2013, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13 dB*	*Temperature*	*±0.1 °C*
1kHz	*±0.13 dB*	*Relative Humidity*	*±1.9 %*
8kHz	*±0.14 dB*	*Barometric Pressure*	*±0.014 kPa*
Electrical Tests	*±0.13 dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

PAGE 1 OF 1

CERTIFICATE OF CALIBRATION

CERTIFICATE NO: C50677

EQUIPMENT TESTED : Acoustic Calibrator

Manufacturer: Svantek
Type No: SV 36 **Serial No:** 138019
Class: 1
Owner: EMM Consulting
Suite 01, 20 Chandos St
St Leonards NSW 2065
Tests Performed: Measured Output Pressure level, Frequency & Distortion
Comments: See Details and Class Tolerance overleaf.

CONDITION OF TEST:

Ambient Pressure	1004	hPa ±1 hPa	**Date of Receipt :**	24/07/2024
Temperature	23	°C ±1° C	**Date of Calibration :**	26/07/2024
Relative Humidity	40	% ±5%	**Date of Issue :**	29/07/2024

Acu-Vib Test Procedure: AVP02 (Calibrators)
Test Method: AS IEC 60942 - 2017

CHECKED BY: ..KRR.. **AUTHORISED SIGNATURE:** .....

Hein Soe

Accredited for compliance with ISO/IEC 17025 - Calibration

Results of the tests, calibration and/or measurements included in this document are traceable to SI units through reference equipment that has been calibrated by the Australian National Measurement Institute or other NATA accredited laboratories demonstrating traceability.

This report applies only to the item identified in the report and may not be reproduced in part.

The uncertainties quoted are calculated in accordance with the methods of the ISO Guide to the Uncertainty of Measurement and quoted at a coverage factor of 2 with a confidence interval of approximately 95%.

Acu-Vib Electronics
ACOUSTICS AND VIBRATIONS
Head Office & Calibration Laboratory
Unit 14, 22 Hudson Avenue, Castle Hill NSW 2154
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www.acu-vib.com.au

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Accredited Laboratory No. 9262
Acoustic and Vibration Measurements

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www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C25320-V1

Client Details EMM Consulting
Level 3, 175 Scott Street
Newcastle NSW, 2300

Equipment Tested :	*Manufacturer*	*Model*	*Serial*
Instrument :	Rion	NA-28	00701424
Microphone :	Rion	UC-59	01916
Pre-amplifier :	Rion	NH-23	01463
Firmware Version :	2.0		

Pre-Test Atmospheric Conditions		**Post-Test Atmospheric Conditions**	
Ambient Temperature :	20 °C	**Ambient Temperature :**	21 °C
Relative Humidity :	62.1 %	**Relative Humidity :**	60.2 %
Barometric Pressure :	101.61 kPa	**Barometric Pressure :**	101.62 kPa

Calibration Technician : Emanuel Eid
Calibration Date : 21-May-2025
Secondary Check: Cooper Sallway
Report Issue Date : 22-May-2025

Approved Signatory : Ken Williams

Clause and Characteristic Tested	**Result**	**Clause and Characteristic Tested**	**Result**
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*Pass*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

However, no general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2013 because evidence was not publicly available, from an independent testing organisation responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013 and because the periodic tests of IEC 61672-3:2013 cover only a limited subset of the specifications in IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13 dB*	*Temperature*	*±0.1 °C*
1kHz	*±0.13 dB*	*Relative Humidity*	*±1.9 %*
8kHz	*±0.14 dB*	*Barometric Pressure*	*±0.11 kPa*
Electrical Tests	*±0.13 dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

NATA WORLD RECOGNISED ACCREDITATION

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

CERTIFICATE OF CALIBRATION

CERTIFICATE NO: C53021

EQUIPMENT TESTED : Acoustic Calibrator

Manufacturer: Pulsar
Type No: 105 **Serial No:** 78226
Class: 1
Owner: EMM Consulting
Level 1, 175 Scott Street
Newcastle, NSW 2300
Tests Performed: Measured Output Pressure level, Frequency & Distortion
See Details and Class Tolerance overleaf.
Comments:

CONDITION OF TEST:

Ambient Pressure	1008	hPa ±1 hPa	**Date of Receipt :**	27/02/2025
Temperature	24	°C ±1° C	**Date of Calibration :**	04/03/2025
Relative Humidity	53	% ±5%	**Date of Issue :**	04/03/2025

Acu-Vib Test Procedure: AVP02 (Calibrators)
Test Method: AS IEC 60942 - 2017

CHECKED BY: ..... **AUTHORISED SIGNATURE:** .....

Accredited for compliance with ISO/IEC 17025 - Calibration
Results of the tests, calibration and/or measurements included in this document are traceable to SI units through reference equipment that has been calibrated by the Australian National Measurement Institute or other NATA accredited laboratories demonstrating traceability.

This report applies only to the item identified in the report and may not be reproduced in part.

The uncertainties quoted are calculated in accordance with the methods of the ISO Guide to the Uncertainty of Measurement and quoted at a coverage factor of 2 with a confidence interval of approximately 95%.

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Ph: +61 2 9484 0800 A.B.N. 65 160 399 119
www.acousticresearch.com.au

Sound Level Meter
IEC 61672-3:2013
Calibration Certificate

Calibration Number C24405

Client Details	EMM Consulting Level 3, 175 Scott Street Newcastle NSW 2300
Equipment Tested/ Model Number :	NA-28
Instrument Serial Number :	01070590
Microphone Serial Number :	08184
Pre-amplifier Serial Number :	52329
Firmware Version :	v2.0

Pre-Test Atmospheric Conditions		**Post-Test Atmospheric Conditions**	
Ambient Temperature :	24.4 °C	**Ambient Temperature :**	23.8 °C
Relative Humidity :	45.2 %	**Relative Humidity :**	46.7 %
Barometric Pressure :	101.3 kPa	**Barometric Pressure :**	101.26 kPa

Calibration Technician : Peter Elters
Secondary Check: Rhys Gravelle
Calibration Date : 27 May 2024
Report Issue Date : 3 Jun 2024

Approved Signatory : Ken Williams

Clause and Characteristic Tested	Result	Clause and Characteristic Tested	Result
12: Acoustical Sig. tests of a frequency weighting	*Pass*	17: Level linearity incl. the level range control	*Pass*
13: Electrical Sig. tests of frequency weightings	*Pass*	18: Toneburst response	*Pass*
14: Frequency and time weightings at 1 kHz	*Pass*	19: C Weighted Peak Sound Level	*Pass*
15: Long Term Stability	*Pass*	20: Overload Indication	*Pass*
16: Level linearity on the reference level range	*Pass*	21: High Level Stability	*Pass*

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed.

As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation test performed in accordance with IEC 61672-2:2013, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2013.

Uncertainties of Measurement -

Acoustic Tests		Environmental Conditions	
125Hz	*±0.13 dB*	*Temperature*	*±0.1 °C*
1kHz	*±0.13 dB*	*Relative Humidity*	*±1.9 %*
8kHz	*±0.14 dB*	*Barometric Pressure*	*±0.11 kPa*
Electrical Tests	*±0.13 dB*		

All uncertainties are derived at the 95% confidence level with a coverage factor of 2.

This calibration certificate is to be read in conjunction with the calibration test report.

Acoustic Research Labs Pty Ltd is NATA Accredited Laboratory Number 14172.
Accredited for compliance with ISO/IEC 17025 - Calibration.

The results of the tests, calibrations and/or measurements included in this document are traceable to SI units.

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports.

CERTIFICATE OF CALIBRATION

CERTIFICATE NO: C53022

EQUIPMENT TESTED : Acoustic Calibrator

Manufacturer: Pulsar
Type No: 105 **Serial No:** 96080
Class: 1
Owner: EMM Consulting
Level 1, 175 Scott Street
Newcastle, NSW 2300
Tests Performed: Measured Output Pressure level, Frequency & Distortion
See Details and Class Tolerance overleaf.
Comments:

CONDITION OF TEST:

Ambient Pressure	1008	hPa ±1 hPa	**Date of Receipt :**	27/02/2025
Temperature	24	°C ±1° C	**Date of Calibration :**	04/03/2025
Relative Humidity	52	% ±5%	**Date of Issue :**	04/03/2025

Acu-Vib Test Procedure: AVP02 (Calibrators)
Test Method: AS IEC 60942 - 2017

CHECKED BY: ....HB **AUTHORISED SIGNATURE:** .....

Hein Soe

Accredited for compliance with ISO/IEC 17025 - Calibration
Results of the tests, calibration and/or measurements included in this document are traceable to SI units through reference equipment that has been calibrated by the Australian National Measurement Institute or other NATA accredited laboratories demonstrating traceability.

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