Duralie Coal Mine

Compliance Noise Monitoring
August 2026

Duralie Coal Ltd

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v1.0	6 October 2026	Patrick Marshall	Martin Davenport	Martin Davenport

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Duralie Coal Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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1.0 Introduction

Duralie Coal Pty Limited (DCPL), a wholly owned subsidiary of Yancoal Australia Limited (Yancoal), has commissioned SLR Consulting Australia Pty Ltd (SLR) to conduct quarterly noise monitoring for the Duralie Coal Mine (DCM) operations guided by the requirements of the *Duralie Coal Mine Noise Management Plan* (NMP), Document No. NMP-R07-A, dated December 2021. This report presents the results and findings from operator-attended operational noise monitoring conducted across Thursday 13 August 2026.

The objectives of the noise monitoring programme for this operating period were as follows:

- Conduct one round of external operator-attended noise measurements during operational periods at four nominated locations listed in Project Approval, representative of receivers located in the north, west and south directions from the DCM. The monitoring locations are NM1, NM4, NM5, and NM6.
- Quantify all sources of noise within each of the attended noise surveys, including measured and/or estimated contribution and maximum level of individual noise sources.
- Assess the noise emissions from the DCM and determine compliance with respect to the limits contained in the NMP.

This report uses specialist acoustic terminology. An explanation of common terms is provided in **Appendix A**.

2.0 DCM Noise Limits

2.1 EPL Noise Limits

The site-specific noise limits of sub-section L4.1 of Section L4 *Noise Limits* of the EPA's Environment Protection Licence (EPL), EPL 11701 dated 10 March 2025, for the four nominated attended noise monitoring locations, are summarised in **Table 1.**

Table 1 EPL Noise Limits for the Nominated Attended Noise Monitoring Locations

Locality	$L_{Aeq(15minute)}$			$L_{A1(1minute)}$
	Day	Evening	Night	Night
NM1 - Woodley	35	35	35	45
NM4 - Fisher-Webster	35	35	37	45
NM5 - Moylan	35	35	35	45
NM6 - Oleksiuk and Carmody	35	35	39	45

Additional conditions relating to the noise monitoring location and applicable meteorological conditions are outlined in sub-sections L4.2 (a) and L4.8 of EPL 11701 and are summarised below.

L4.2 (a) with the L_{eq} (15-minute) noise limits in condition 4.1, the noise measurement equipment must be located:

Approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or

Within 30 metres of a dwelling façade, but not closer than 3 m, where any dwelling on the property is situated more than 30 metres from the boundary closest to the premises.

Noise from the premises is to be measured at a distance within 30 metres of the locations identified in L4.1 to determine compliance with this condition.

L4.8 The noise limits set out in condition in L4.1 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) Temperature Inversion conditions up to 3 degrees Celsius/100m and wind speeds greater than 2 metres/second at 10 metres above the ground level; or

c) Temperature inversion conditions greater than 3 degrees Celsius/100m.

2.2 Project Approval Noise Limits

The Project approval conditions relating to the noise limits are as follows:

Noise Criteria

2. Except for the land referred to in Table 1, the Proponent shall 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	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{A1(1\ minute)}$
172 - Lyall	35	39	40	45
126 – Hamann Pixalu PL 123 – Oleksiuk & Carmody	35	35	39	45
173 – Trigg & Holland	35	36	37	45
116 - Weismantel 127 – Fisher-Webster 131(1) - Relton	35	35	37	45
180 (1) - Thompson	35	36	36	45
95 - Smith & Ransley	35	35	36	45
144 - Wielgosinski 169 - Williams 177 - Thompson	35	36	35	45
All other privately-owned land	35	35	35	45

Notes:
- *To identify the locations referred to in Table 2, see the 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 Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

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 Proponent shall acquire the land in accordance with the procedures in Conditions 5 - 6 of Schedule 4.

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

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

2.3 Low Frequency Noise

The 'Duralie Modification Noise and Blasting Assessment' (prepared by SLR Consulting Australia dated 9 July 2014) included a low frequency analysis of C and A weighted intrusive noise levels in accordance with the NSW *Industrial Noise Policy* (INP) requirements. The assessment indicated that there is no dominant low-frequency content relating to noise emissions from the DCM.

The implementation and transitional arrangements for the NSW Noise Policy for Industry (NPfI) notes the following:

> *The NSW Industrial Noise Policy (2000) will continue to apply where it is referenced in existing statutory instruments (such as consents and licences), except for the NSW Industrial Noise Policy Section 4 modifying factors, which will be transitioned to the Noise Policy for Industry (2017) Fact Sheet C through a NSW Industrial Noise Policy application note. This approach has been taken because the Noise Policy for Industry (2017) modification factor approach reflects more recent understanding of the impact of tonal and low-frequency noise on the community.*

As such appropriate modifying factors such as low frequency noise have been assessed against NPfI requirements. At all locations DCM was found to not trigger any modification factors, was not audible or was significantly below the relevant noise criteria and modification factors are therefore not addressed further in this report. The results of the operator attended noise measurements presented in **Section 3**.

3.0 Operational Noise Monitoring Methodology

3.1 General Requirements

All acoustic instrumentation employed throughout the monitoring programme has been designed to comply with the requirements of AS IEC 61672.1 – 2019 *Electroacoustics—Sound level meters*, AS IEC 60942 2017 *Electroacoustics – Sound calibrators* and carried current NATA or manufacturer calibration certificates. Instrument calibration was checked before and after each measurement survey, with the variation in calibrated levels not exceeding ±0.5 dBA.

3.2 Methodology – Operator-Attended Noise Monitoring Locations

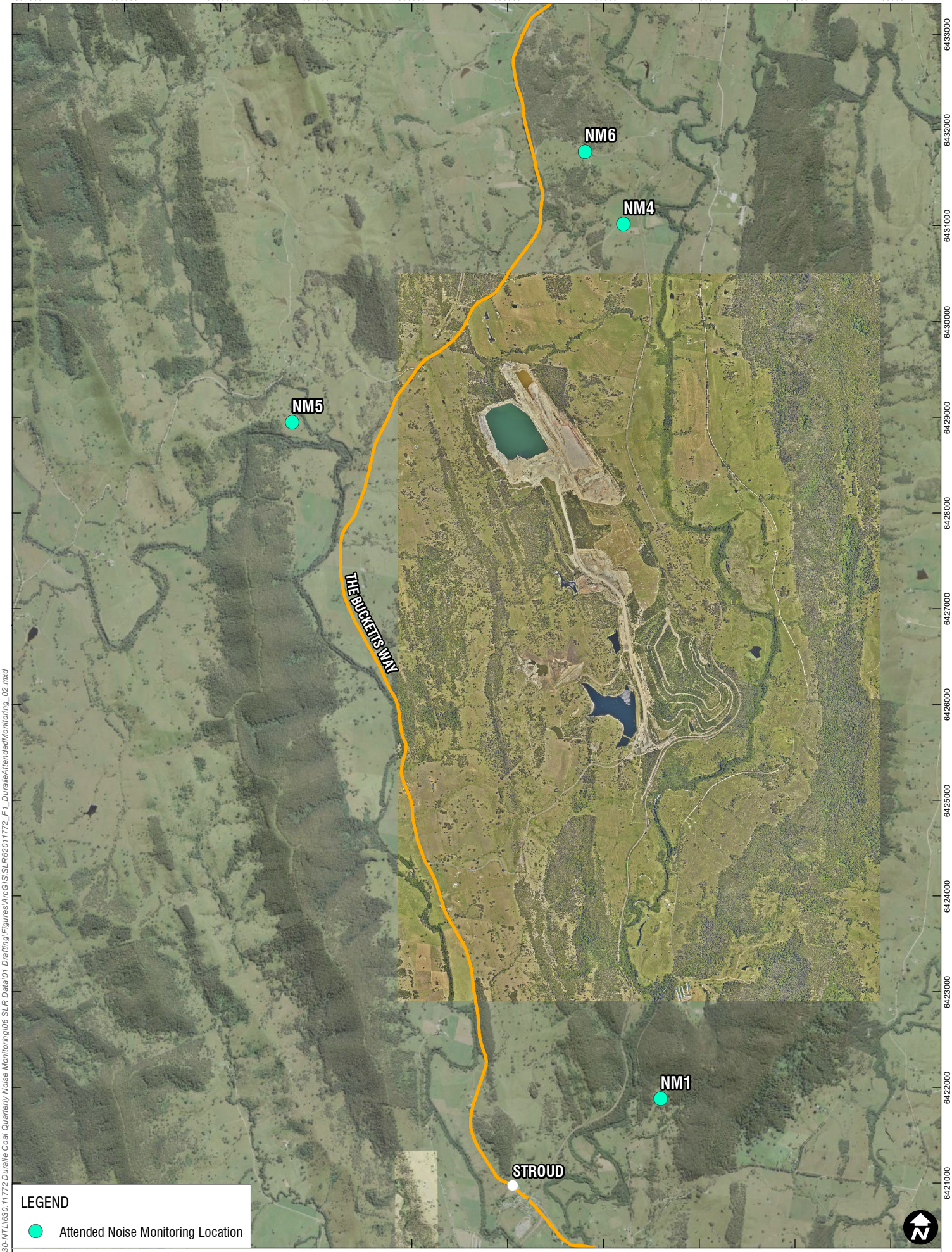
Noise monitoring was conducted guided by the requirements of the NMP. Operator-attended noise measurements were conducted during the day evening and night-time period for 15 minutes per period at each of the four nominated noise monitoring locations. The details of the operator-attended noise monitoring locations are contained within **Table 2** and shown in **Figure 1**. During the operator attended noise measurements, the character and relative contribution of ambient noise sources along with the mine contributions were noted.

Table 2 DCM Operational Noise Monitoring Locations

Monitoring Location	Receiver Type	Resident / Owner	Monitoring Location - MGA Zone 56	
			Easting (m)	Northing (m)
NM1	Residence	Woodley[1]	400644	6421907
NM4	Residence	Fisher-Webster	396790	6428961
NM5	Residence	Moylan	396770	6428945
NM6	Residence	Oleksiuk and Carmody	399661	6431862
Note 1: Woodley property has changed ownership but will retain the title of 'Woodley' until a License revision.				

The objective of the DCM operational operator-attended noise monitoring was to measure the maximum (L_{Amax}) and the $L_{Aeq(15minute)}$ noise level contributions at the nearest potentially affected receptors to determine the noise contribution of mining activities associated with Duralie Coal Mine operations over a 15-minute measurement period. In addition, the operator quantifies and characterises the overall levels of ambient noise in the area (i.e. L_{Amax}, L_{A1}, L_{A10}, L_{A90}, and L_{Aeq}) over the 15-minute measurement interval. Operator-attended noise measurements were conducted using a one-third octave type 1 integrating Bruel and Kjaer 2250L sound level meter (serial number 3005908).

Note that operator-attended rail noise monitoring was not conducted as rail noise monitoring ceased following the completion of ROM coal rail movements in December 2021. The rail infrastructure was decommissioned in 2024.



Scale: 1:50,000 at A4
Coordinate System: GDA2020 MGA Zone 56

Date Drawn: 20-Jun-2025
Project Number: 630.11772

Data Source: ESRI Base Maps Imagery
and site supplied ecw (Duralie_20241221_MGA94z56)

SLR

NOISE MONITORING LOCATIONS

FIGURE 1

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4.0 Results

4.1 Operator-Attended Noise Monitoring – DCM Operational Activity

Operator-attended noise measurements were conducted during the day, evening and night-time period on Thursday 13 August 2026. Results of the operator-attended noise surveys at NM1, NM4, NM5, NM6 are provided in **Table 3** through to **Table 6**.

A summary of the results for the operator-attended noise monitoring are displayed graphically in **Appendix B**. Charts of the noise surveys show L_{Amax}, L_{Aeq}, and $L_{Aeq(\leq 1.25kHz)}$ in 1-second intervals throughout the monitoring survey.

Ambient noise levels presented include all noise sources such as transport (roads, rail and aircraft), fauna (insects, frogs, birds, and bats), farm animals, the natural environment (wind in trees), domestic noises, other industrial operations as well as Duralie Coal Mine noise emissions.

Weather data during the monitoring period has been obtained from the weather station located on the Duralie Coal Mine site. Where this data was not available meteorological conditions have been estimated based on observed conditions during the monitoring period.

The tables provide the following information:

- Date and start time, operator and equipment details.
- Monitoring location.
- Wind velocity (m/s) and temperature (ºC) at the measurement location.
- Typical maximum (L_{Amax}) and contributed $L_{Aeq(15minute)}$ noise levels.

4.1.1 Operator-Attended Noise Survey Results – 'NM1'

Results of the operator-attended noise surveys at 'NM1' are provided in **Table 3**. Monitoring location 'NM1' represents residential receptors located to the south of the site. Due to access restrictions noise monitoring was conducted at the entrance to the property.

Table 3 Operator-Attended Noise Survey Results – 'NM1'

Period	Date/ Start Time/ Weather	Primary Noise Descriptor dBA (15minute)						Description of Noise Emissions and Typical Maximum Noise Levels (dBA)
		L_{Amax}	L_{A1}	L_{A10}	L_{A90}	L_{Aeq}	L_{Aeq} (≤1.25kHz)	
Day	13/08/2026 16:08 18°C 0.5m/s SSW	76	60	48	29	48	38	*Site related noise events:* **DCM: Inaudible** *Other noise events:* Birdsong 29-76 Livestock 35-48 Industry 25-30 Aircraft 30-40
Evening	13/08/2026 19:41 12°C >3°C/100m[1]	59	52	36	27	39	37	*Site related noise events:* **DCM: Inaudible** *Other noise events:* Birdsong/insects 25-53 Traffic 27-59
Night	13/08/2026 23:57 7°C >3°C/100m[1]	40	30	28	25	27	22	*Site related noise events:* **DCM: Inaudible** *Other noise events:* Birdsong/insects 25-40 Traffic 20-28

Note 1: Available data and corresponding lapse rate observations indicate temperature inversions greater than 3°C/100m during the monitoring periods.

DCM operations were inaudible during all periods of the operator attended noise surveys at this location. The ambient noise environment at the monitoring location generally consisted of road traffic and aircraft noise as well as natural sources such as birdsong, and insects.

Meteorological data from the onsite DCM automatic weather station showed lapse rates in excess of 3°C/100m during the evening, and night-time periods of the operator attended measurements at this location. As such, the criteria during these periods at this location is not applicable.

4.1.2 Operator-Attended Noise Survey Results – 'NM4'

Results of the operator-attended noise surveys at 'NM4' are provided in **Table 4**. Monitoring location 'NM4' represents residential receptors located north of the site.

Table 4 Operator-Attended Noise Survey Results – 'NM4'

Period	Date/ Start Time/ Weather	Primary Noise Descriptor dBA (15minute)						Description of Noise Emissions and Typical Maximum Noise Levels (dBA)
		L_{Amax}	L_{A1}	L_{A10}	L_{A90}	L_{Aeq}	L_{Aeq} (≤1.25kHz)	
Day	13/08/2026 17:53 15°C 6.9°C/100m	66	47	40	27	38	37	*Site related noise events:* **DCM: Inaudible** *Other noise events:* Birdsong 25-66 Dogs 25-39 Traffic 20-48
Evening	13/08/2026 18:08 13°C 7.1°C/100m	51	43	38	27	35	33	*Site related noise events:* **DCM: Briefly audible** DCM operations 23-29 **$L_{Aeq(15minute)}$ contribution <20 dBA** *Other noise events:* Birdsong/insects 51 Dogs 36-37 Traffic 25-44 Livestock 30-47
Night	13/08/2026 22:28 8°C >3°C/100m[1]	42	38	34	23	30	29	*Site related noise events:* **DCM: Briefly audible** DCM operations 18-38 **$L_{Aeq(15minute)}$ contribution 26 dBA** **L_{Amax} 38 dBA** *Other noise events:* Insect noise 25-38 Traffic 25-42 Livestock 25-32 Aircraft 24-39

Note 1: Available data and corresponding lapse rate observations indicate temperature inversions greater than 3°C/100m during the monitoring periods.

DCM operations were inaudible during the daytime, and briefly audible during the evening, and night-time operator attended measurements at this location. During the evening, and night-time, operator attended noise surveys, DCM operations generated an $L_{Aeq(15minute)}$ noise contribution of less than 20 dBA and 26 dBA, respectively. During the night-time DCM generated an L_{Amax} noise contribution of 38 dBA. The ambient noise environment at the monitoring location generally consisted of road traffic as well as natural sources such as dogs, birdsong, and insects.

Meteorological data from the onsite DCM automatic weather station showed lapse rates in excess of 3°C/100m during all periods of the operator attended measurements at this location. As such, the criteria at this location is not applicable.

4.1.3 Operator-Attended Noise Survey Results – 'NM5'

Results of the operator-attended noise surveys at 'NM5' are provided in **Table 5**. Monitoring location 'NM5' represents residential receptors located to the west of the site.

Table 5 Operator-Attended Noise Survey Results - 'NM5'

Period	Date/ Start Time/ Weather	Primary Noise Descriptor dBA (15minute)						Description of Noise Emissions and Typical Maximum Noise Levels (dBA)
		L_{Amax}	L_{A1}	L_{A10}	L_{A90}	L_{Aeq}	L_{Aeq} (≤1.25kHz)	
Day	13/08/2026 16:41 17°C 0.0m/s WSW	55	45	37	27	34	30	*Site related noise events:* **DCM: Inaudible** *Other noise events:* Birdsong 28-55 Traffic 20-34 Livestock 20-44
Evening	13/08/2026 19:00 13°C >3°C/100m[1]	49	46	39	29	36	35	*Site related noise events:* **DCM: Audible** Tracked vehicles 22-33 **$L_{Aeq(15minute)}$ contribution 28 dBA** *Other noise events:* Birdsong/insects 30-42 Traffic 22-49 Train 29-34
Night	13/08/2026 23:17 7°C >3°C/100m[1]	47	41	37	32	35	35	*Site related noise events:* **DCM: Barely Audible** Vehicle noise 32-44 **$L_{Aeq(15minute)}$ contribution 33 dBA** **L_{Amax} 43 dBA** *Other noise events:* Insects 30-40 Traffic 30-47 Livestock 30-39

Note 1: Available data and corresponding lapse rate observations indicate temperature inversions greater than 3°C/100m during the monitoring periods.

DCM operations were inaudible during the daytime, and audible during the evening and night-time period operator attended surveys at this location. During evening, and night-time, operator attended noise surveys, DCM operations generated an $L_{Aeq(15minute)}$ noise contribution of 28 dBA and 33 dBA, respectively. During the night-time DCM generated an L_{Amax} noise contribution of 43 dBA. The ambient noise environment at the monitoring location generally consisted of road traffic as well as natural sources such as birdsong, and insects.

Meteorological data from the onsite DCM automatic weather station showed lapse rates in excess of 3°C/100m during the evening, and night-time periods of the operator attended measurements at this location. As such, the criteria during these periods at this location is not applicable.

4.1.4 Operator-Attended Noise Survey Results – 'NM6'

Results of the operator-attended noise surveys at 'NM6' are provided in **Table 6**. Monitoring location 'NM6' represents residential receptors located north of the site.

Table 6 Operator-Attended Noise Survey Results - 'NM6'

Period	Date/ Start Time/ Weather	Primary Noise Descriptor dBA (15minute)						Description of Noise Emissions and Typical Maximum Noise Levels (dBA)
		L_{Amax}	L_{A1}	L_{A10}	L_{A90}	L_{Aeq}	L_{Aeq} (≤1.25kHz)	
Day	13/08/2026 17:11 16°C 3.5°C/100m	72	57	43	33	44	37	*Site related noise events:* **DCM: Inaudible** *Other noise events:* Birdsong 34-72 Traffic 30-45
Evening	13/08/2026 20:21 11°C >3°C/100m[1]	47	42	35	20	31	31	*Site related noise events:* **DCM: Audible** DCM operations 16-30 **$L_{Aeq(15minute)}$ contribution 29 dBA** *Other noise events:* Insects 26-45 Dogs 25-30 Traffic 15-43 Extraneous 45-47
Night	13/08/2026 22:01 7°C >3°C/100m[1]	55	41	33	24	31	30	*Site related noise events:* **DCM: Audible** DCM operations 20-35 **$L_{Aeq(15minute)}$ contribution 24 dBA** **L_{Amax} 35 dBA** *Other noise events:* Insects 22-41 Dogs 20-39 Traffic 20-39 Extraneous 55

Note 1: Available data and corresponding lapse rate observations indicate temperature inversions greater than 3°C/100m during the monitoring periods.

DCM operations were inaudible during the daytime, and audible during the evening and night-time operator attended measurements at this location. During the evening and night-time, operator attended noise surveys, DCM operations generated an $L_{Aeq(15minute)}$ noise contribution of 29 dBA and 24 dBA, respectively. During the night-time DCM generated an L_{Amax} noise contribution of up to 35 dBA. The ambient noise environment at the monitoring location generally consisted of road traffic as well as natural sources such as dogs, birdsong, and insects.

Meteorological data from the onsite DCM automatic weather station showed lapse rates in excess of 3°C/100m during all periods of the operator attended measurements at this location. As such, the criteria at this location is not applicable.

5.0 Performance Assessment

5.1 Operational Noise

Results of the operator-attended noise measurements compared with the relevant noise criteria contained in the Project Approval and EPL 11701 are given in **Table 7**.

Table 7 Performance Assessment – Operations

Location	Estimated DCM Noise Level $L_{Aeq(15minute)}$ (dBA)			Noise Criteria $L_{Aeq(15minute)}$ (dBA)			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
NM1	I/A[1]	I/A[1]	I/A[1]	35	35	35	Yes	Yes[2]	Yes[2]
NM4	I/A[1]	<20	26	35	35	37	Yes[2]	Yes[2]	Yes[2]
NM5	I/A[1]	28	33	35	35	35	Yes	Yes[2]	Yes[2]
NM6	I/A[1]	29	24	35	35	39	Yes[2]	Yes[2]	Yes[2]

Note 1: I/A = Inaudible.

Note 2: Criteria not applicable due to non-compliant weather conditions.

5.2 Sleep Disturbance

Results of the night period sleep disturbance measurement compared with the relevant noise criteria contained in the Project Approval and EPL 11701 are given in **Table 8**.

Table 8 Performance Assessment – Sleep Disturbance

Location	Estimated DCM Noise Level $L_{A1(1minute)}$ (dBA)	Noise Criteria $L_{A1(1minute)}$ (dBA)	Compliance
NM1	I/A[1]	45	Yes[2]
NM4	38	45	Yes[2]
NM5	43	45	Yes[2]
NM6	35	45	Yes[2]

Note 1: I/A = Inaudible.

Note 2: Criteria not applicable due to non-compliant weather conditions.

Results presented in **Table 7** and **Table 8**. indicate that compliance with the relevant criteria was achieved at all operator-attended monitoring locations.

6.0 Conclusion

SLR has conducted quarterly noise monitoring for the DCM guided by the requirements of the NMP.

Operator-attended operational noise monitoring was conducted at four locations during the day, evening and night period on Thursday 13 August 2026. The assessment of daytime, evening and night-time operational noise emissions found DCM to be compliant with the relevant criteria contained within the DCM PA and EPL.

Appendix A Glossary of Acoustic Terminology

Duralie Coal Mine

Compliance Noise Monitoring
August 2026

Duralie Coal Ltd

SLR Project No.: 630.11772

6 October 2026

1. Sound Level or Noise Level

The terms ‘sound’ and ‘noise’ are almost interchangeable, except that ‘noise’ often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. the human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. the decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

the symbols SPL, L or LP are commonly used to represent Sound Pressure Level. the symbol LA represents A-weighted Sound Pressure Level. the standard reference unit for Sound Pressure Levels expressed in decibels is 2 x 10^{-5} Pa.

2. ‘A’ Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an ‘A-weighting’ filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People’s hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. the table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private Office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as ‘linear’, and the units are expressed as dB(lin) or dB.

3. Sound Power Level

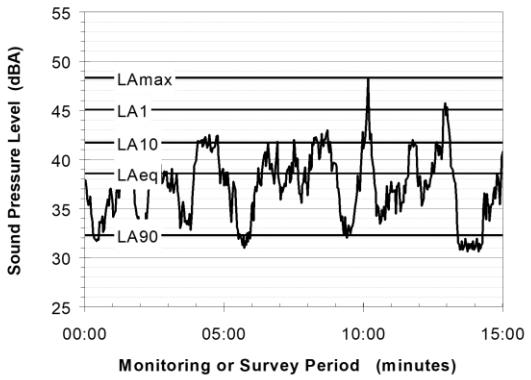
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

the relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. for example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

L_{A1} The noise level exceeded for 1% of the 15 minute interval.

L_{A10} The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

L_{A90} The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

L_{Aeq} The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

5. Frequency Analysis

Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

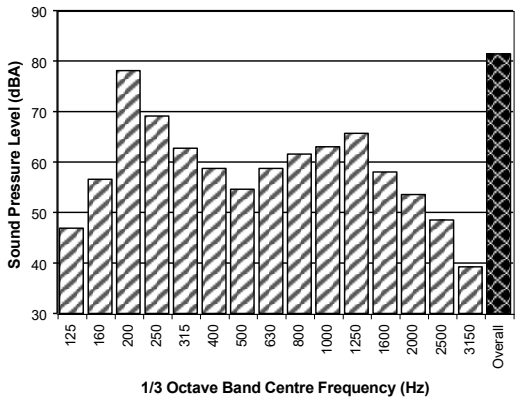
The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)

Narrow band (where the spectrum is divided into 400 or more bands of equal width)

the following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and Off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.

Appendix B Operator Attended Noise Survey Charts

Duralie Coal Mine

Compliance Noise Monitoring
August 2026

Duralie Coal Ltd

SLR Project No.: 630.11772

6 October 2026

Figure B1 – Day Period – 'NM1' Operator Attended Noise Survey Results

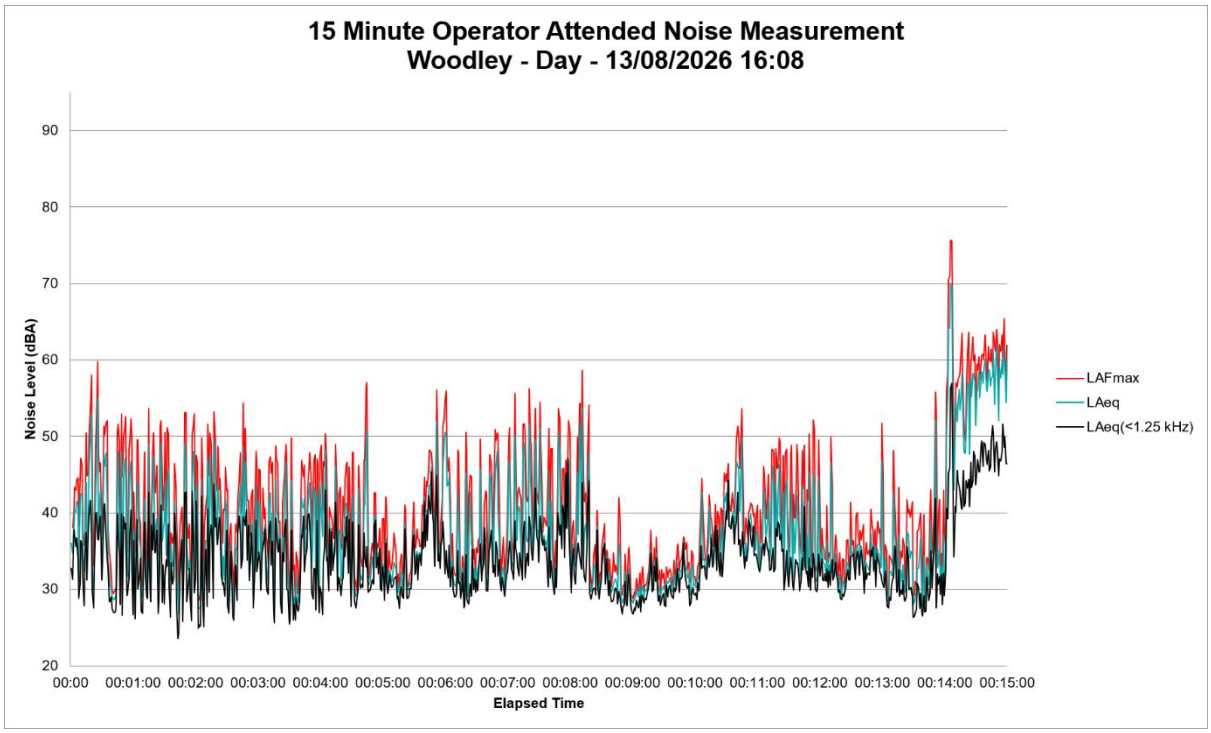


Figure B2 – Evening Period – 'NM1' Operator Attended Noise Survey Results

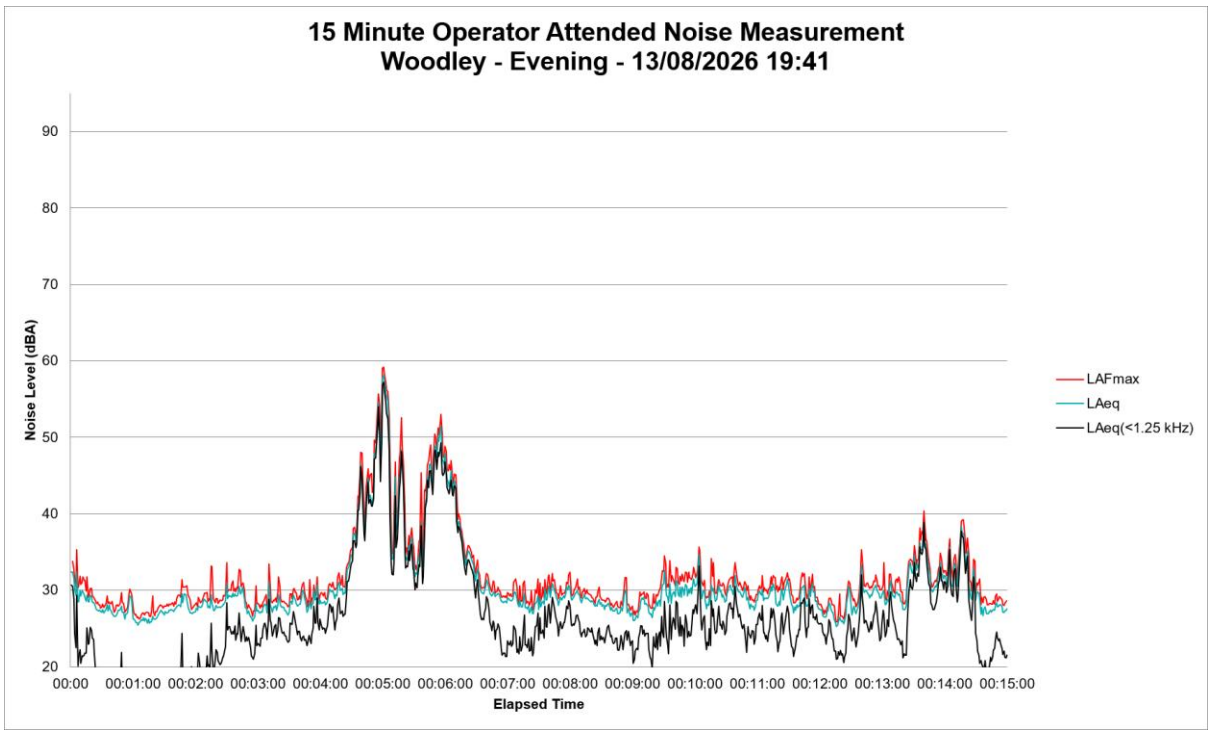


Figure B3 – Night Period – 'NM1' Operator Attended Noise Survey Results

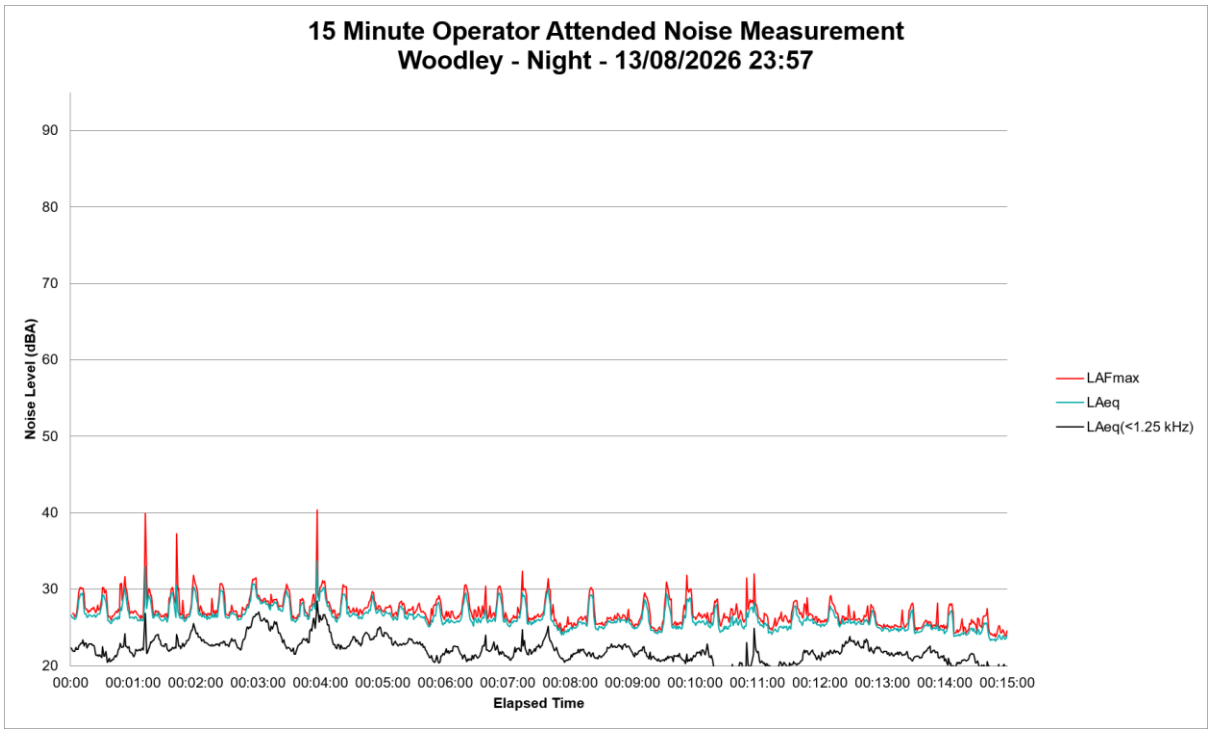


Figure B4 – Day Period – 'NM4' Operator Attended Noise Survey Results

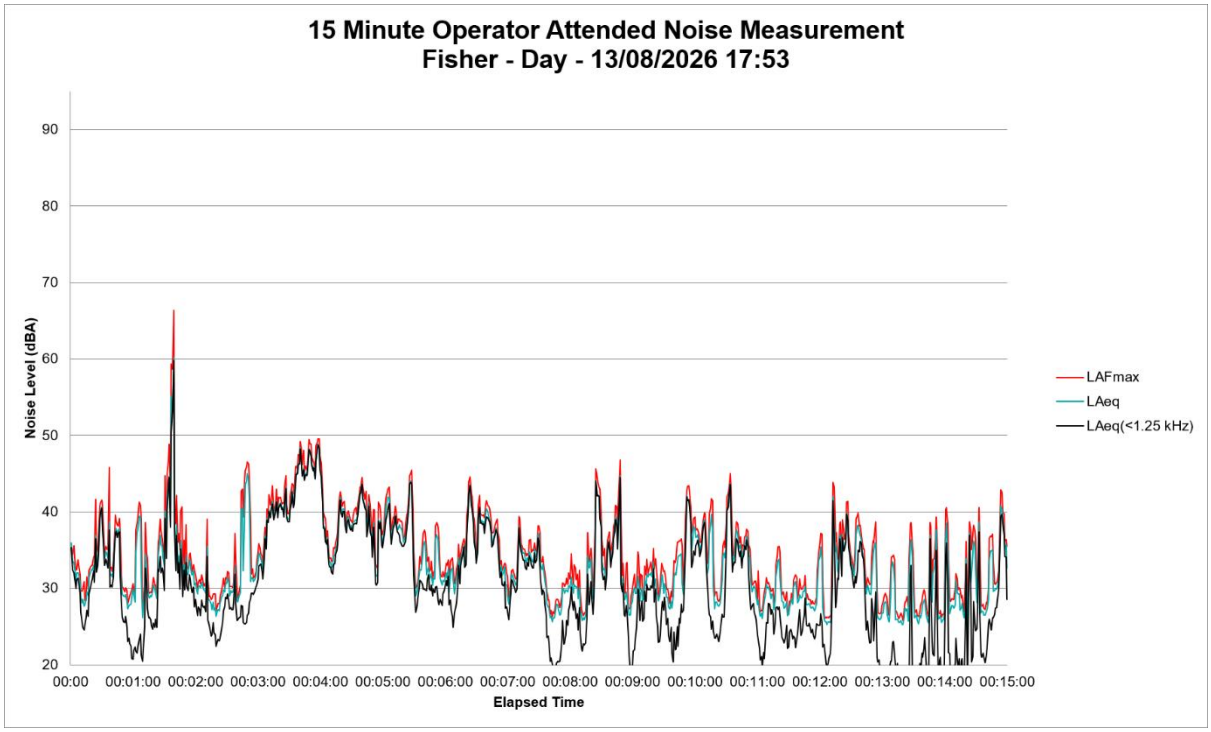


Figure B5 – Evening Period – 'NM4' Operator Attended Noise Survey Results

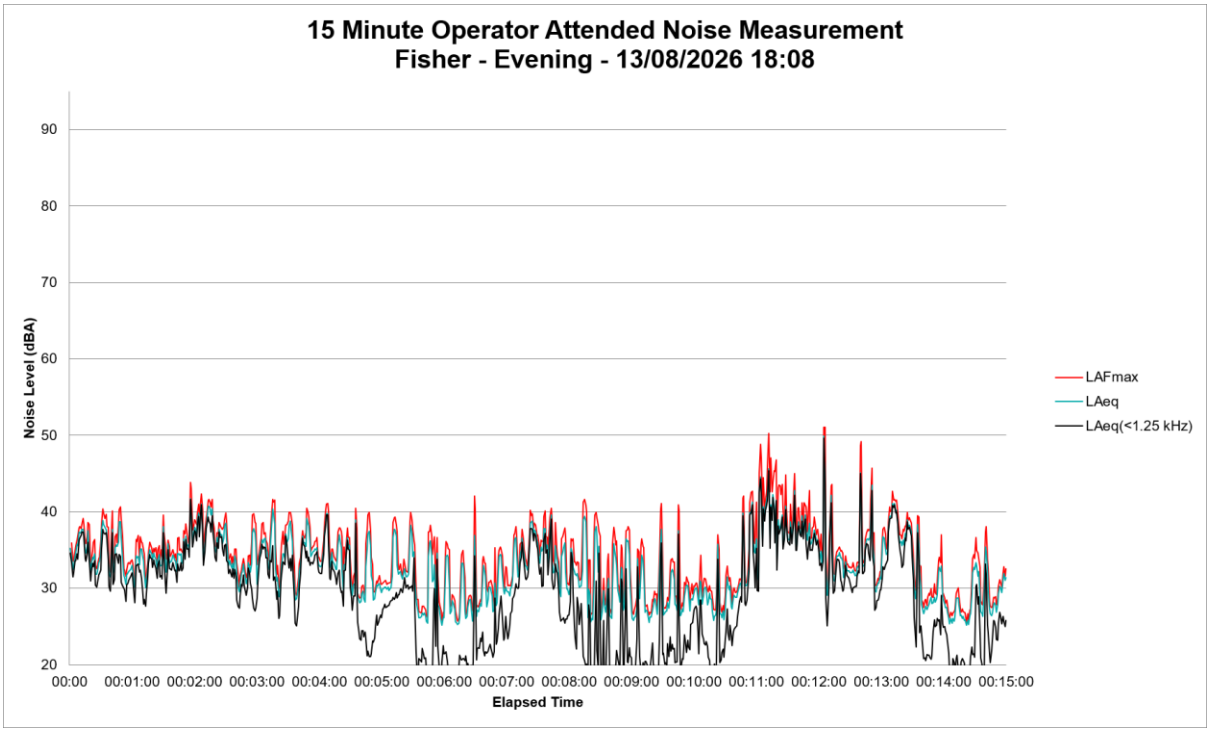


Figure B6 – Night Period – 'NM4' Operator Attended Noise Survey Results

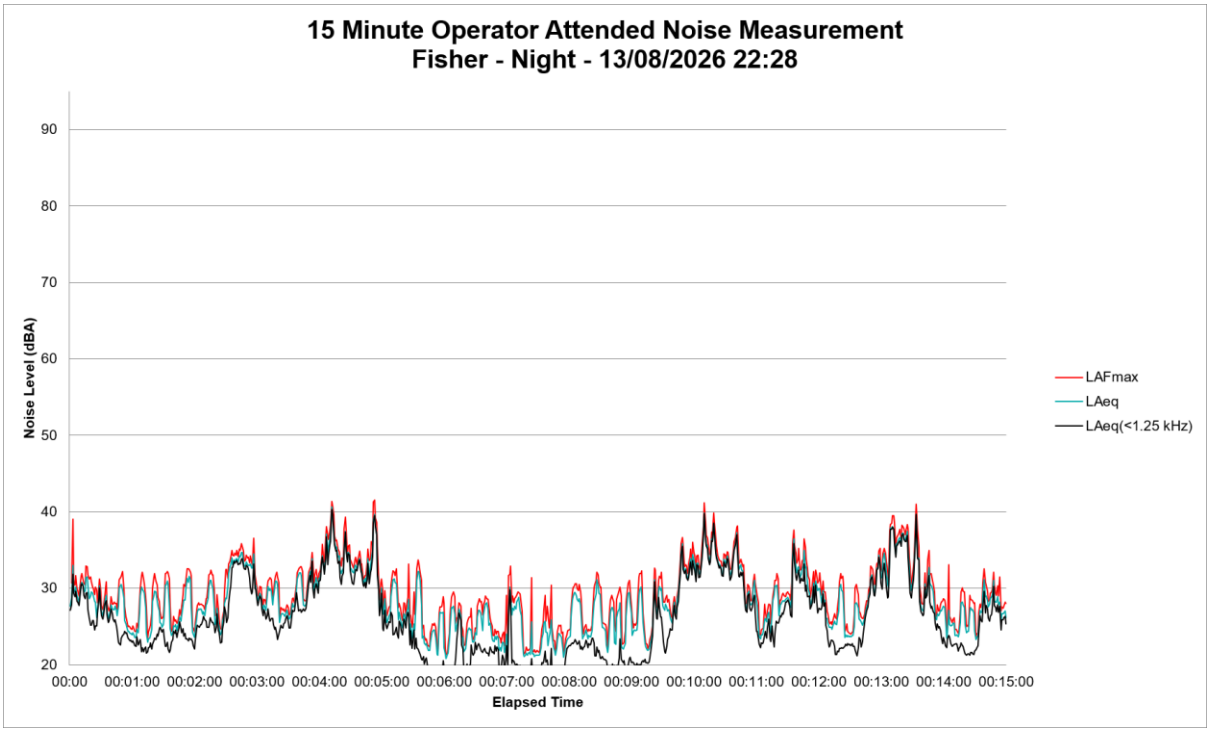


Figure B7 – Day Period – 'NM5' Operator Attended Noise Survey Results

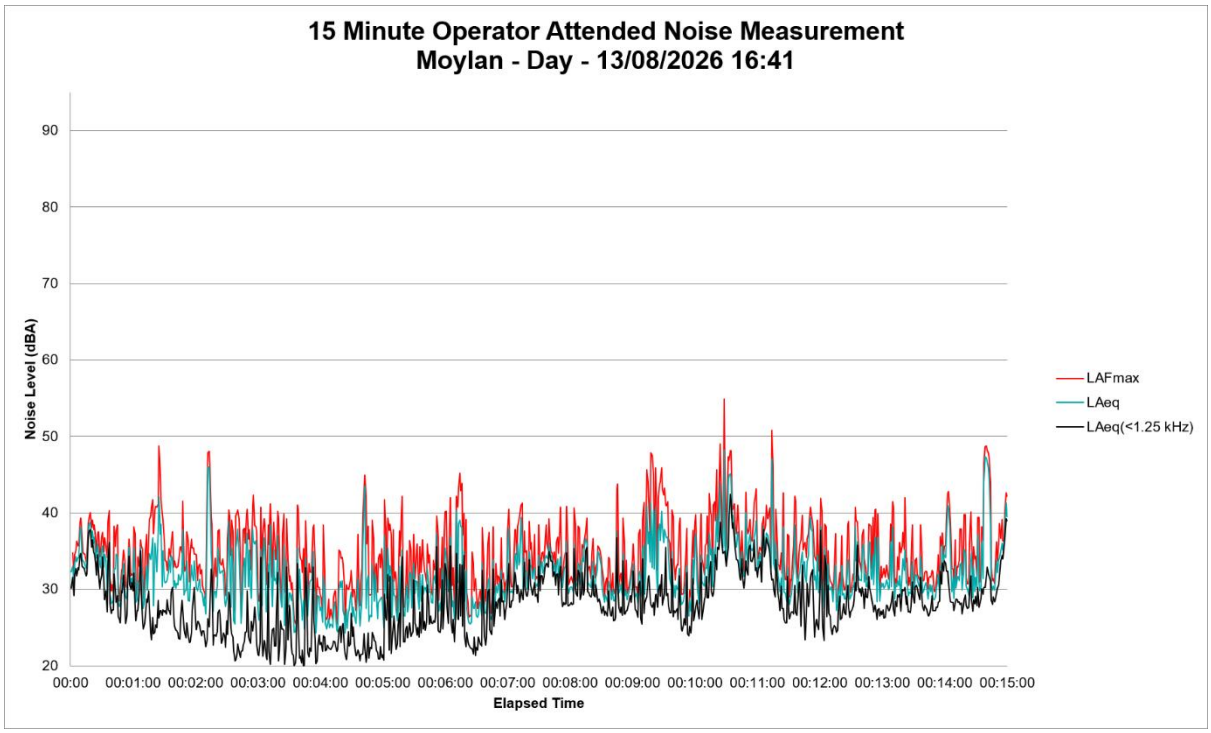


Figure B8 – Evening Period – 'NM5' Operator Attended Noise Survey Results

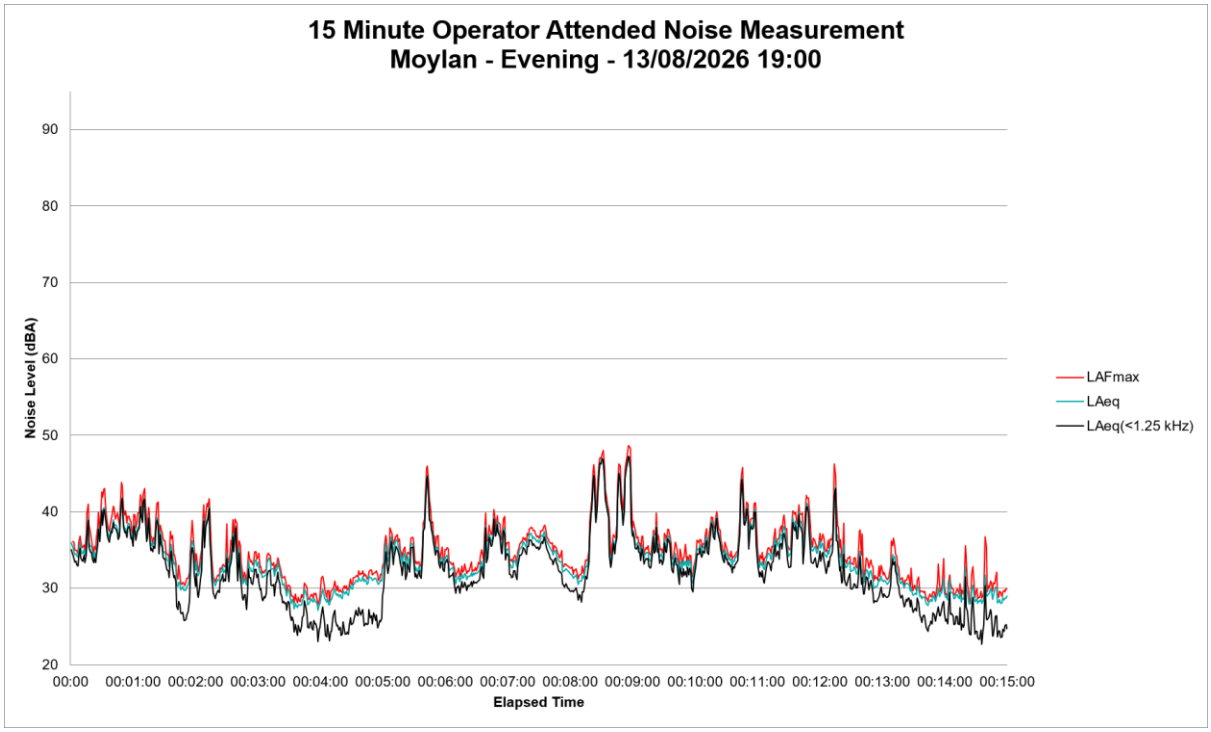


Figure B9 – Night Period – 'NM5' Operator Attended Noise Survey Results

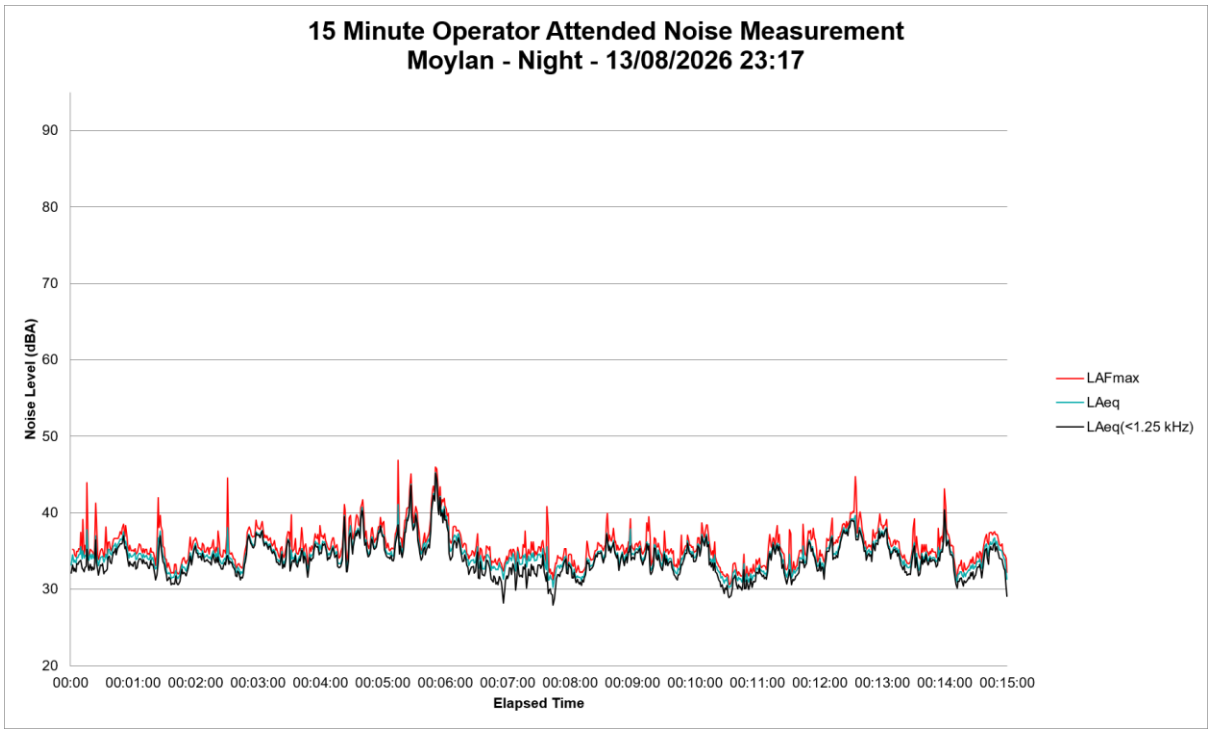


Figure B10 – Day Period – 'NM6' Operator Attended Noise Survey Results

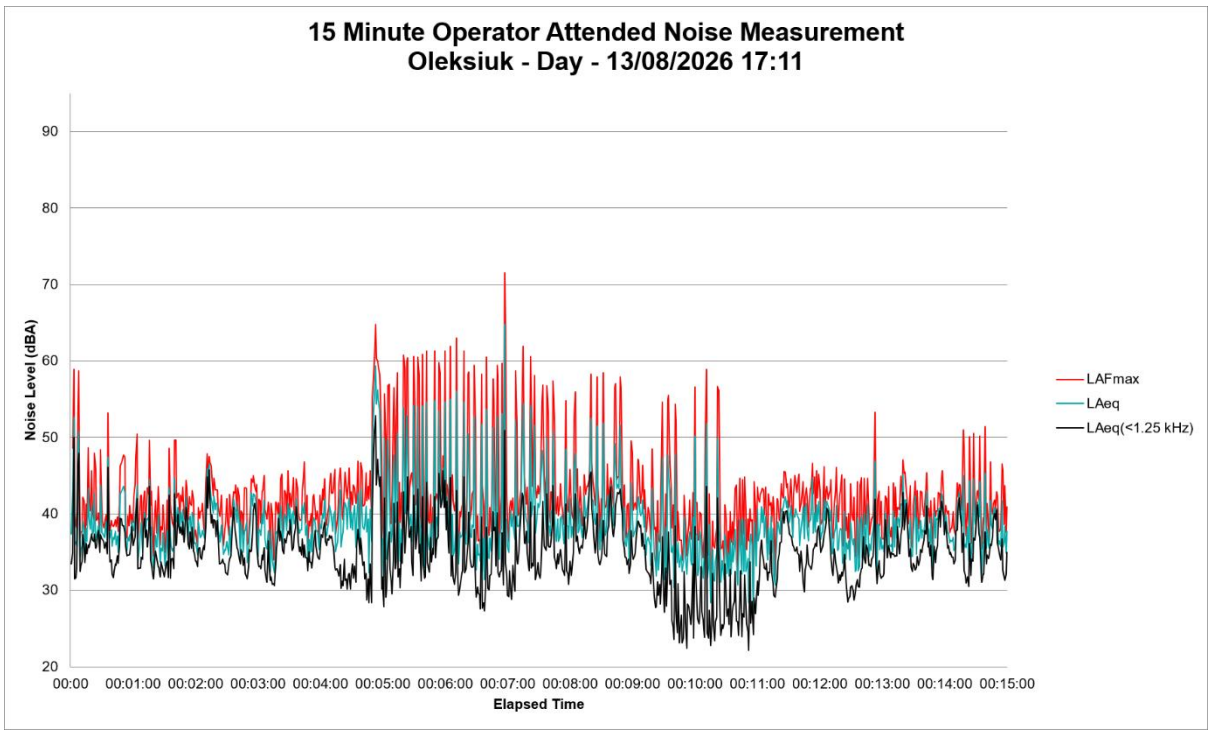


Figure B11 – Evening Period – 'NM6' Operator Attended Noise Survey Results

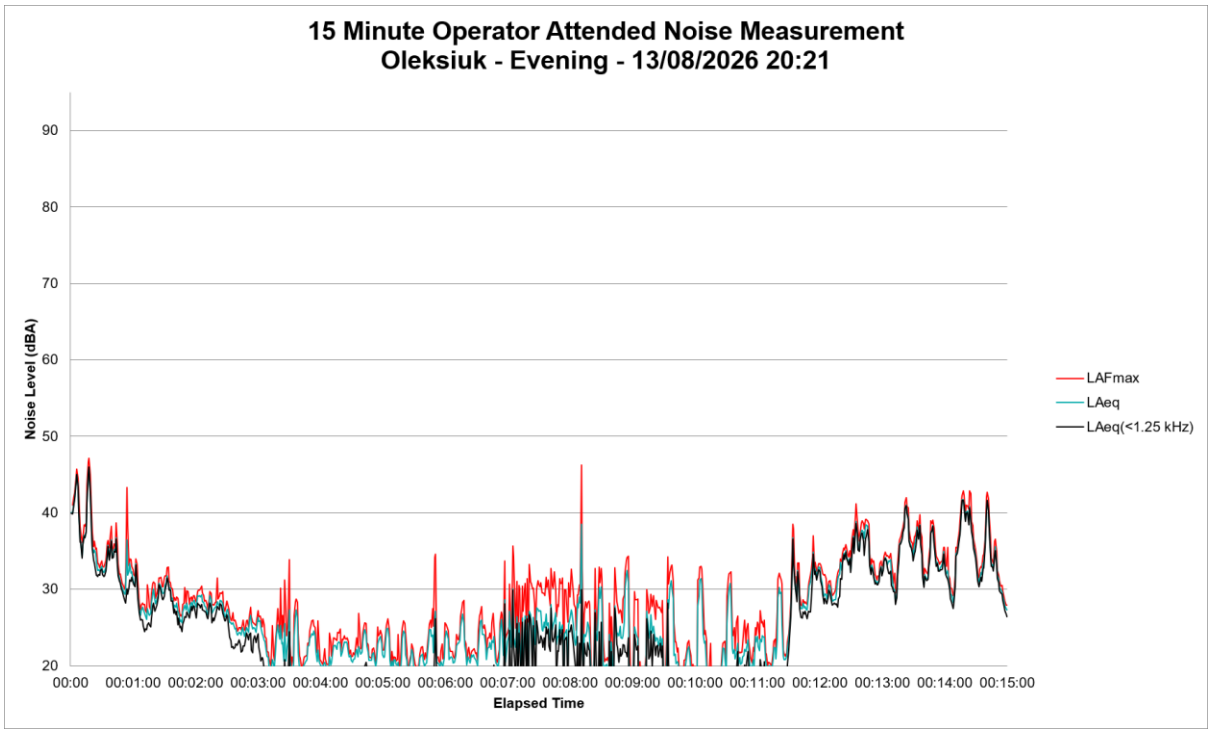
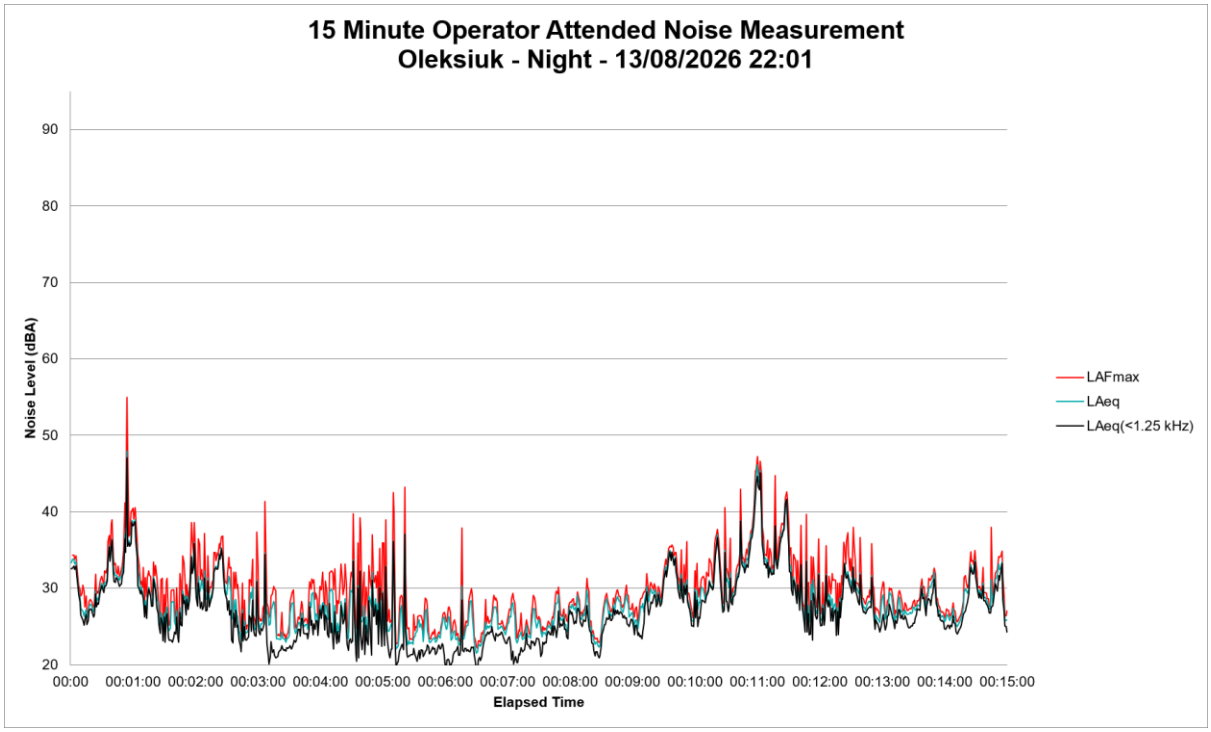
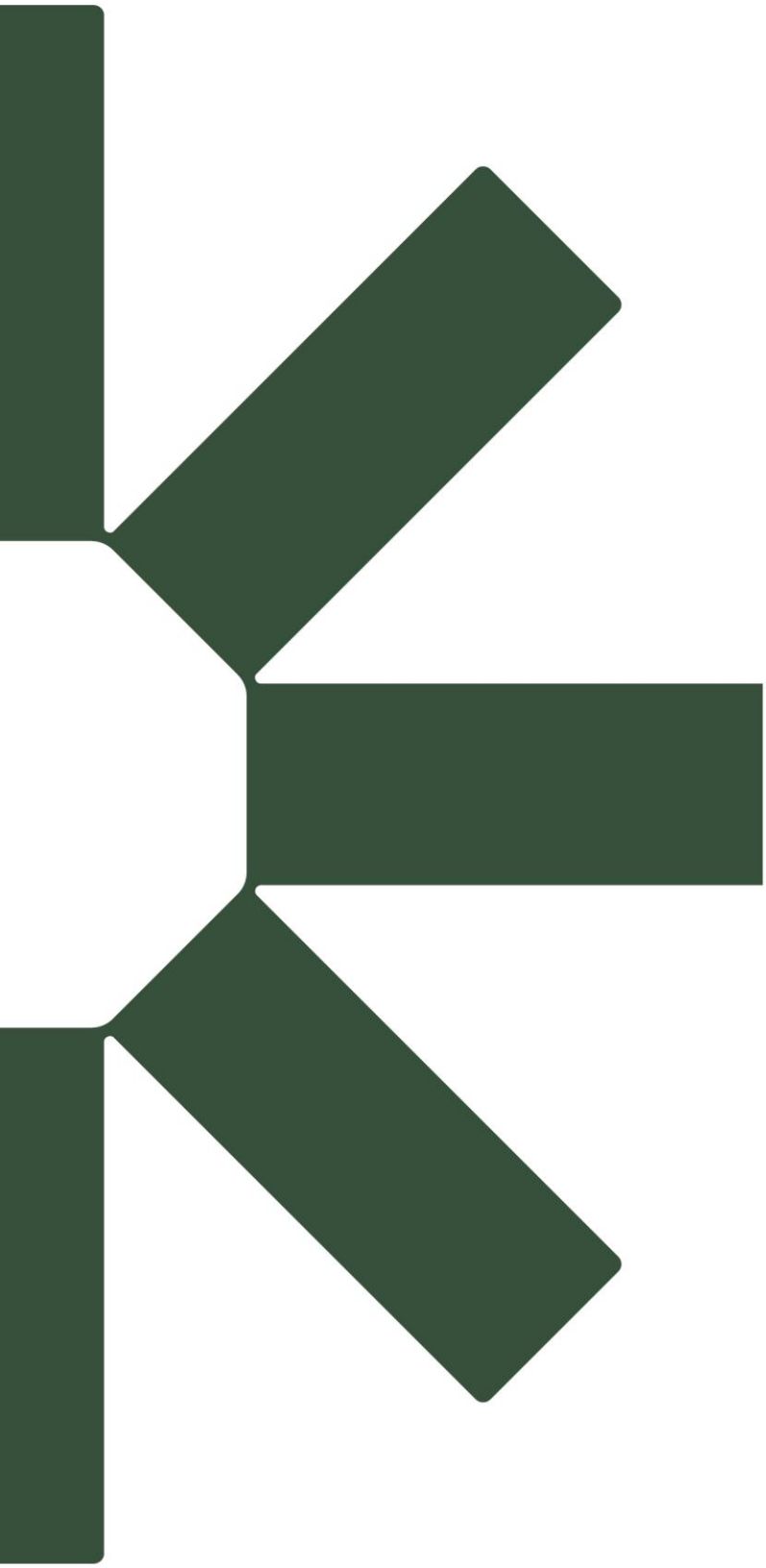


Figure B12 – Night Period – 'NM6' Operator Attended Noise Survey Results





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