Noise Monitoring Assessment

Northparkes Mines
Quarter 1 , 2025

Prepared for: Evolution Mining (Northparkes) Pty Ltd
April 2025
MAC190810-RP24

Muller Acoustic Consulting

Document Information

Noise Monitoring Assessment

Northparkes Mines

Quarter 1, 2025

Prepared for: Evolution Mining (Northparkes) Pty Ltd

PO Box 995

Parkes NSW 2870

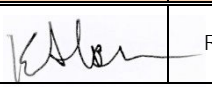
Prepared by: Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

P: +61 2 4920 1833

www.mulleracoustic.com

DOCUMENT ID	DATE	PREPARED	SIGNED	REVIEWED	SIGNED
MAC190810-RP24	7 April 2025	Kristian Allen		Rod Linnett	

Field Officer: Kristian Allen

CONTENTS

This page has been intentionally left blank

1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by Evolution Mining (Northparkes) Pty Ltd to complete a Noise Monitoring Assessment (NMA) for Northparkes Mines (Northparkes), 27km Northwest of Parkes, NSW. The NMA has been completed to quantify operational noise emissions as per Conditions 1 to 5 of Schedule 3 of the Project Approval Conditions (PA #11_0060) and the Northparkes Noise Management Plan (NMP, 2019).

The assessment has been conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA) 2017, Noise Policy for Industry (NPI);
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022; and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise - General Procedures.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A.**

This page has been intentionally left blank

2 Noise Criteria

2.1 Operational Noise Criteria

This assessment has adopted criteria as per Conditions 1 to 5 of Schedule 3 of PA #11_0060 and the NMP, 2019 (see **Appendix B**) and is summarised below in **Table 1**.

Table 1 Noise Criteria

Location	Day	Evening	Night	
	dB $L_{Aeq(15min)}$	dB $L_{Aeq(15min)}$	dB $L_{Aeq(15min)}$	dB $L_{A1(1min)}$
All privately-owned land	35	35	35	45

Additionally, the conditions state:

> *Operational Noise generated by the project will be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy.*
>
> *These limits apply under all meteorological conditions except the following:*
>
> - *during periods of rain or hail;*
> - *average wind speeds at microphone height exceeds 5 m/s;*
> - *wind speeds greater than 3 m/s at 10 metres above ground level; or*
> - *temperature inversion conditions of up to 3 °C/100m or alternatively a stability class of G.*
>
> *Except for wind speed at the microphone height, the data to be used for determining meteorological conditions will be that recorded by the meteorological station located onsite. Operational noise generated by the project is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy. Appendix 5 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.*
>
> *These limits do not apply if NPM have an agreement with the relevant owner/s of the residences or land to generate higher noise levels, and NPM has advised the Department in writing of the terms of the agreement.*

This page has been intentionally left blank

3 Assessment Methodology

All attended noise monitoring surveys for this assessment were conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise" and the NMP.

The acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ±0.5dBA.

3.1 Operational Noise Measurement Methodology

The locality surrounding the mine is primarily rural/residential. In accordance with the NMP, five representative receivers were selected for this assessment and are presented in **Table 2.**

Table 2 Noise Monitoring Locations

ID	Location	Coordinate Locations, MGA55	
		Easting (m)	Northing (m)
NM1	Hubberstone	600687	6360754
NM2	Lone Pine	593669	6358933
NM3	Milpose	594827	6352971
NM4	Hillview	602993	6353469
NM5	Adavale	593568	6356920

Note: NM5 is an additional monitoring initiative by NPM.

Monitoring locations with respect to the mine site are shown visually in **Figure 1**.

Measurements were carried out using a Svantek Type 1, 977 noise analyser. The monitoring regime consisted of three 15-minute measurements during the daytime, evening, and night-time periods at each monitoring location. Throughout each survey, the operator quantified the contribution of significant noise sources where possible.

FIGURE 1

Locality Plan

MAC190810

Northparkes Mine

KEY

Monitoring Locations

0 400 800 1200 1600 2000 m

N

MAC
Muller Acoustic Consulting

4 Results

4.1 Assessment Information

The noise monitoring assessment for the first quarter in the 2025 EPL period was conducted on Wednesday 5 March 2025 to Thursday 6 March 2025 by field officer Kristian Allen.

4.2 Operational Noise Results

The monitoring assessment results for each location are presented in **Table 3** to **Table 7**. Each table contains results for each of the three 15-minute measurements for daytime, evening and night-time periods for each location including wind direction, wind speed and atmospheric stability class.

Table 3 Operator-Attended Noise Survey Results – Location NM1, Hubberstone					
Time(hrs)/Date	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L_{Amax}	L_{Aeq}	L_{A90}		
Day					
16:45 06/03/2025	49	36	21	WD: E WS: 1.5m/s Stab Class: C	Wind Gusts 20-59 Birds 20-54 Traffic 25-49 NPM Inaudible
17:00 06/03/2025	54	42	36		
17:15 06/03/2025	59	40	27		
Site $L_{Aeq(15min)}$ Contribution					<35
Evening					
19:07 05/03/2025	78	56	25	WD: SE WS: 2.0m/s Stab Class: E	Birds 20-78 Wind Gusts 22-57 Traffic 30-53 NPM Inaudible
19:22 05/03/2025	50	38	29		
19:37 05/03/2025	57	48	43		
Site $L_{Aeq(15min)}$ Contribution					<35
Night					
00:06 06/03/2025	45	28	26	WD: E WS: 1.0m/s Stab Class: E	Wind Gusts 20-52 Insects 24-45 NPM – Haul Trucks <25 (barely audible <50% measurement)
00:21 06/03/2025	46	32	28		
00:36 06/03/2025	52	38	34		
Site $L_{Aeq(15min)}$ Contribution					<35
Site $L_{A1(1min)}$ Contribution					<45

Note: NPM denotes Northparkes Mines.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Table 4 Operator-Attended Noise Survey Results – Location NM2, Lone Pine					
Time(hrs)/Date Duration 15min	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
	L_{Amax}	L_{Aeq}	L_{A90}		
Day					
15:50 06/03/2025	80	52	23	WD: E WS: 1.0m/s Stab Class: A	Wind Gusts 20-54 Birds 20-28 Traffic 25-80 NPM – Site Hum <20 (barely audible throughout)
16:05 06/03/2025	77	48	20		
16:20 06/03/2025	54	39	26		
Site $L_{Aeq(15min)}$ Contribution					<35
Evening					
20:04 05/03/2025	54	37	33	WD: SE WS: 2.0m/s Stab Class: D	Dogs Barking 30-54 Insects 32-46 Wind Gusts 30-55 Birds 32-68 Traffic 32-78 NPM Inaudible
20:19 05/03/2025	78	51	39		
20:34 05/03/2025	60	42	40		
Site $L_{Aeq(15min)}$ Contribution					<35
Night					
01:04 06/03/2025	59	36	32	WD: E WS: 1.0m/s Stab Class: E	Dogs Barking 30-59 Insects 25-45 Wind Gusts 25-40 NPM – Production <25-30 (barely to just audible <50% measurement) NPM – Haul Trucks <25-30 (barely to just audible <50% measurement)
01:19 06/03/2025	43	36	33		
01:34 06/03/2025	44	33	31		
Site $L_{Aeq(15min)}$ Contribution					<35
Site $L_{A1(1min)}$ Contribution					<45

Note: NPM denotes Northparkes Mines.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Table 5 Operator-Attended Noise Survey Results – Location NM3, Milpose					
Time(hrs)/Date	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L_{Amax}	L_{Aeq}	L_{A90}		
Day					
13:53 06/03/2025	54	33	19	WD: E WS: 1.0m/s Stab Class: A	Wind Gusts 20-57 Birds 20-38 MAC Operator 62 NPM Inaudible
14:08 06/03/2025	62	40	22		
14:23 06/03/2025	57	39	20		
Site $L_{Aeq(15min)}$ Contribution					<35
Evening					
19:27 06/03/2025	52	42	35	WD: NE WS: 2.0m/s Stab Class: D	Wind Gusts 31-53 Birds30-43 Agricultural Noise 61 NPM Inaudible
19:42 06/03/2025	53	41	36		
19:57 06/03/2025	61	41	35		
Site $L_{Aeq(15min)}$ Contribution					<35
Night					
22:03 05/03/2025	59	32	28	WD: E WS: 1.0m/s Stab Class: D	Insects 25-46 Wind Gusts 22-41 MAC Operator 59 NPM – Vent Fan <25-28 (barely to just audible throughout)
22:18 05/03/2025	46	31	28		
22:33 05/03/2025	49	31	28		
Site $L_{Aeq(15min)}$ Contribution					<35
Site $L_{A1(1min)}$ Contribution					<45

Note: NPM denotes Northparkes Mines.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Table 6 Operator-Attended Noise Survey Results – Location NM4, Hillview					
Time(hrs)/Date Duration 15min	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
	L_{Amax}	L_{Aeq}	L_{A90}		
Day					
12:36 06/03/2025	54	37	25	WD: SE WS: 1.0m/s Stab Class: A	Birds 20-48 Traffic 25-60 Wind Gusts 20-45 NPM Inaudible
12:51 06/03/2025	54	34	27		
13:06 06/03/2025	60	36	25		
Site $L_{Aeq(15min)}$ Contribution					<35
Evening					
18:14 06/03/2025	54	43	39	WD: E WS: 2.5m/s Stab Class: D	Traffic 32-61 Wind Gusts 35-51 Residential Noise 35-69 Dogs Barking 30-42 Birds 32-43 NPM inaudible
18:29 06/03/2025	57	43	38		
18:44 06/03/2025	69	49	37		
Site $L_{Aeq(15min)}$ Contribution					<35
Night					
23:07 05/03/2025	68	45	24	WD: E WS: 1.0m/s Stab Class: E	Insects 20-44 Wind Gusts 20-48 Traffic 25-68 Wildlife 20-30 NPM Inaudible
23:22 05/03/2025	48	31	25		
23:37 05/03/2025	56	36	25		
Site $L_{Aeq(15min)}$ Contribution					<35
Site $L_{A1(1min)}$ Contribution					<45

Note: NPM denotes Northparkes Mines.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Table 7 Operator-Attended Noise Survey Results – Location NM5, Adavale					
Time(hrs)/Date Duration 15min	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
	L_{Amax}	L_{Aeq}	L_{A90}		
Day					
14:55 06/03/2025	57	39	29	WD: E WS: 1.5m/s Stab Class: A	Wind Gusts 25-48 Birds 25-57 Agricultural Noise 24-52 NPM Inaudible
15:10 06/03/2025	52	38	33		
15:25 06/03/2025	48	38	30		
Site $L_{Aeq(15min)}$ Contribution					<35
Evening					
20:59 05/03/2025	58	39	36	WD: E WS: 2.0m/s Stab Class: D	Wind Gusts 34-54 MAC Operator 58 NPM – Vent Fan <25-34 (barely audible to audible throughout)
21:14 05/03/2025	51	39	35		
21:29 05/03/2025	54	37	34		
Site $L_{Aeq(15min)}$ Contribution					<35
Night					
01:57 06/03/2025	52	33	32	WD: E WS: 0.5m/s Stab Class: F	Insects 28-52 NPM – Vent Fan <28-36 (just audible to audible throughout measurement) NPM – Haul Trucks <28-36 (barely audible to audible <50% measurement)
02:12 06/03/2025	44	32	30		
02:27 06/03/2025	50	33	30		
Site $L_{Aeq(15min)}$ Contribution					<35
Site $L_{A1(1min)}$ Contribution					<45

Note: NPM denotes Northparkes Mines.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 1: NPM Contribution derived from further analysis.

4.3 Road Noise Results

As an additional initiative to operational attended noise monitoring, Northparkes include two, 1-hour attended noise monitoring measurements at the Hillview monitoring location (NM4) to quantify Northparkes road noise levels associated concentrate trucks movements (where present) and shift change traffic flows. **Table 8** presents the results of the road traffic noise measurements with a comparison against the road noise criteria outlined in the NMP which is consistent with the NSW Road Noise Policy (DECCW, 2011).

Table 8 Operator-Attended Road Noise Survey Results – Location NM4, Hillview

Time(hrs)/Date Duration 1 hour	Measured Noise Level dB $LA_{eq(1hr)}$	Meteorology	Criteria dB $LA_{eq(1hr)}$	Description and SPL dBA
12:36 06/03/2025 (Day)	36	WD: SE WS: 1.0m/s Stab Class: A	55	Birds 20-48 Traffic 25-60 Wind Gusts 20-45 (Approx. 19 vehicles Enter/Exit NPM Site)
18:14 06/03/2025 (Evening)	46	WD: E WS: 2.5m/s Stab Class: D	55	Traffic 32-57 Wind Gusts 35-51 Residential Noise 35-69 Dogs Barking 30-42 Birds 32-43 NPM Concentrate Truck (offsite) 30-61 (Two passes) (Approx. 69 vehicles Enter/Exit NPM Site)

Note: NPM denotes Northparkes Mines.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Results of the road noise survey identify that the $LA_{eq(1hr)}$ noise contribution at NM4 is <50dBA for both measurements and hence, satisfy the relevant road noise criteria as outlined in the NMP and the RNP. Observations from MAC operator identified concentrate truck movements at a maximum of two movements per hour during the evening and night measurement periods, which is in line with previous NPM quarterly measurements.

4.4 Unattended Noise Results

Unattended noise monitors are installed at four attended monitoring locations. Data from the unattended monitors provide a real time method for monitoring noise events, although it is noted that the results include all noise sources (ie project noise and extraneous noise sources). The results are used as a management tool for the project site.

Averaged results of the $LA_{90(15min)}$ and $LA_{1(15min)}$ metrics from the seven-day monitoring period from Monday 3 March 2025 to Sunday 9 March 2025 for NM1, NM3, NM4 and NM5 are summarised in **Table 9**. **Appendix C** presents the unattended results in chart format.

Table 9 Unattended Noise Survey Results

Period[1]	Noise Descriptor (dBA re 20 µPa)	
	Weekly Average $LA_{90(15min)}$	Weekly Average $LA_{1(15min)}$
Location NM1, Hubberstone		
Day	26	-
Evening	33	-
Night	26	57
Location NM3, Milpose		
Day	27	-
Evening	31	-
Night	34	59
Location NM4, Hillview		
Day	28	-
Evening	34	-
Night	23	67
Location NM5, Adavale		
Day	28	-
Evening	30	-
Night	29	61

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Discussion

5.1 Operational Noise Discussion

5.1.1 Discussion of Results – Location NM1, Hubberstone

Attended measurement results for monitoring conducted at NM1, Hubberstone, for the quarter ending March 2025 noise survey, identified that NPM was inaudible during day and evening measurement periods and barely audible for periods during the night measurement period.

Contributions from NPM were characterised as haul truck movements. External noise sources including traffic, birds, insects, and wind gusts were audible during the monitoring period.

In summary, the noise contribution from NPM satisfied the relevant noise criteria for all monitored assessment periods at Location NM1.

5.1.2 Discussion of Results – Location NM2, Lone Pine

Attended measurement results for monitoring conducted at NM2, Lone Pine, for the quarter ending March 2025 noise survey, identified that NPM was audible during day and night measurement periods and inaudible during evening measurement period.

Contributions from NPM were characterised as general production noise, haul truck movements, and general site hum. External noise sources including traffic, wind gusts, birds, insects, wildlife, and dogs barking were all audible during the monitoring periods.

In summary, the noise contribution from NPM satisfied the relevant noise criteria for all monitored assessment periods at Location NM2.

5.1.3 Discussion of Results – Location NM3, Milpose

Attended measurement results for monitoring conducted at NM3, Milpose, for the quarter ending March 2025 noise survey, identified that NPM was inaudible during the day and evening measurement periods and generally just audible throughout night-time measurement period.

Contributions from NPM were characterised as ventilation fan noise. External noise sources including birds, insects, wind gusts, and agricultural noise were all audible during the monitoring periods.

In summary, the noise contribution from NPM satisfied the relevant noise criteria for all monitored assessment periods at Location NM3.

5.1.4 Discussion of Results – Location NM4, Hillview

Attended measurement results for monitoring conducted at NM4, Hillview, for the quarter ending March 2025 noise survey, identified that NPM was inaudible during all measurement periods.

External noise sources including traffic, birds, insects, wind gusts, and residential noise were all audible during the monitoring period.

In summary, the noise contribution from NPM satisfied the relevant noise criteria for all monitored assessment periods at Location NM4.

5.1.5 Discussion of Results – Location NM5, Adavale

Attended measurement results for additional monitoring conducted at NM5, Adavale, for the quarter ending March 2025 noise survey, indicated that NPM was inaudible during the day measurements and generally just audible throughout evening and night-time measurements.

Contributions from NPM were characterised as haul truck movements and ventilation fan noise. External noise sources including birds, insects, wind gusts, and agricultural noise were all audible during the monitoring period.

In summary, the noise contribution from NPM satisfied the relevant noise criteria for all monitored assessment periods at Location NM5.

6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) on behalf of Evolution Mining (Northparkes) Pty Ltd. The assessment was completed to quantify site noise emissions against relevant noise criteria pertaining to NPM operations in accordance with Conditions 1 to 5 of Schedule 3 of the Development Consent Conditions (PA #11_0060) and the Northparkes, Noise Management Plan (NMP, 2019) for Quarter 1, ending March 2025.

Road noise monitoring identified that vehicle movements associated with shift change generated noise levels below the relevant road noise criteria specified in the RNP and NMP.

Attended monitoring has identified that operational emissions generated by NPM comply with relevant noise criteria at all monitoring locations for all assessment periods. Furthermore, project related noise emissions were generally audible at four monitoring locations during, day and night periods and inaudible at one monitoring location. NPM noise sources such as general site hum, general production noise, ventilation fan noise and haul truck operations were audible and extraneous non-mining sources such as wind in trees, traffic, birds, dogs barking, insects, residential and agricultural noise, were audible during the monitoring period.

This page has been intentionally left blank

Appendix A – Glossary of Terms

A number of technical terms have been used in this report and are explained in **Table A1**.

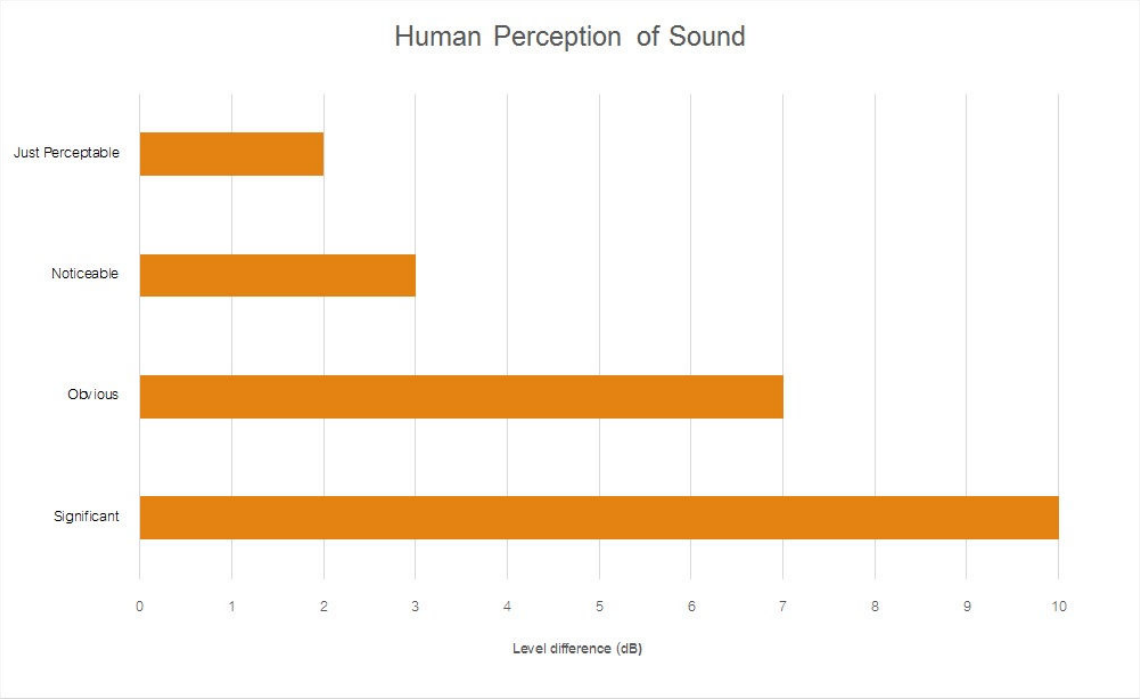
Table A1 Glossary of Acoustical Terms

Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmax	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by 10.log10 (W/Wo). Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA	
Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



This page has been intentionally left blank

Appendix B – Regulatory Noise Limits

Table 1 NSW Development Consent Conditions – Schedule 3

<table>
<tr><th>Condition</th><th>Related Section in NMP</th></tr>
<tr><td colspan="2">Noise Criteria</td></tr>
<tr><td>1. 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.

Table 2 Noise impact assessment criteria dB(A)
<table>
<tr><th rowspan="2">Property</th><th>Day</th><th>Evening</th><th colspan="2">Night</th></tr>
<tr><th>$L_{Aeq(15min)}$</th><th>$L_{Aeq(15min)}$</th><th>$L_{Aeq(15min)}$</th><th>$L_{A1(1min)}$</th></tr>
<tr><td>All privately-owned land</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
</table>
Note: To interpret the land referred to in Table 1, see the applicable figures in Appendix 4.

Operational noise generated by the project is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy. Appendix 5 sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.</td><td>Section 5.4.1</td></tr>
<tr><td>2. The Proponent shall only carry out the construction works associated with the upgrade of McClintocks Lane, the construction of the McClintocks Lane access road and the upgrade of the intersection of McClintocks Lane and Bogan Road during the day.</td><td>Section 5.4.1</td></tr>
<tr><td>3. During construction of the works referred to in condition 2 of schedule 3, the noise criteria in Table 1 do not apply to the residences located in the vicinity of the works. The Proponent shall implement all reasonable and feasible measures to minimise construction noise impacts on the residences in the vicinity of these works.</td><td>Section 6</td></tr>
<tr><td>4. The Proponent shall:
a) implement best management practice to minimise the construction, operational and road noise of the project;
b) operate a comprehensive noise management system that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this approval;
c) minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply (see Appendix 5); and
d) carry out regular monitoring to determine whether the project is complying with the relevant conditions of this approval,
To the satisfaction of the Secretary.</td><td>Section 6 & Section 7</td></tr>
<tr><td>5. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
a) be prepared in consultation with the EPA, and submitted to the Secretary prior to the commencement of construction;
b) describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions in this approval;
c) describe the proposed noise management system in detail; and
d) include a monitoring program that:
• evaluates and reports on:
– the effectiveness of the noise management system;
– compliance against the noise criteria in this approval; and
– compliance against the noise operating conditions;
• includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time (so the real-time noise monitoring program can be used as a better indicator of compliance with the noise criteria in this approval and trigger for further attended monitoring); and
• defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents</td><td>Section 6 & Section 7

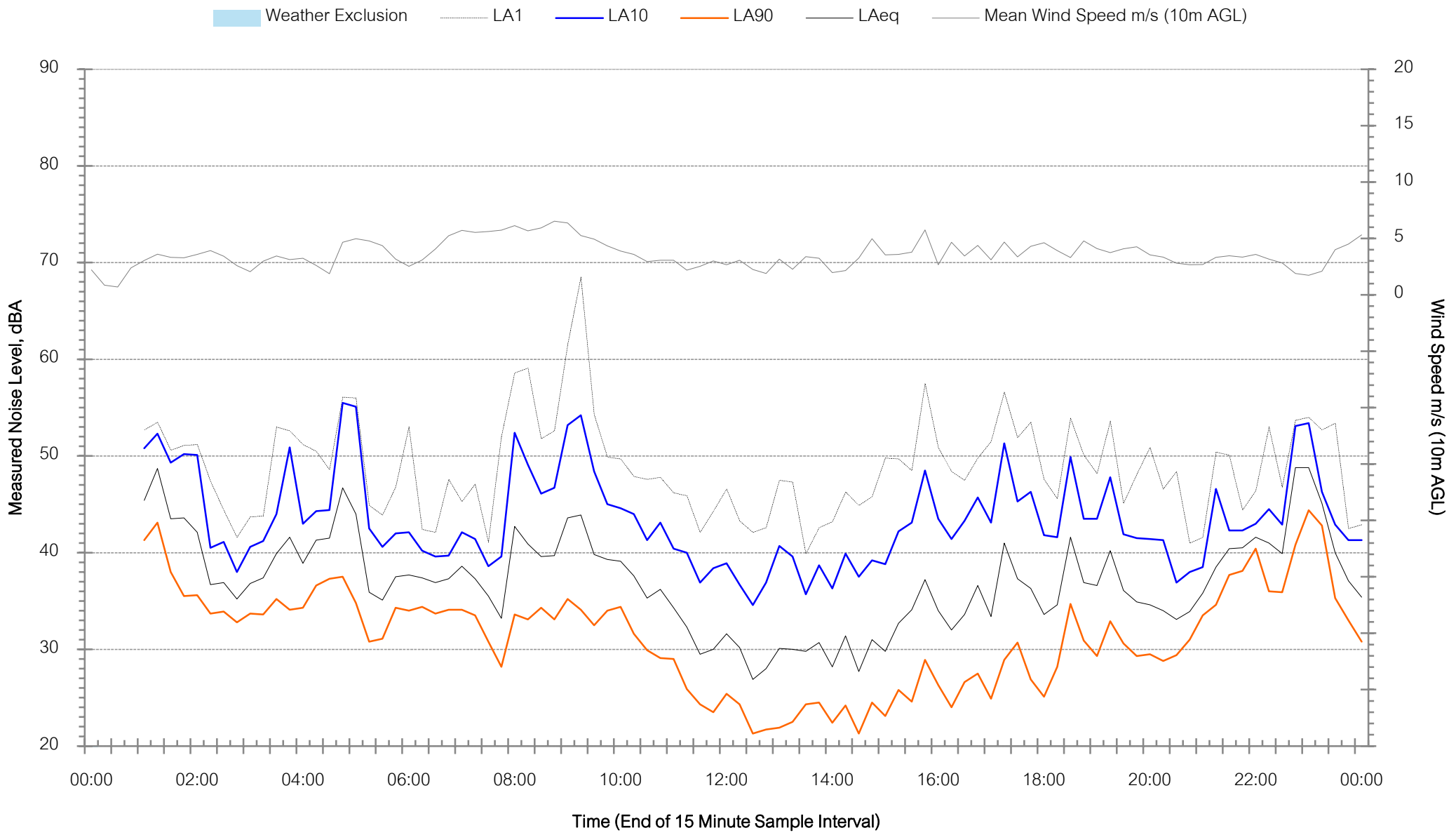
Section 7

Section 7.1</td></tr>
</table>

Appendix C – Noise Monitoring Charts

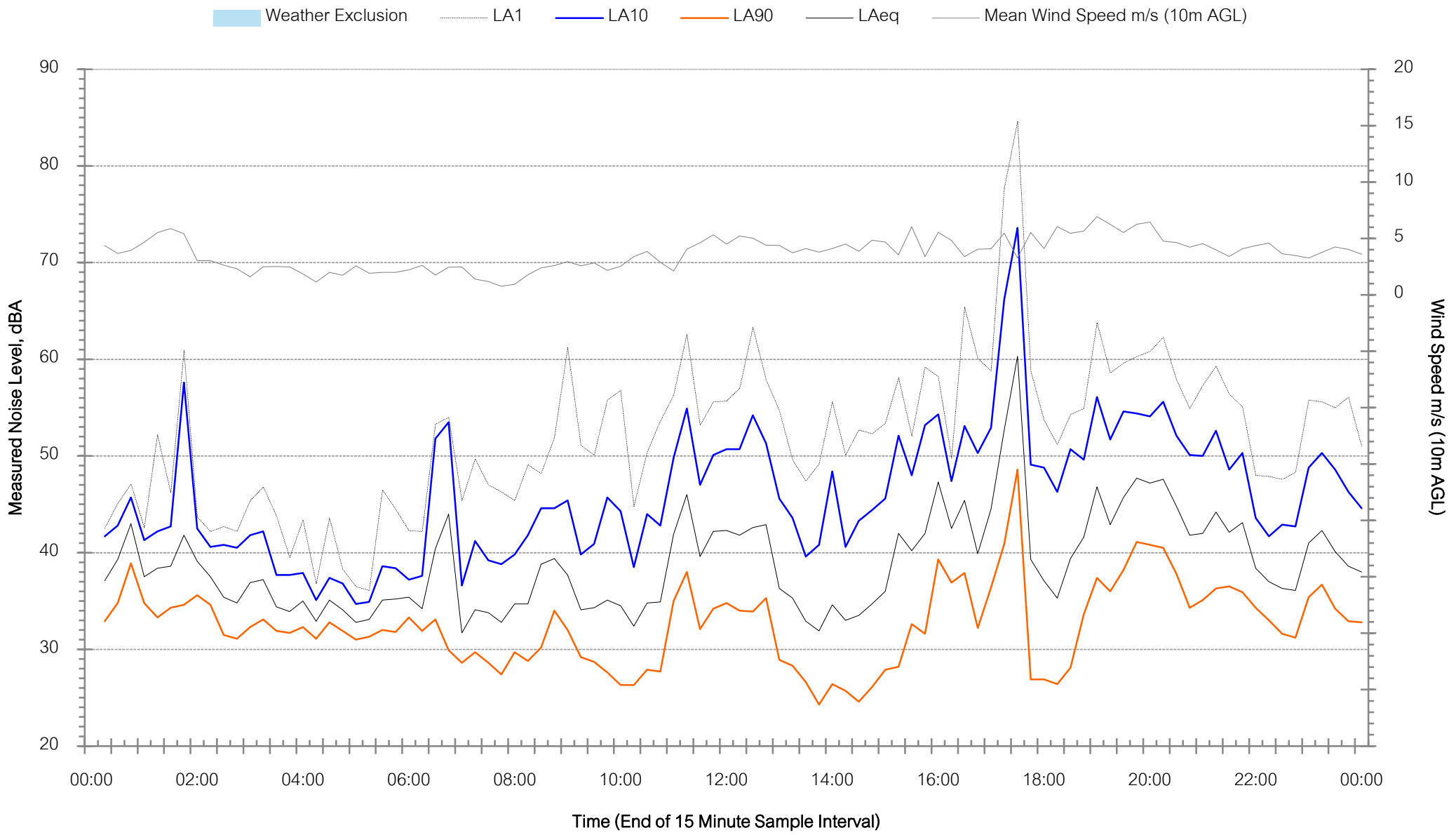
Background Noise Levels

NM1 - Hubberstone - Monday 3 March 2025



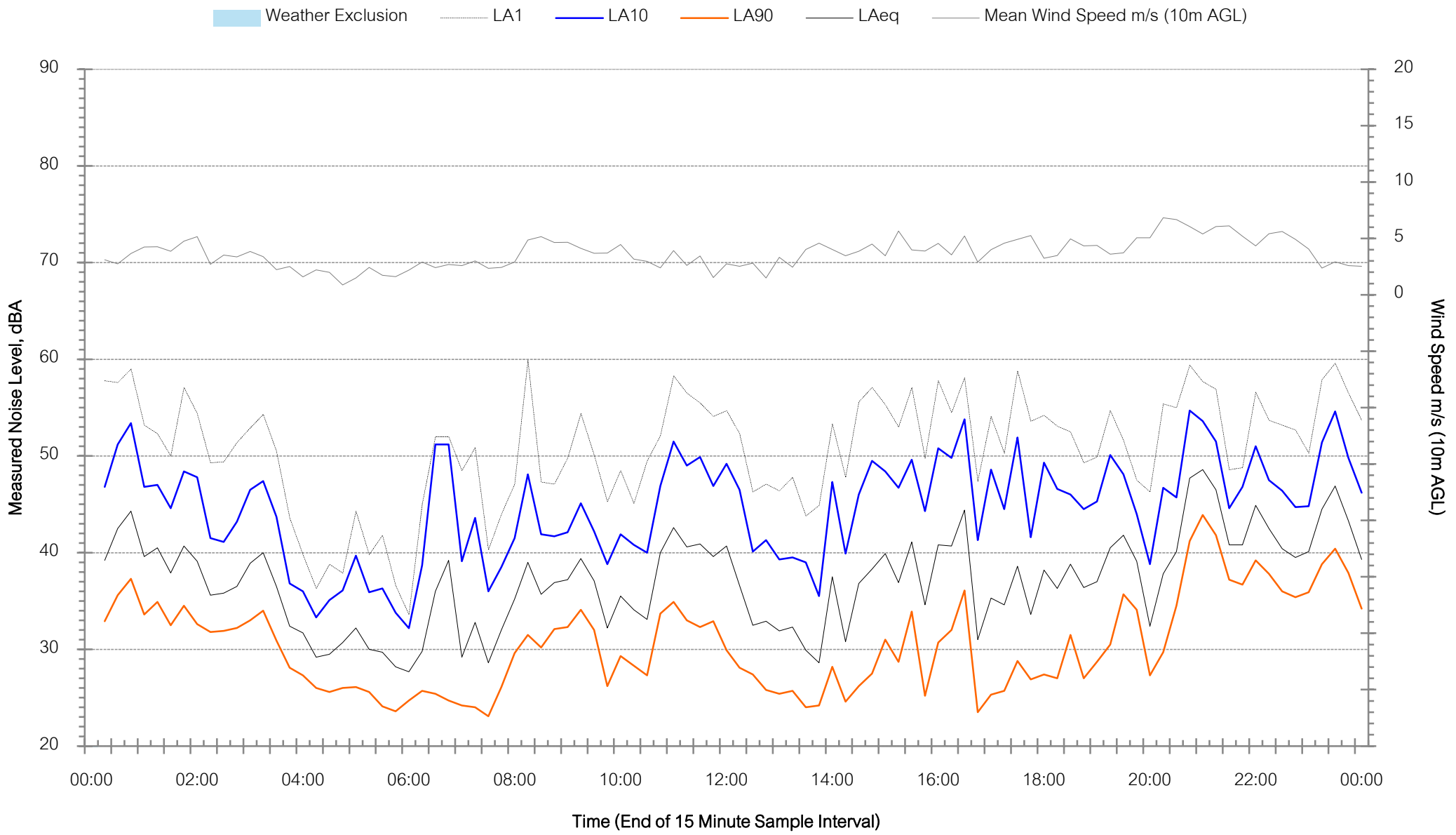
Background Noise Levels

NM1 - Hubberstone - Tuesday 4 March 2025



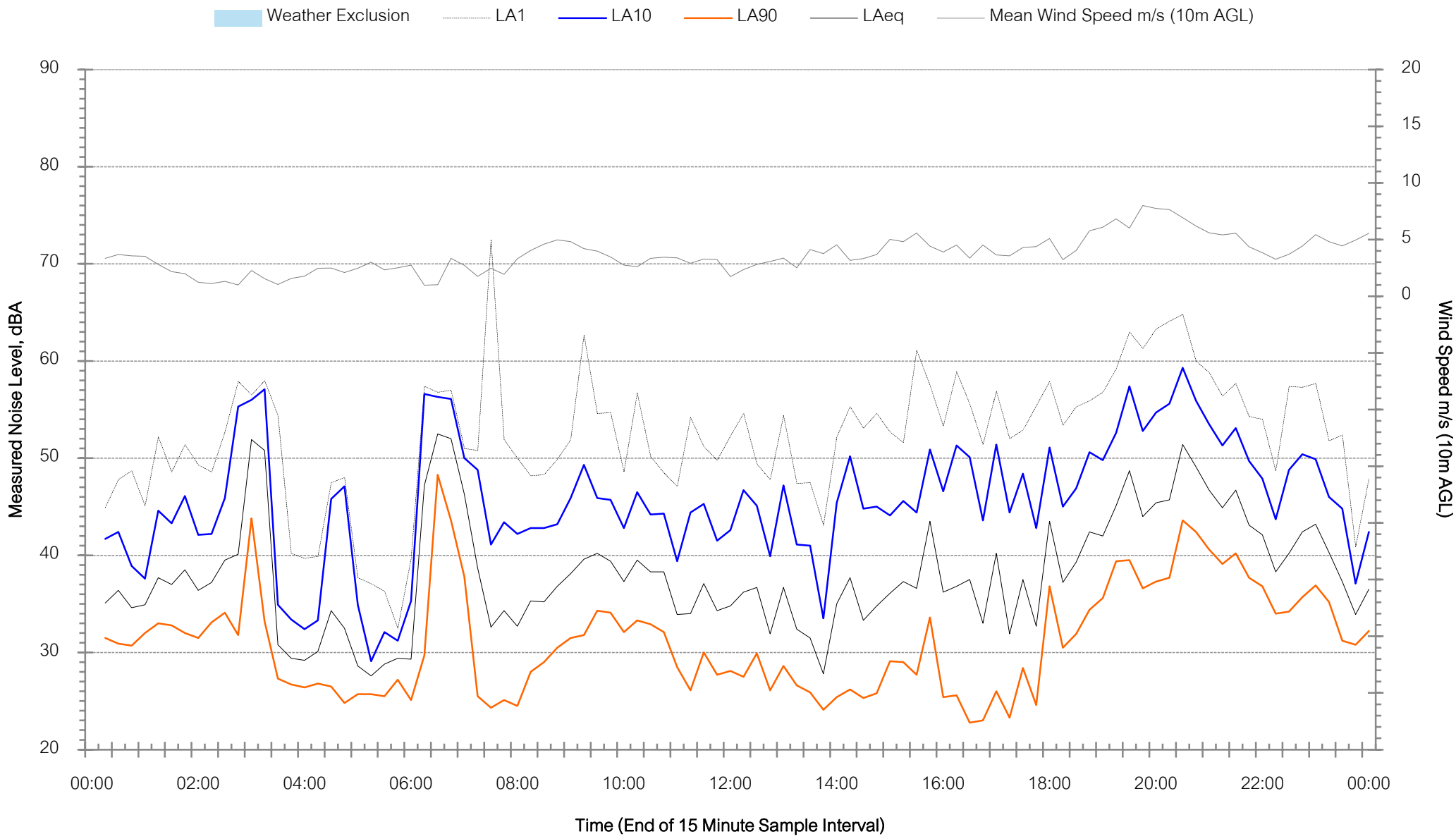
Background Noise Levels

NM1 - Hubberstone - Wednesday 5 March 2025



Background Noise Levels

NM1 - Hubberstone - Thursday 6 March 2025

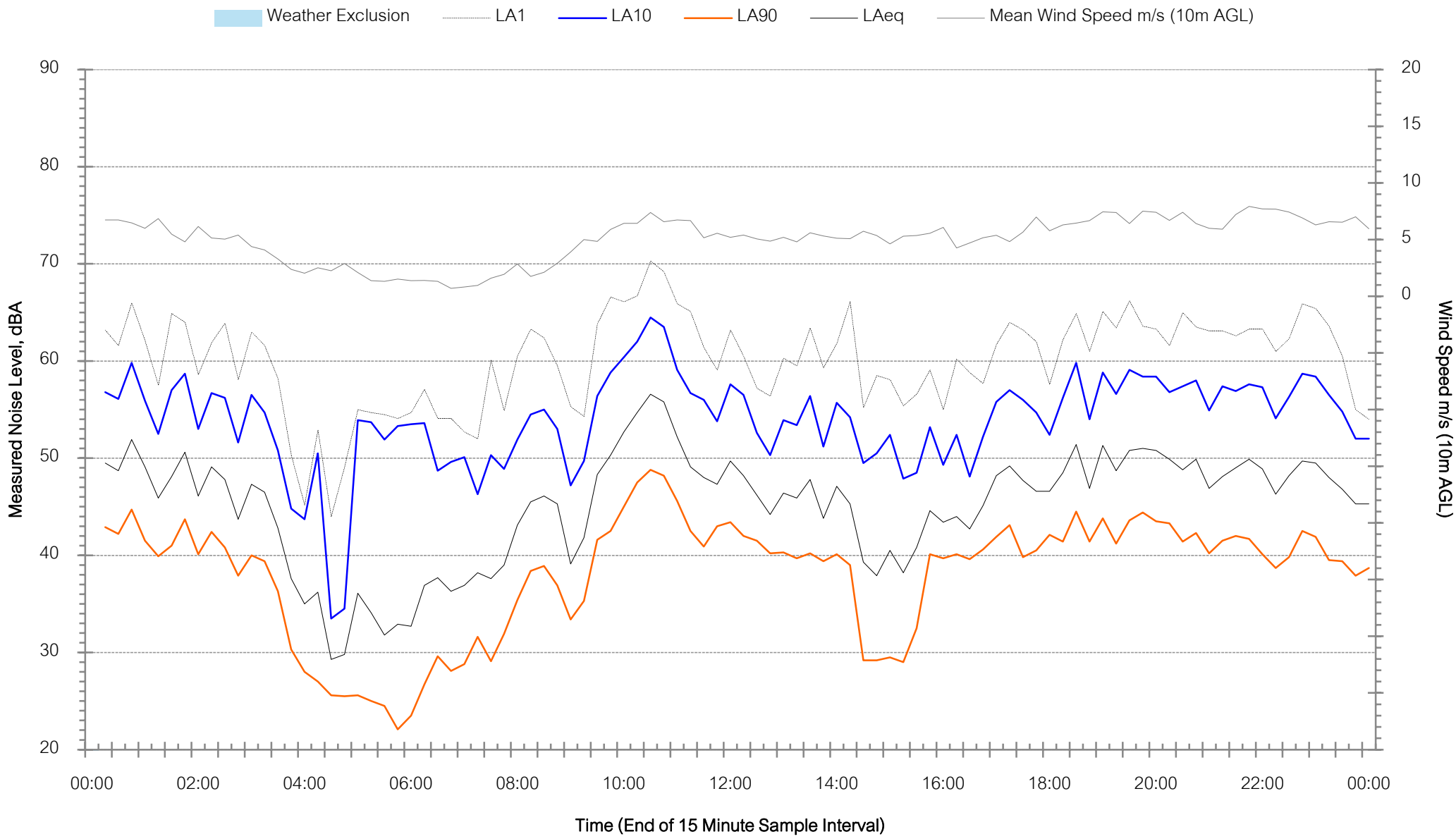


Background Noise Levels

NM1 - Hubberstone - Friday 7 March 2025

Background Noise Levels

NM1 - Hubberstone - Saturday 8 March 2025

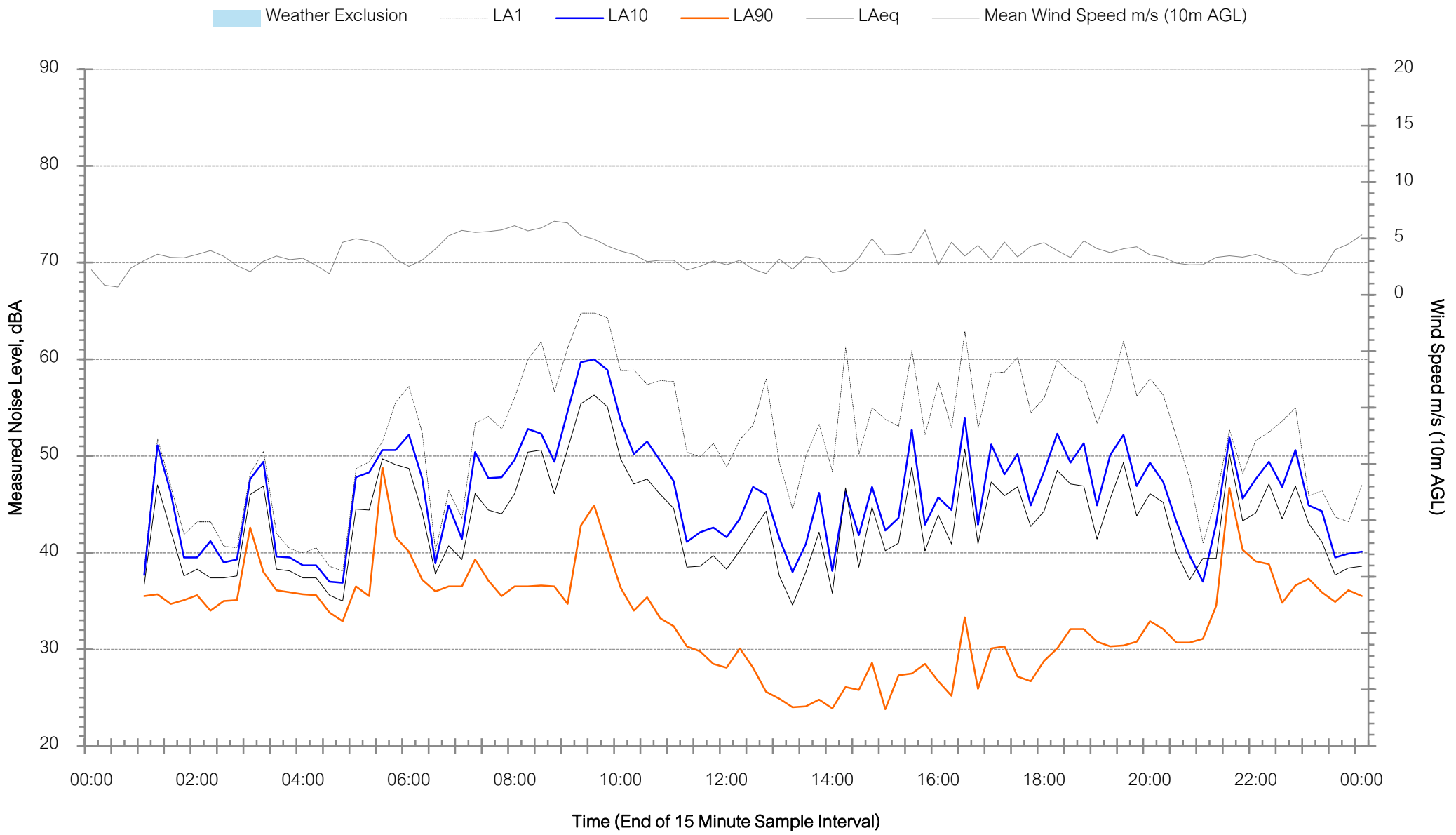


Background Noise Levels

NM1 - Hubberstone - Sunday 9 March 2025

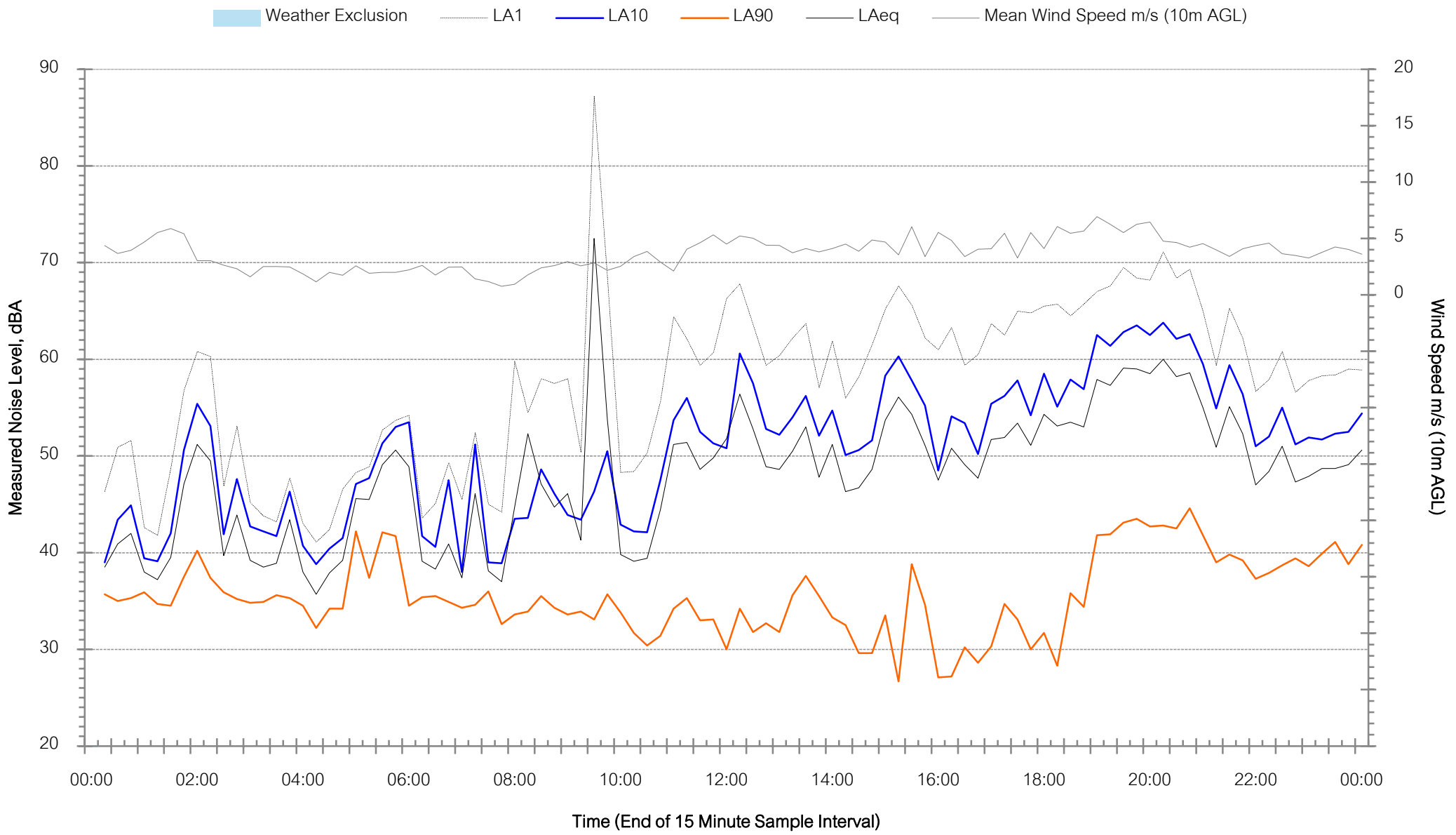
Background Noise Levels

NM3 - Milpose - Monday 3 March 2025



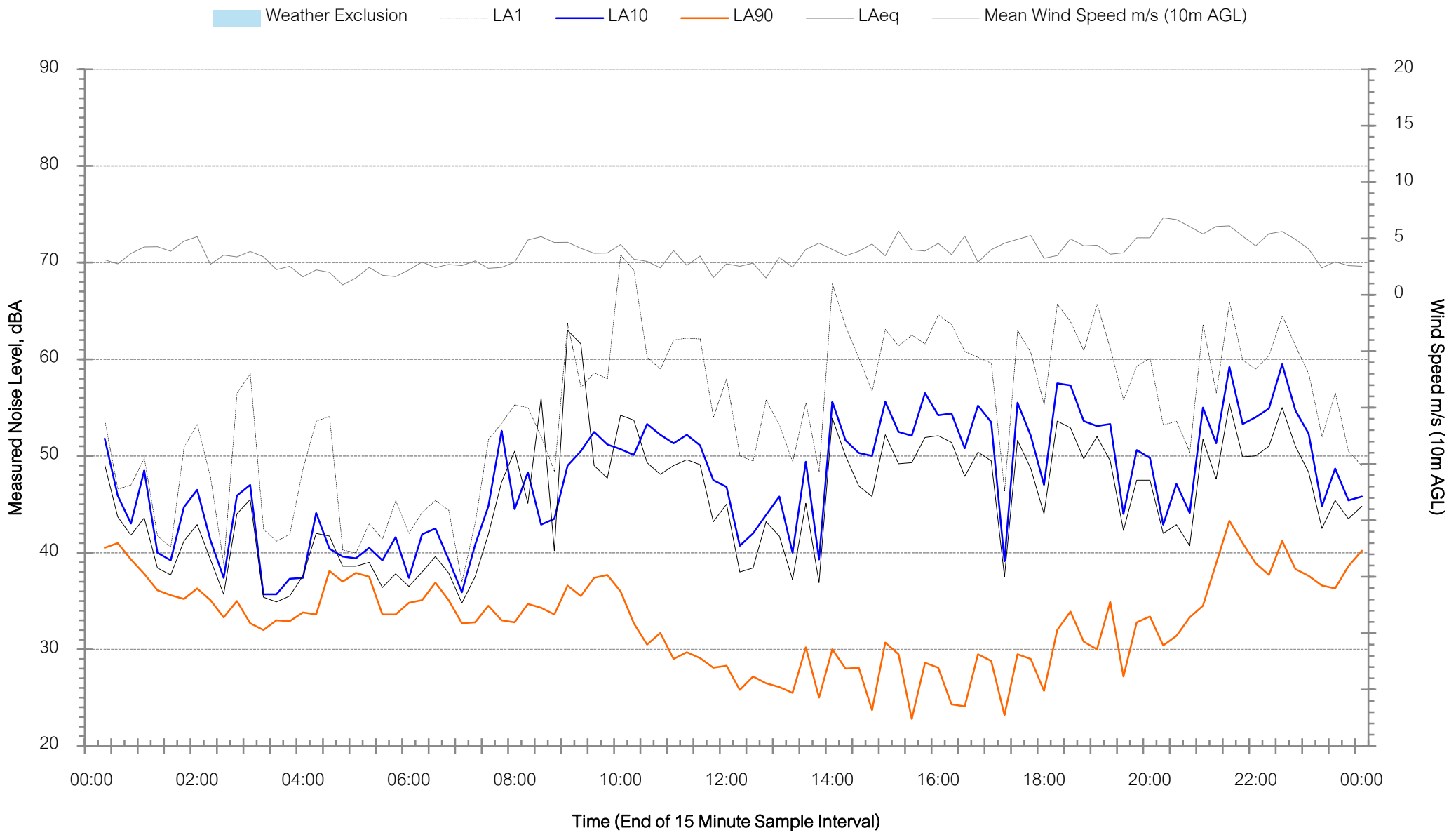
Background Noise Levels

NM3 - Milpose - Tuesday 4 March 2025



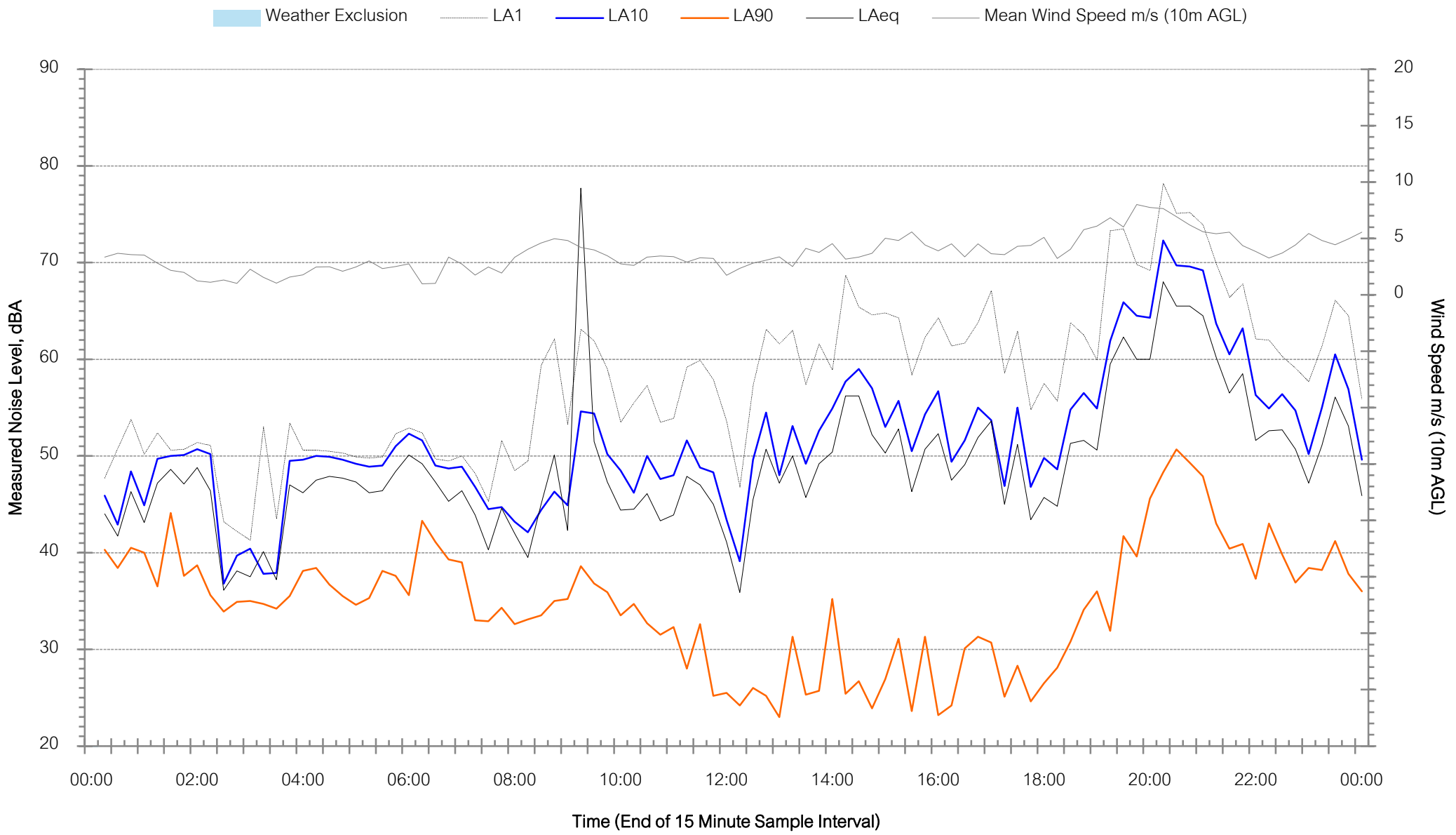
Background Noise Levels

NM3 - Milpose - Wednesday 5 March 2025



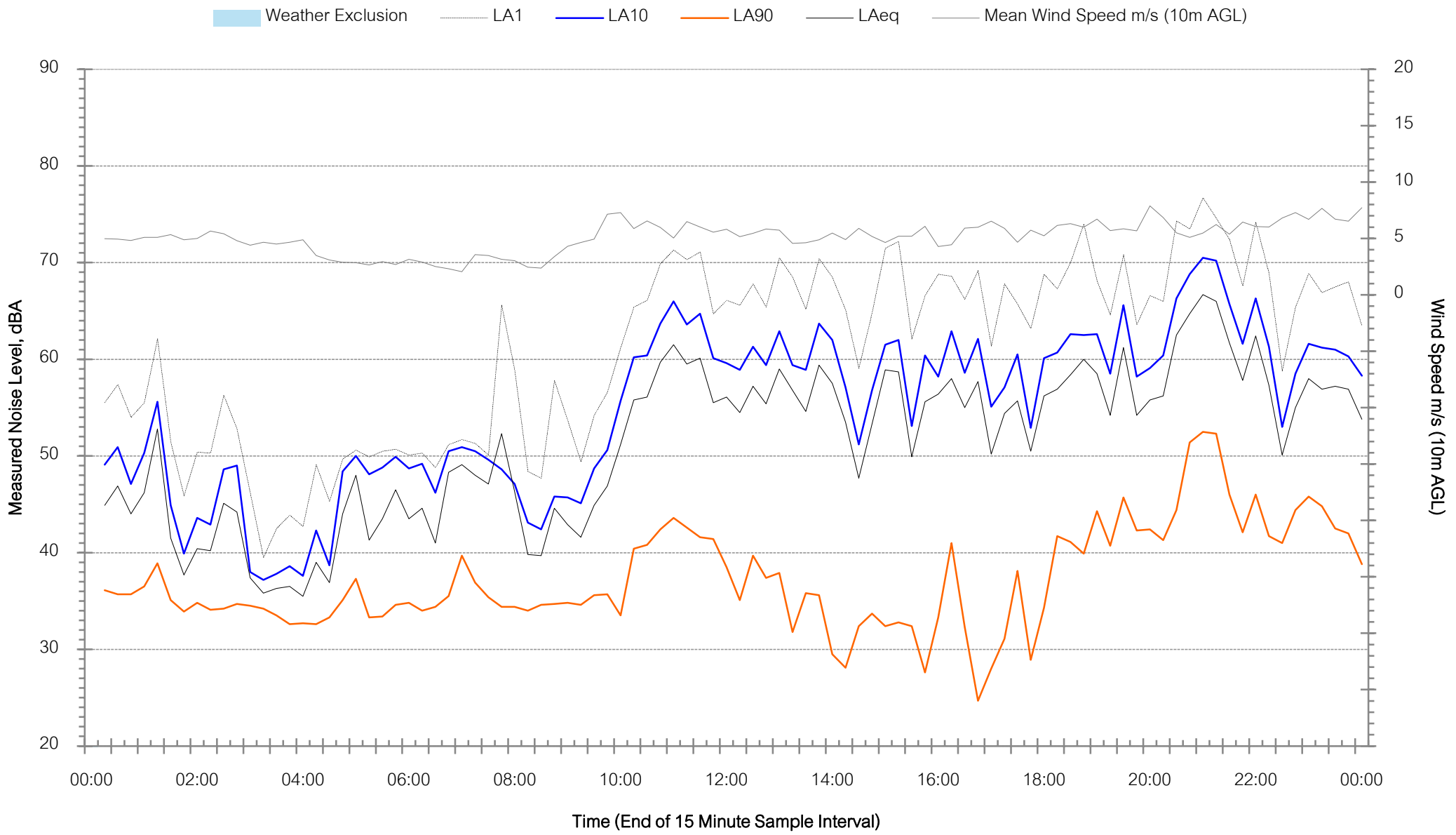
Background Noise Levels

NM3 - Milpose - Thursday 6 March 2025



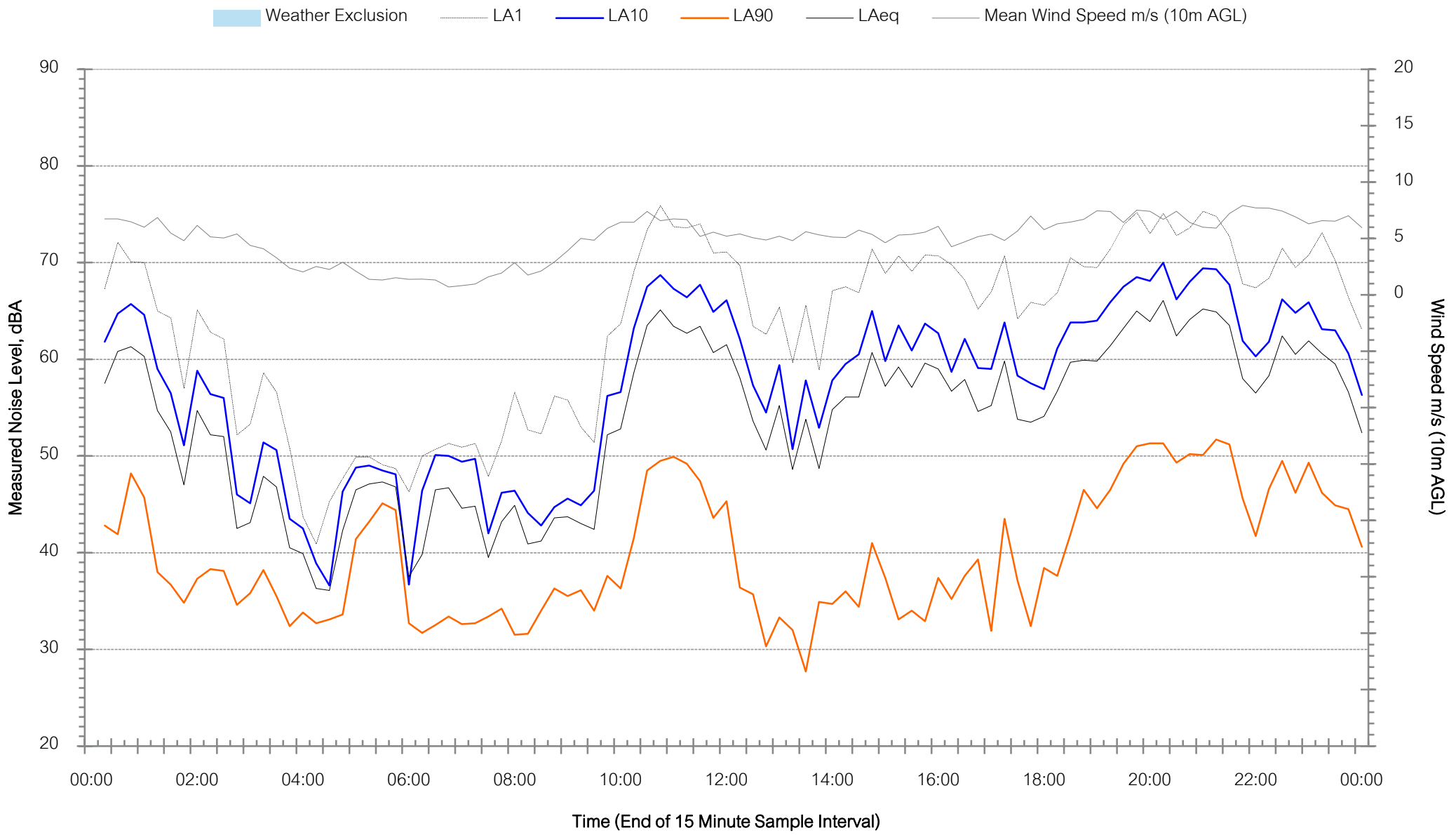
Background Noise Levels

NM3 - Milpose - Friday 7 March 2025



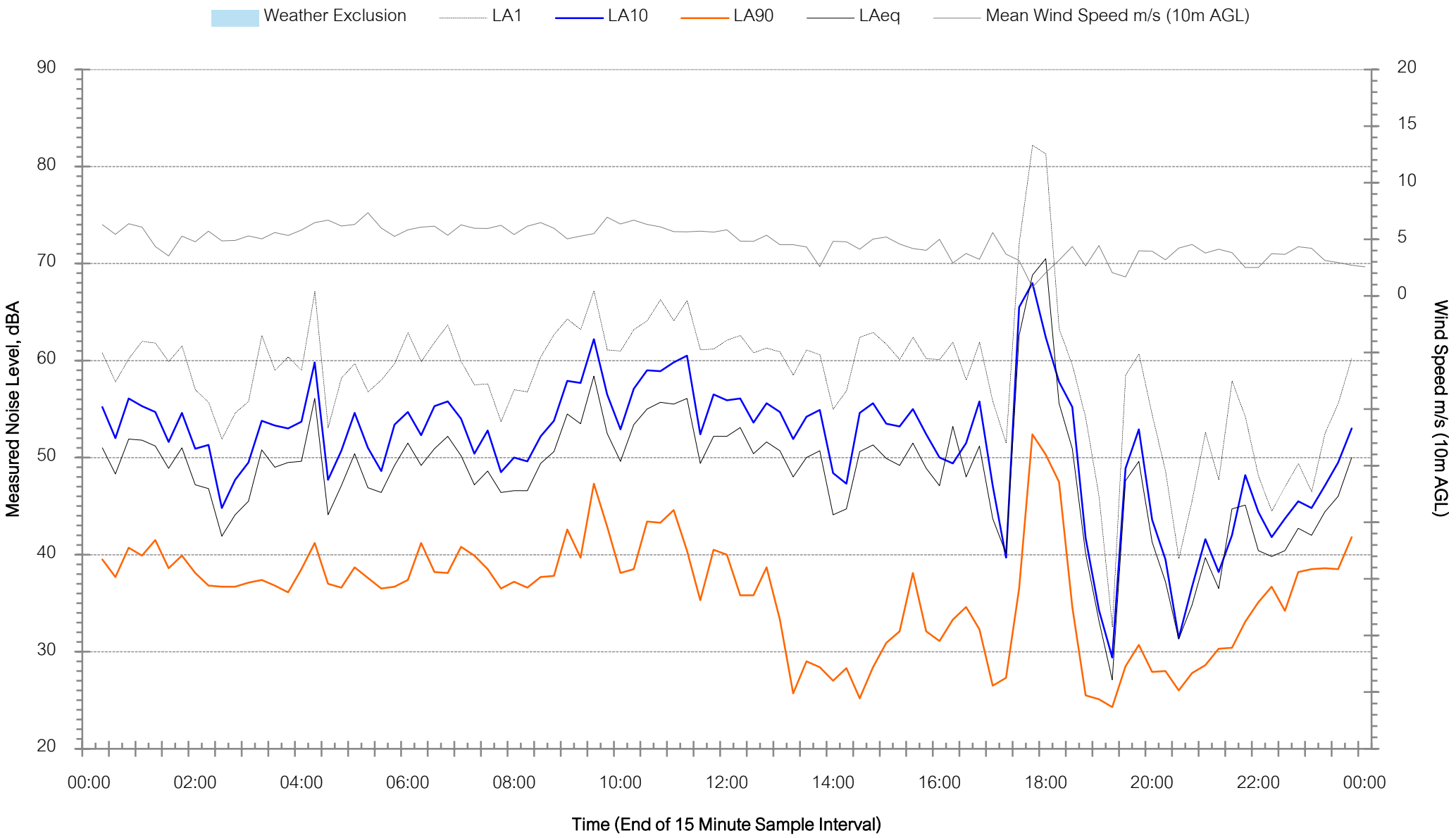
Background Noise Levels

NM3 - Milpose - Saturday 8 March 2025



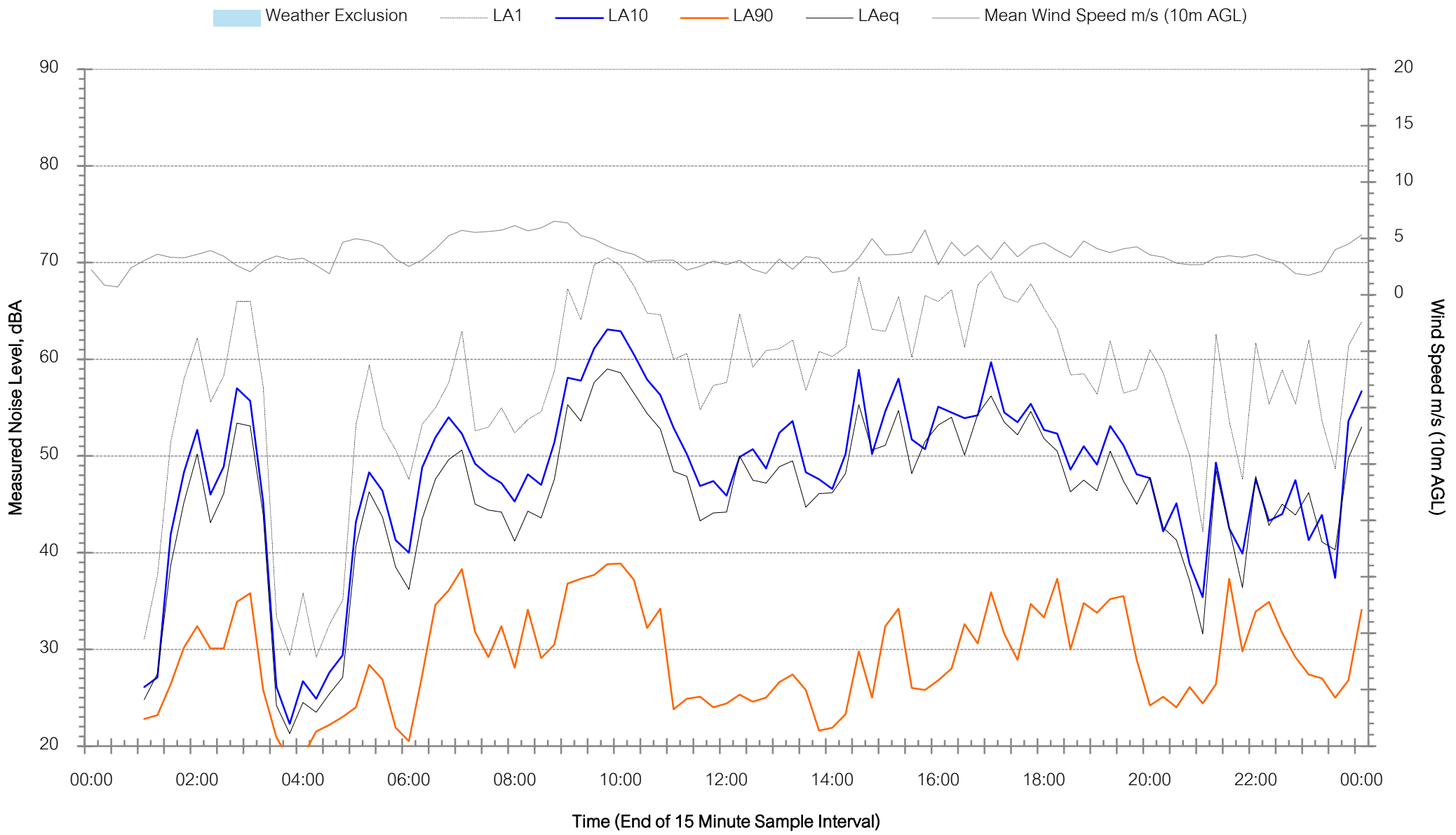
Background Noise Levels

NM3 - Milpose - Sunday 9 March 2025



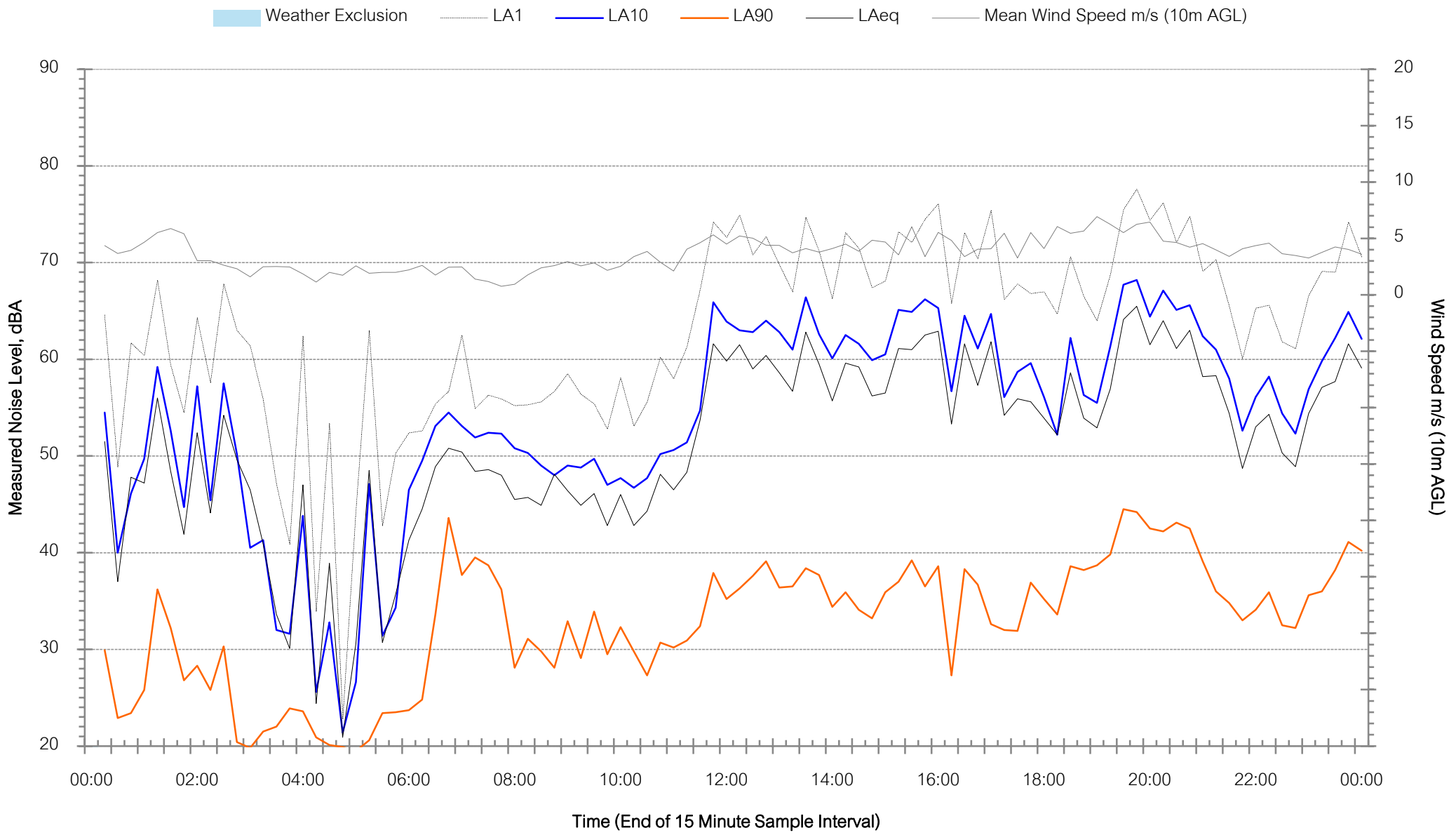
Background Noise Levels

NM4 - Hillview - Monday 3 March 2025



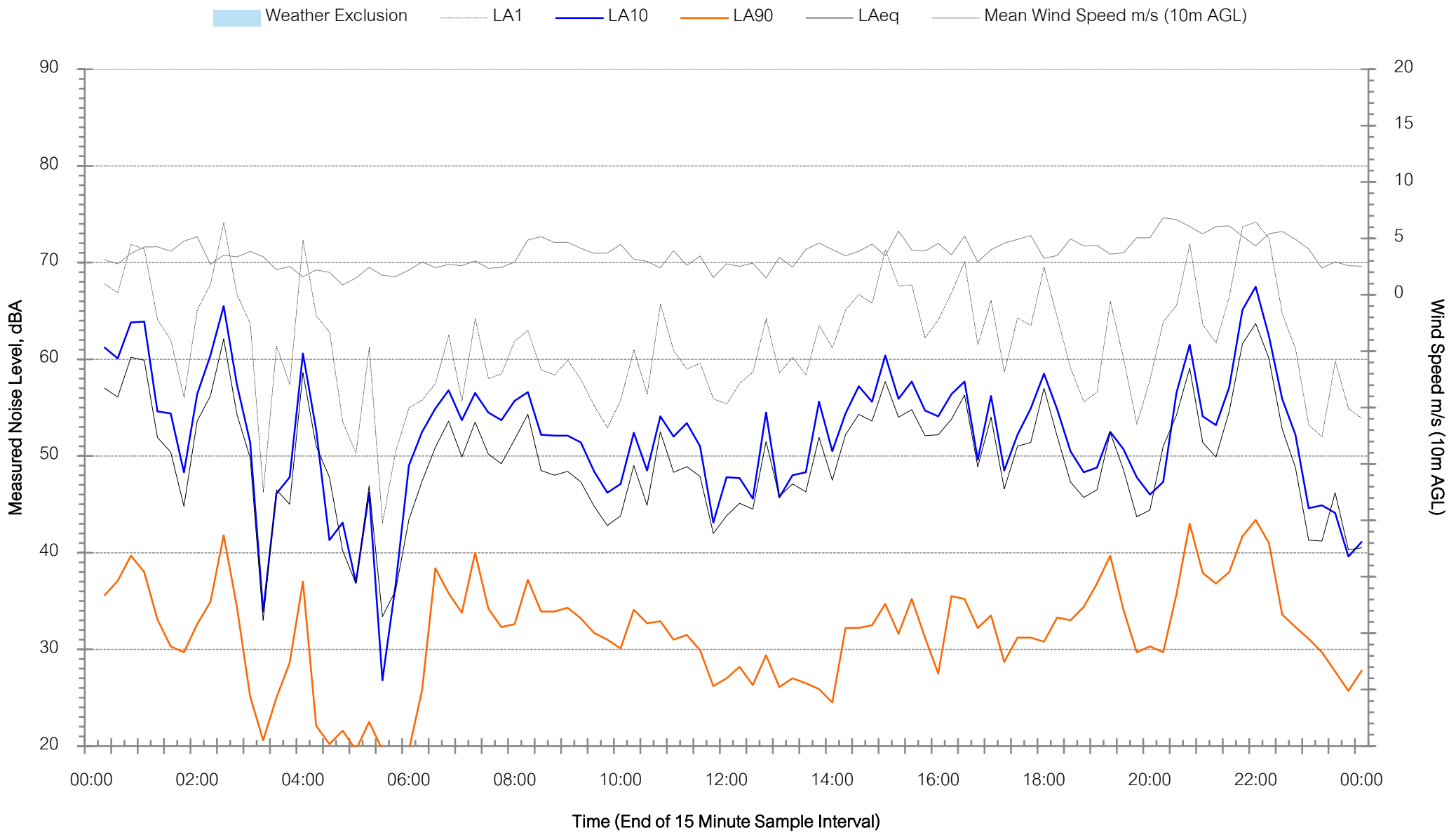
Background Noise Levels

NM4 - Hillview - Tuesday 4 March 2025



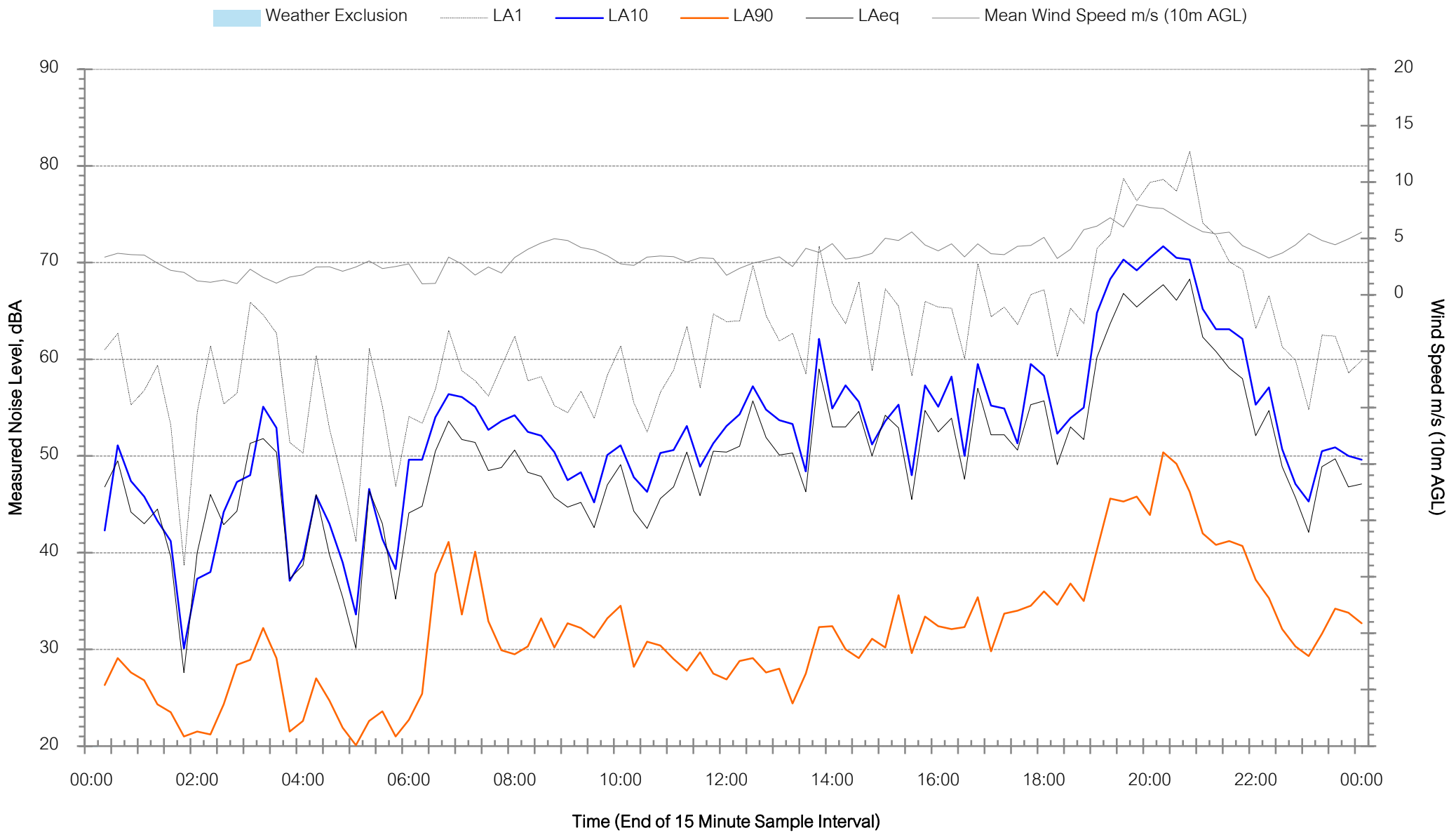
Background Noise Levels

NM4 - Hillview - Wednesday 5 March 2025



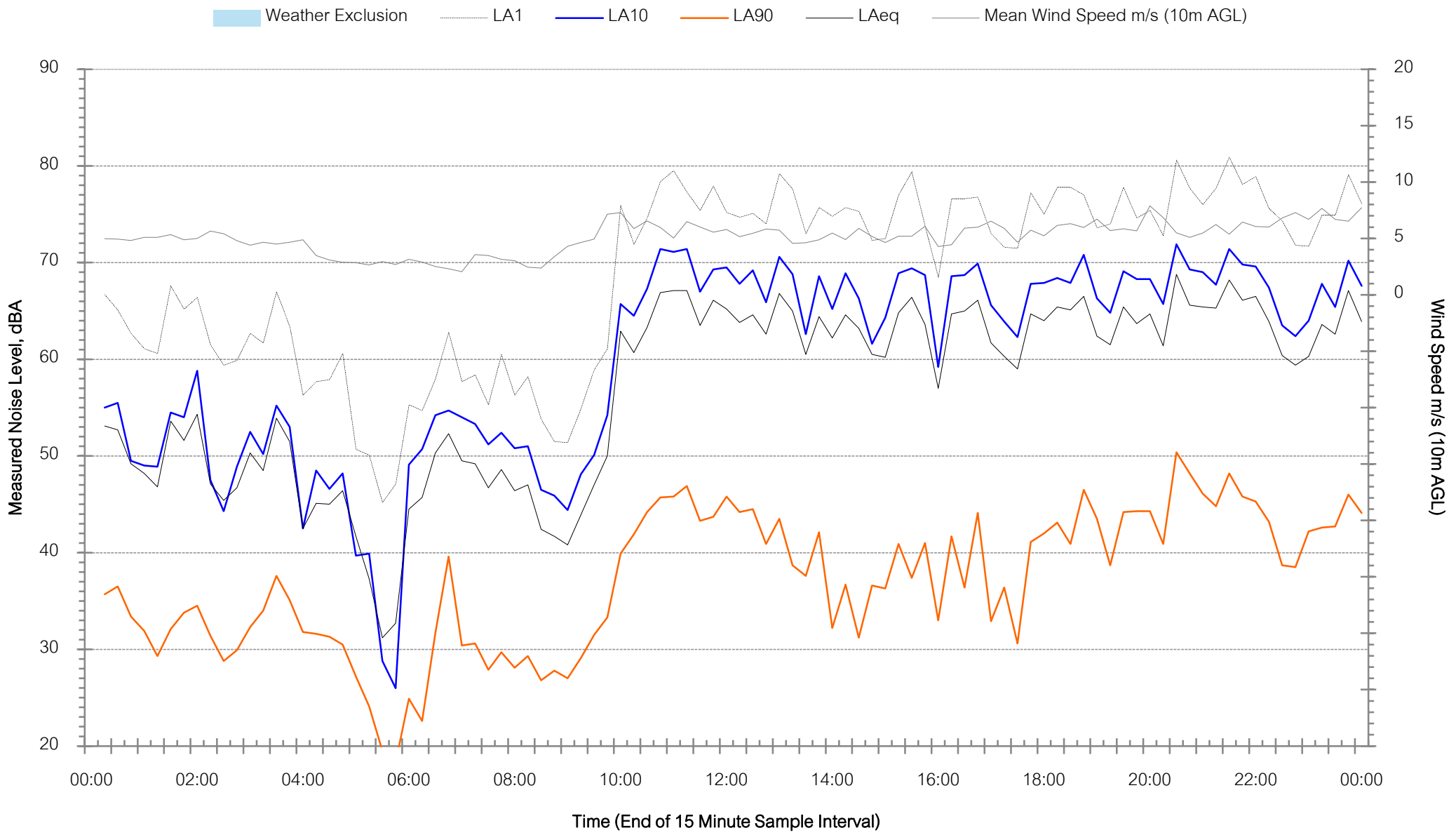
Background Noise Levels

NM4 - Hillview - Thursday 6 March 2025



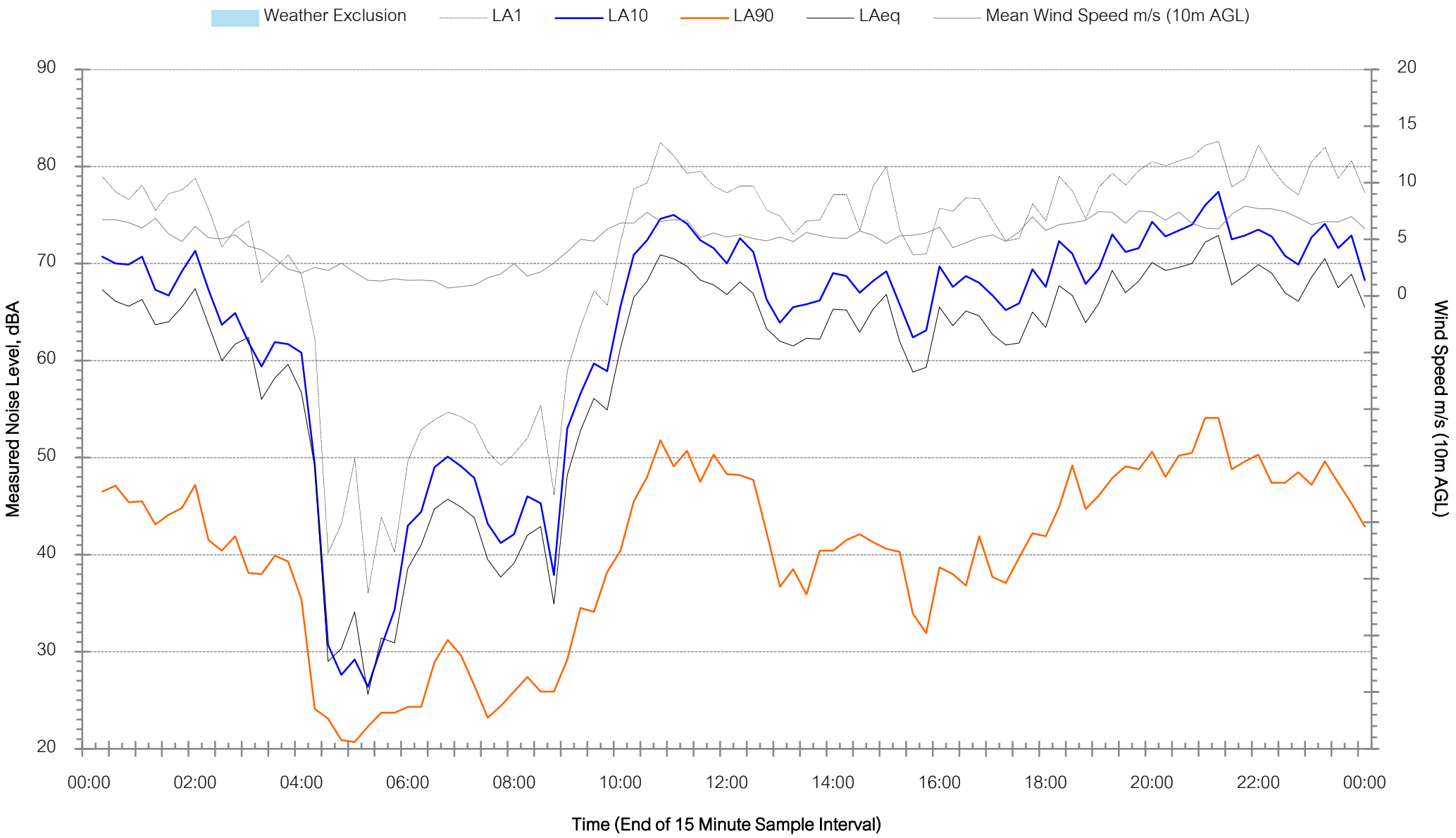
Background Noise Levels

NM4 - Hillview - Friday 7 March 2025



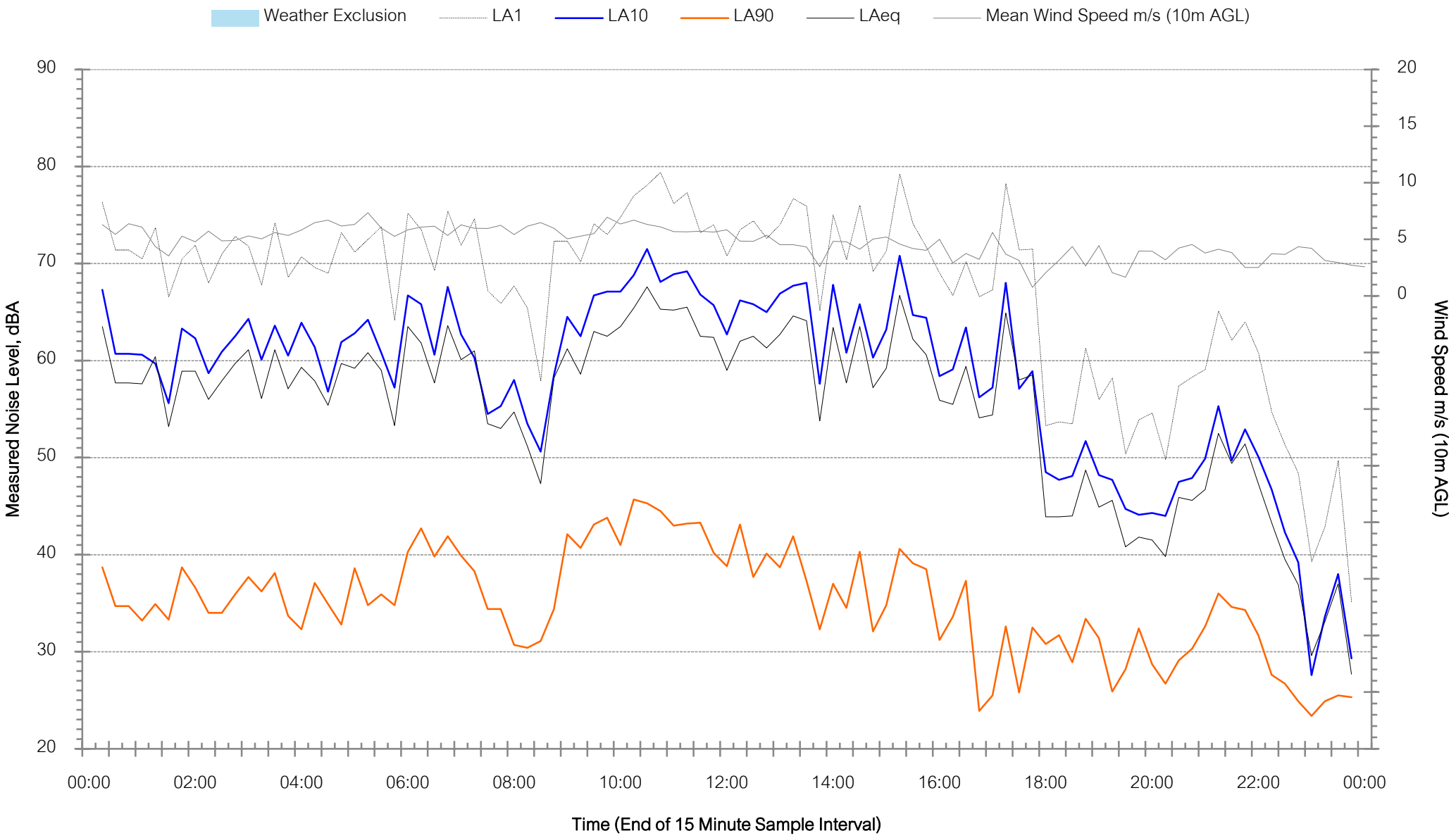
Background Noise Levels

NM4 - Hillview - Saturday 8 March 2025



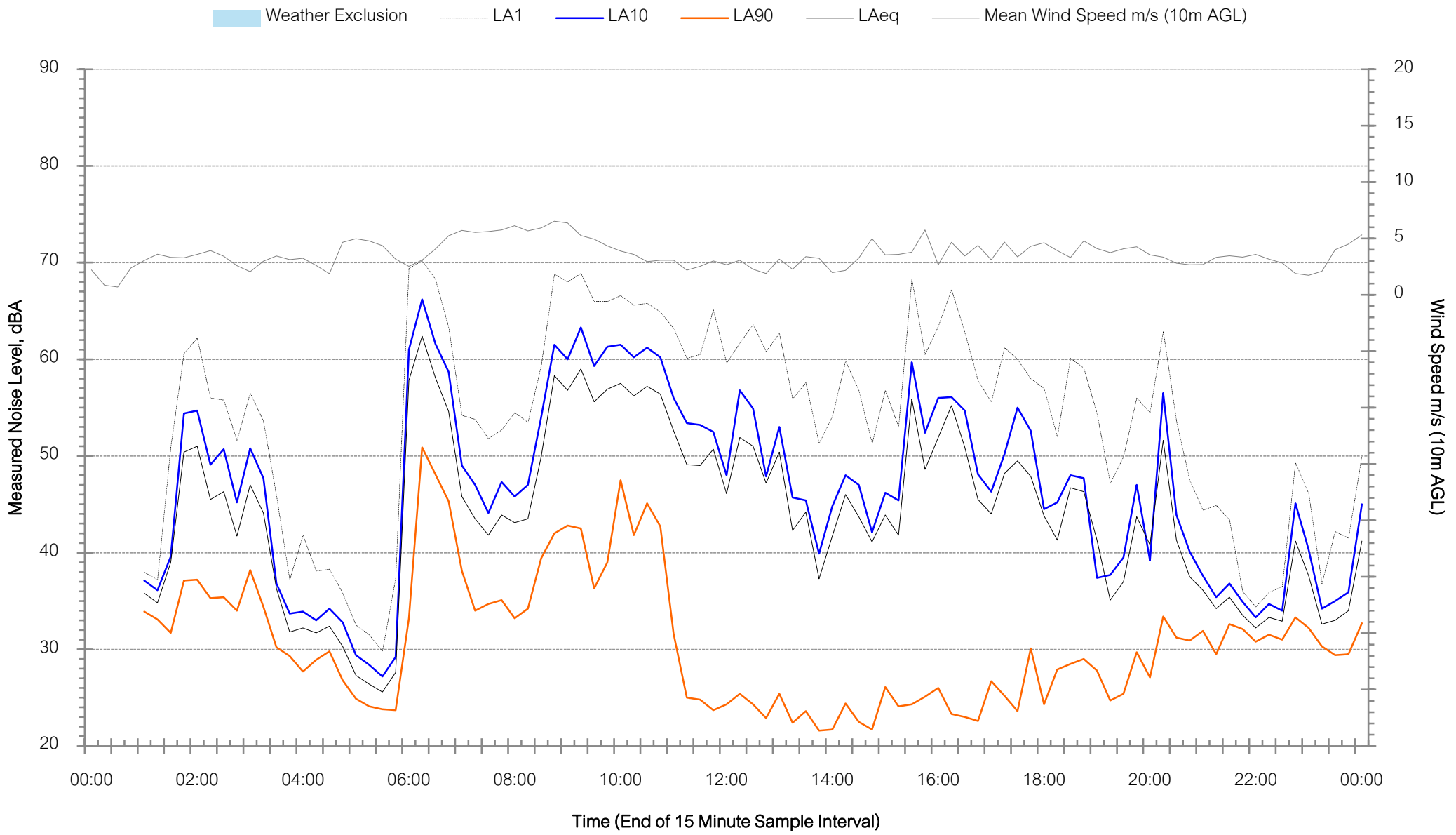
Background Noise Levels

NM4 - Hillview - Sunday 9 March 2025



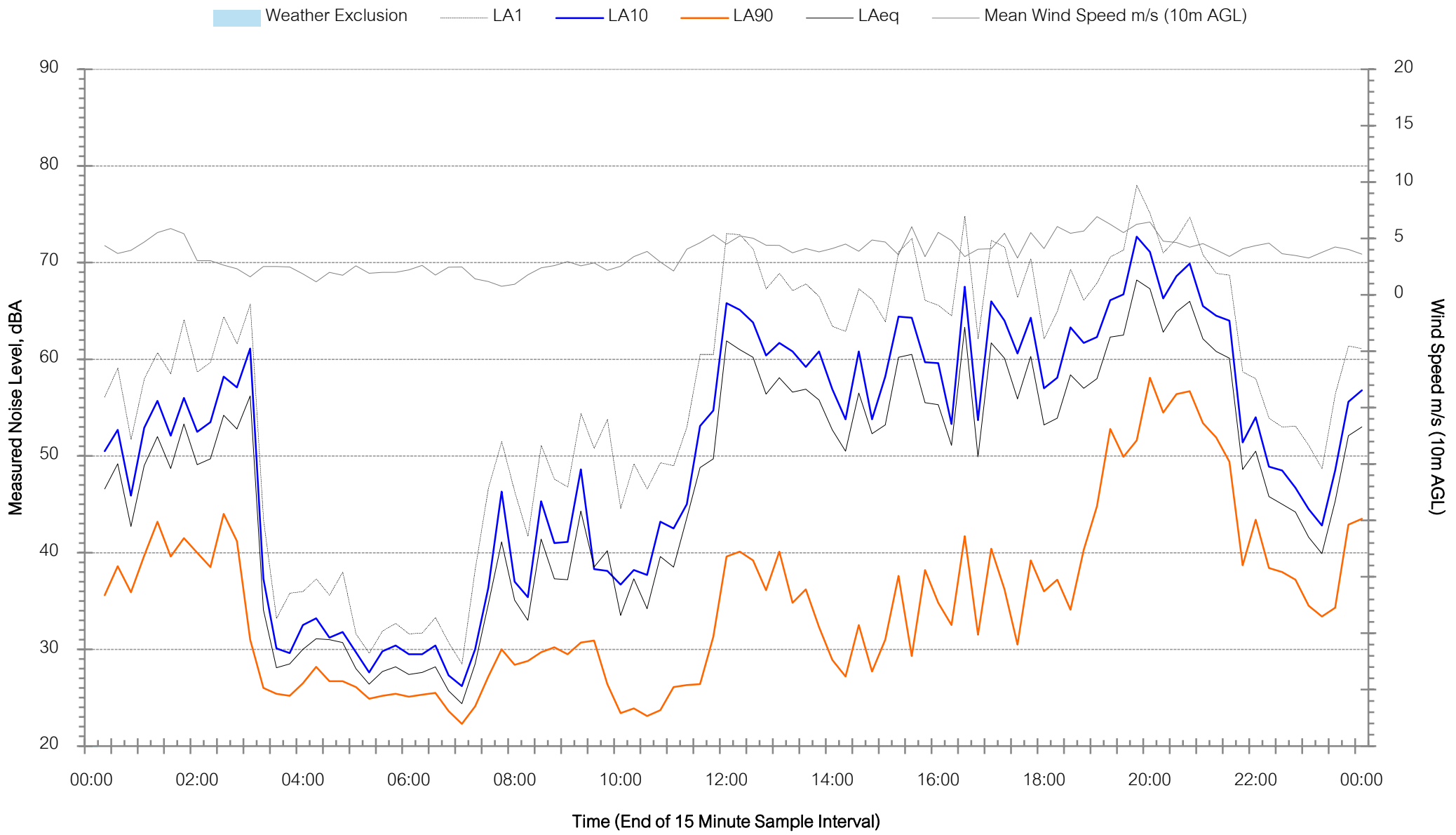
Background Noise Levels

NM5 - Adavale - Monday 3 March 2025



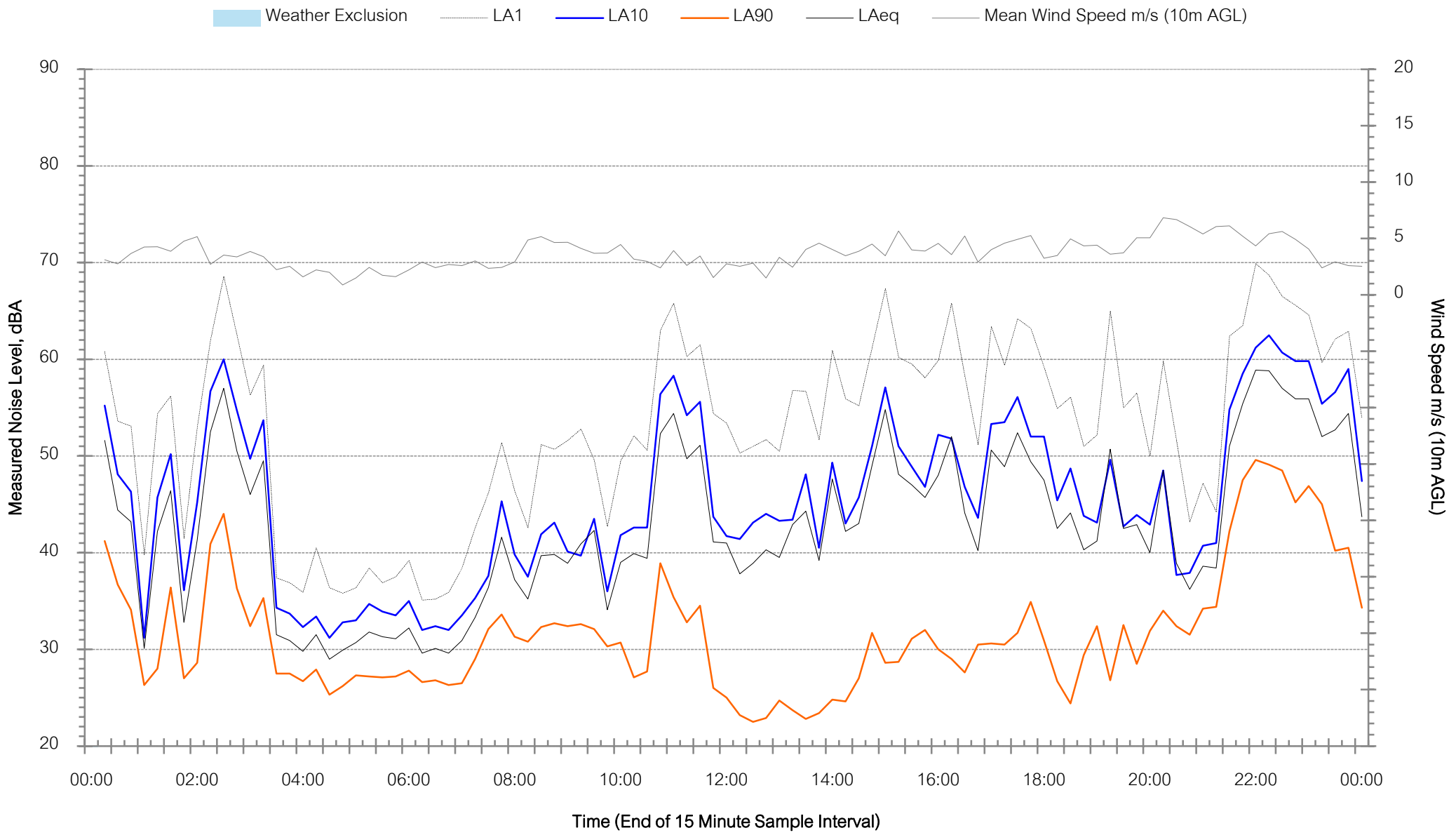
Background Noise Levels

NM5 - Adavale - Tuesday 4 March 2025



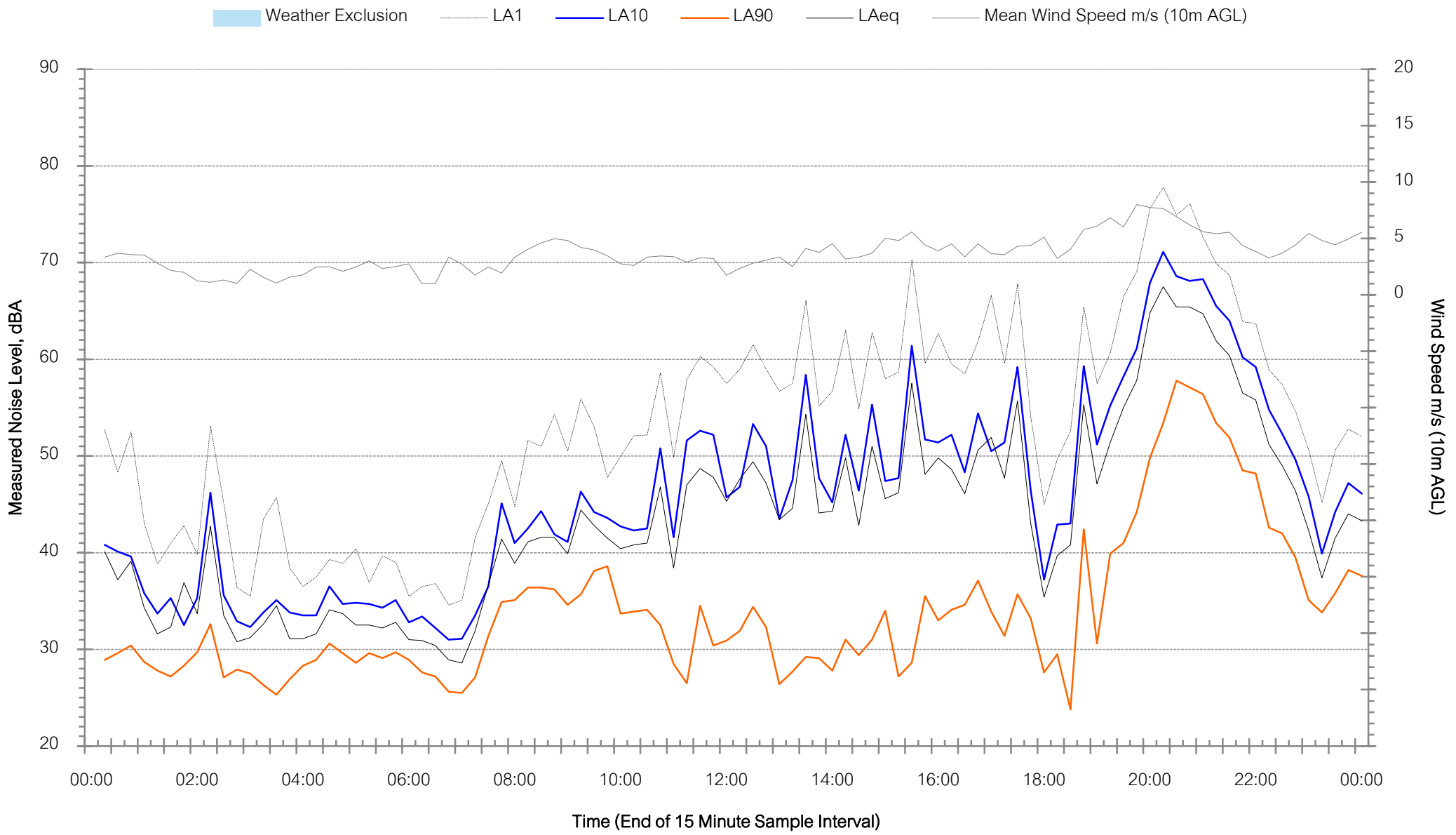
Background Noise Levels

NM5 - Adavale - Wednesday 5 March 2025



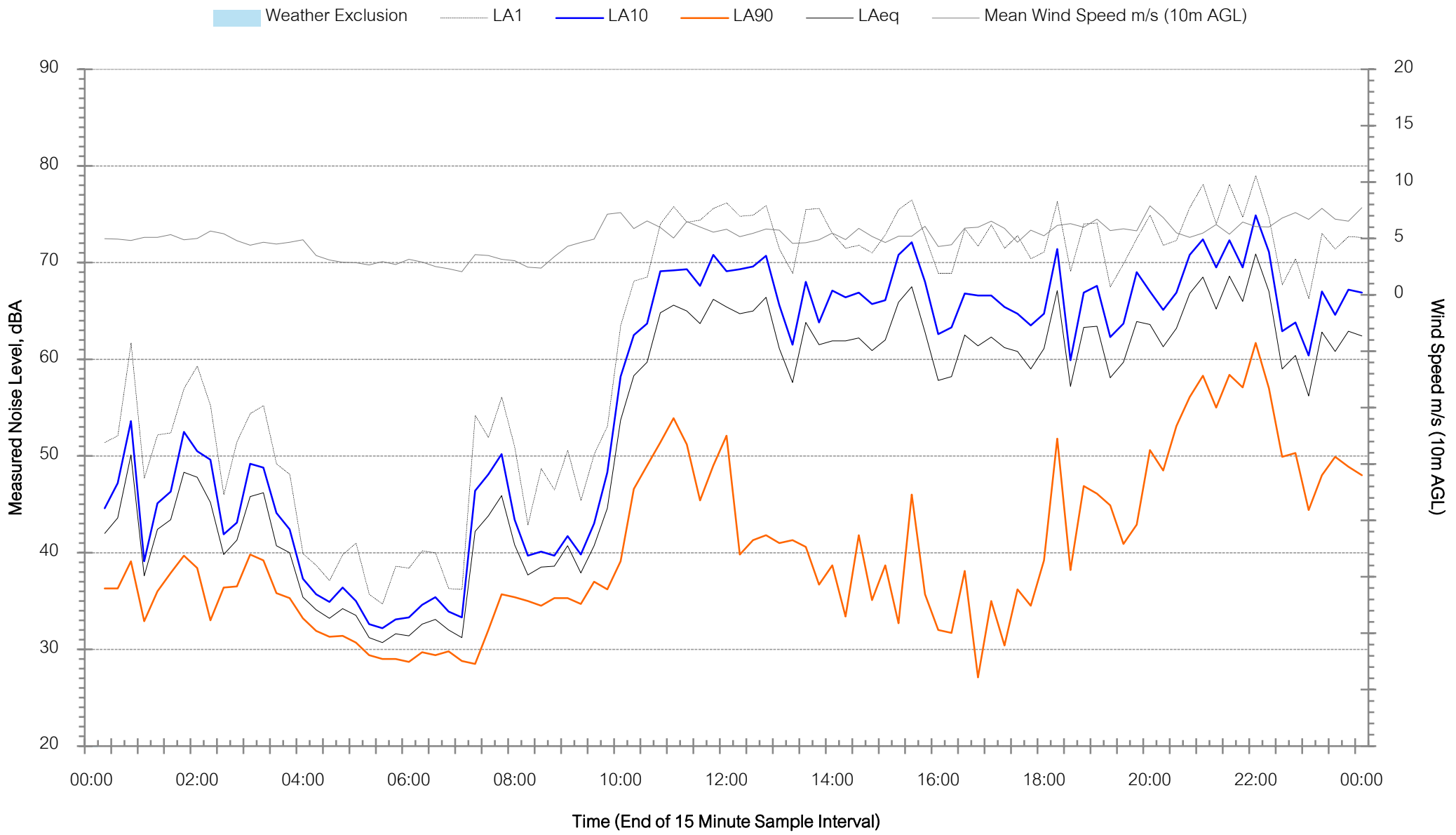
Background Noise Levels

NM5 - Adavale - Thursday 6 March 2025



Background Noise Levels

NM5 - Adavale - Friday 7 March 2025

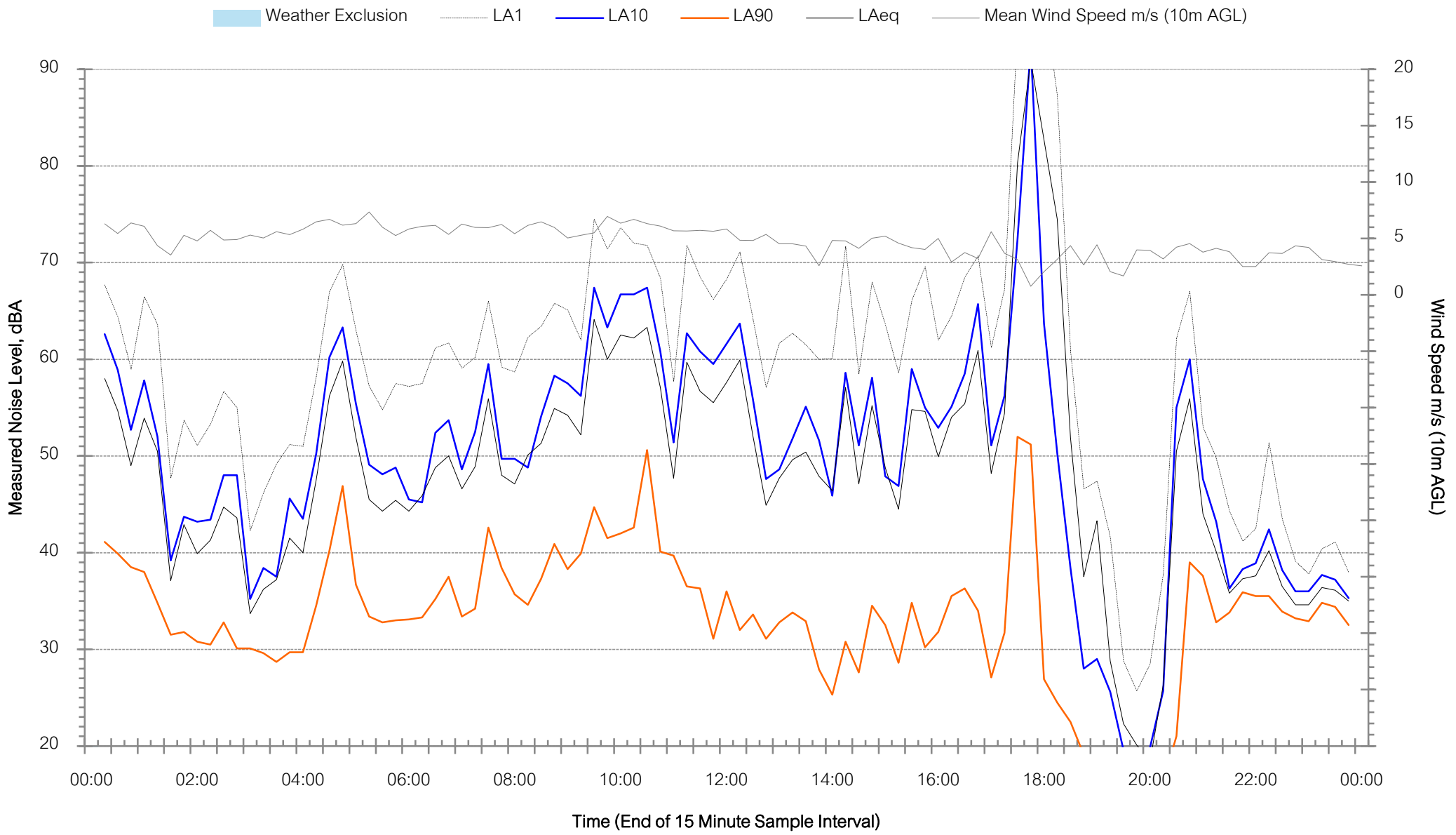


Background Noise Levels

NM5 - Adavale - Saturday 8 March 2025

Background Noise Levels

NM5 - Adavale - Sunday 9 March 2025



Muller Acoustic Consulting Pty Ltd
PO Box 678, Kotara NSW 2289
ABN: 36 602 225 132
Ph: +61 2 4920 1833
www.mulleracoustic.com

MAC
Muller Acoustic Consulting