

Noise Monitoring Assessment

Northparkes Mines

Quarter 4, 2020



Document Information

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Prepared for: CMOC Mining Services Pty Limited

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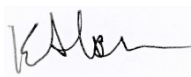

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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by CMOC Mining Services Pty Limited (CMOC) to complete a Noise Monitoring Assessment (NMA) for Northparkes Mines (Northparkes), 27km North West 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 (PA11_110060) 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); and
- Australian Standard 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**.

2 Noise Criteria

2.1 Operational Noise Criteria

This assessment has adopted criteria as per Conditions 1 to 5 of Schedule 3 of the Development Consent Conditions (PA11_110060) and the Northparkes Noise Management Plan (Northparkes, 2019) (see **Appendix B**) and is summarised below in **Table 1**.

Table 1 Noise Criteria				
Location	Day	Evening	Night	
	dB LAeq(15min)	dB LAeq(15min)	dB LAeq(15min)	dB LA1(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.

3 Assessment Methodology

All attended noise monitoring surveys for this assessment were conducted in general accordance with the procedures described in Australian Standard 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 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 ± 0.5 dBA.

3.1 Operational Noise Measurement Methodology

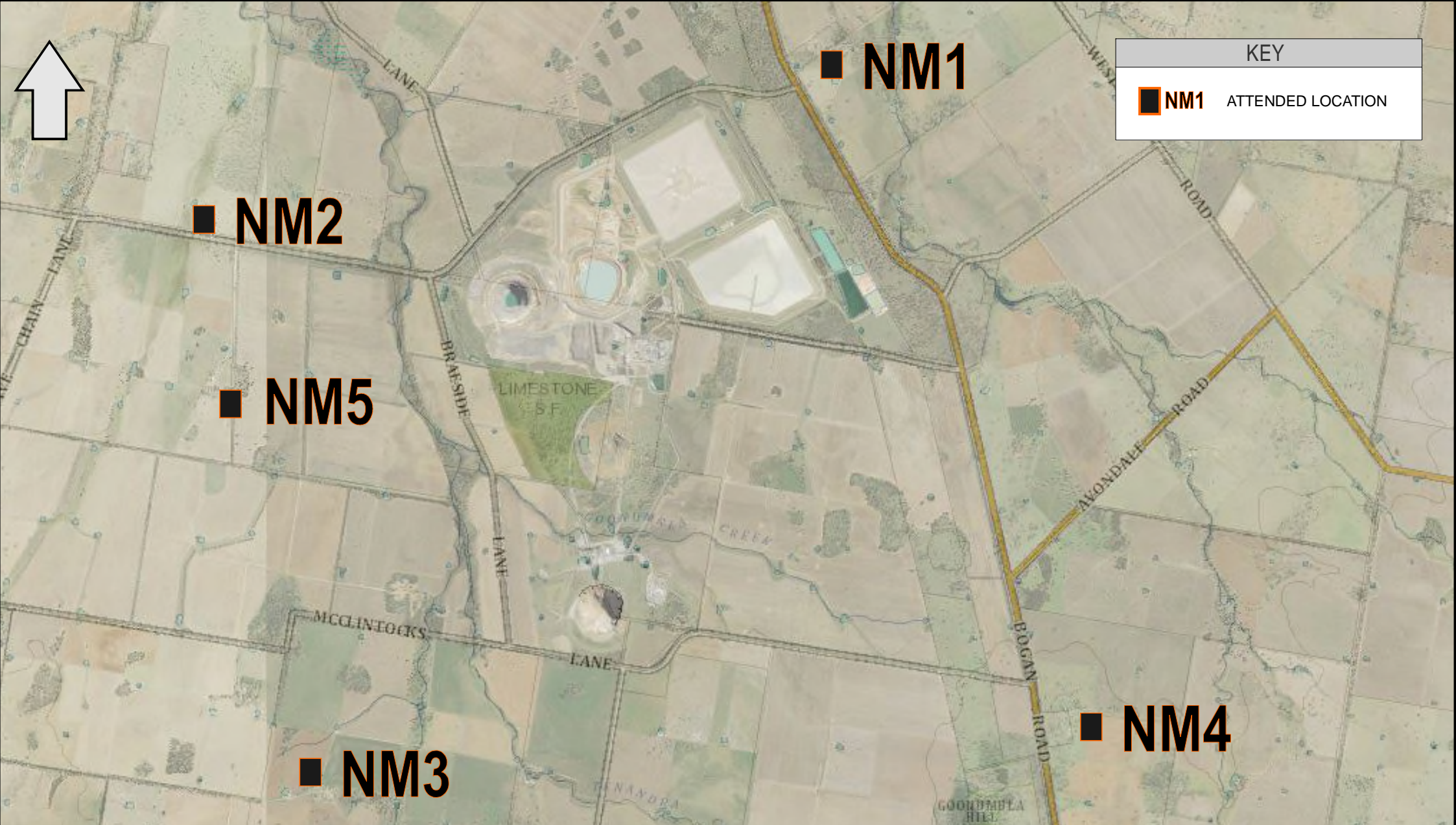
The locality surrounding the mine is primarily rural/residential. In accordance with the NMP, four representative receivers were selected for this assessment and are presented in **Table 2**.

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

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

Measurements were carried out using a Svantek Type 1, 971 noise analyser from Wednesday 2 December 2020 to Thursday 3 December 2020. 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.

Measurements were completed at an additional monitoring Location (NM5 Adavale) during this quarter as it is the nearest receiver in proximity to a recently installed ventilation fan.



4 Results

4.1 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

Date/Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L _A max	L _A eq	L _A 90		
Day					
03/12/2020 16:18	68	48	34	WD: S WS: 2.0m/s Stab Class: D	Birds 25-66
03/12/2020 16:33	73	50	34		Traffic 25-46
03/12/2020 16:48	70	45	34		Livestock 30-73
Site L _A eq(15min) Contribution			<30		Wind 25-38
					NPM not audible
Evening					
02/12/2020 18:01	65	49	44	WD: S WS: 2.0m/s Stab Class: D	Traffic 35-47
02/12/2020 18:16	71	52	43		Birds 32-71
02/12/2020 18:31	70	45	33		Wind 32-51
Site L _A eq(15min) Contribution			<35		Agriculture 35-56
					Farm Vehicles 32-71
Night					
03/12/2020 01:00	50	29	25	WD: S WS: 0.5m/s Stab Class: E	Insects 20-30
03/12/2020 01:15	42	28	24		Dog Barking 25-52
03/12/2020 01:30	52	33	24		Livestock 20-40
Site L _A eq(15min) Contribution			<25		Agriculture 20-30
					NPM not audible
Site L _A 1(1min) Contribution					<35

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

Date/Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L _A max	L _A eq	L _A 90		
Day					
03/12/2020 15:19	64	44	33	WD: SE WS: 2.0m/s Stab Class: D	Birds 30-70 Wind 27-45 Traffic 30-68 Insects <30 NPM Not Audible
03/12/2020 15:34	68	45	35		
03/12/2020 15:49	70	43	36		
Site L _A eq(15min) Contribution			<30		
Evening					
02/12/2020 18:59	54	35	29	WD: SW WS: 1.5/s Stab Class: E	Birds 24-55 Wind 28-36 Traffic 30-66 Insects 25-35 NPM Site Hum <25
02/12/2020 19:14	66	40	28		
02/12/2020 19:29	61	39	30		
Site L _A eq(15min) Contribution			<25		
Night					
03/12/2020 00:01	56	36	32	WD: SE WS: 1.5m/s Stab Class: E	Birds 25-38 Insects 27-45 Wind 27-43 Livestock 30-40 Operator 47-56 NPM Site Hum <25-33
03/12/2020 00:16	47	34	31		
03/12/2020 00:31	49	34	31		
Site L _A eq(15min) Contribution			<30		
Site L _A 1(1min) Contribution			<40		

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

Date/Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L _A max	L _A eq	L _A 90		
Day					
03/12/2020 13:24	47	33	26	WD: SE WS: 1.0m/s Stab Class: B	Birds 23-47
03/12/2020 13:39	46	35	27		Agriculture <20-39
03/12/2020 13:54	47	34	26		NPM Not Audible
Site L _A eq(15min) Contribution			<25		
Evening					
02/12/2020 21:01	58	43	37	WD: S WS: <0.1m/s Stab Class: D	Insects <30-35
02/12/2020 21:16	50	43	38		Agriculture 33-58
02/12/2020 21:31	54	43	38		Operator 51
Site L _A eq(15min) Contribution			<30		
Night					
02/12/2020 22:00	47	32	26	WD: SE WS: 0.5m/s Stab Class: D	Insects 22-34
02/12/2020 22:15	45	31	26		Agriculture 20-58
02/12/2020 22:30	58	31	25		Aircraft 28-47
Site L _A eq(15min) Contribution			<25		
Site L _A 1(1min) Contribution			<40		

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

Date/Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L _A max	L _A eq	L _A 90		
Day					
03/12/2020 12:10	64	43	30	WD: E WS: 1.0m/s Stab Class: B	Birds 27-64 Traffic 25-58 Insects 25-35 Wind 25-36 NPM Not Audible
03/12/2020 12:25	58	40	31		
03/12/2020 12:40	54	38	30		
Site L _A eq(15min) Contribution			<30		
Evening					
03/12/2020 18:00	62	47	36	WD: S WS: 0.5m/s Stab Class: E	Traffic 29-59 Agriculture <25-36 Birds 26-42 Residential Noise 40-64 NPM Not Audible
03/12/2020 18:15	64	46	32		
03/12/2020 18:30	59	45	32		
Site L _A eq(15min) Contribution			<30		
Night					
03/12/2020 1:57	34	22	<20	WD: SE WS: 0.5m/s Stab Class: D	Insects <25 Agriculture <25-28 Operator 34-40 NPM Not Audible
03/12/2020 2:12	40	20	<20		
03/12/2020 2:27	40	21	<20		
Site L _A eq(15min) Contribution			<25		
Site L _A 1(1min) Contribution			<40		

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

Date/Time (hrs)	Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
Duration 15min	L _A max	L _A eq	L _A 90		
Day					
03/12/2020 14:21	49	28	22	WD: SE WS: 1.0m/s Stab Class: C	Birds 20-51
03/12/2020 14:36	50	31	23		Insects <20-25
03/12/2020 14:51	51	33	24		Wind <20-39
					NPM Not Audible
Site L _A eq(15min) Contribution					<25
Evening					
03/12/2020 20:01	54	31	25	WD: S WS: 0.5m/s Stab Class: E	Traffic 20-50
03/12/2020 20:16	53	38	24		Birds 20-54
03/12/2020 20:31	46	26	23		Dogs Barking 24-35
					Insects 20-36
					Aircraft 25-53
Site L _A eq(15min) Contribution					NPM Site Exhaust Fan <20-25
					<25
Night					
02/12/2020 23:01	44	34	30	WD: SE WS: 1.0m/s Stab Class: G	Insects <25
02/12/2020 23:16	47	37	32		Wind 25-44
02/12/2020 23:31	53	30	28		Operator 53
					NPM Site Exhaust Fan <20-45
					NPM Vehicle Movements 25-34 (Infrequent <30 second durations)
Site L _A eq(15min) Contribution					34
Site L _A 1(1min) Contribution					<40

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.

4.2 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

Date/Time (hrs)	Measured Noise Level (re 20 µPa)	Meteorology	Criteria dB LAeq(1hr)	Description and SPL dBA
Duration 1 hour	dB LAeq (1hr)			
03/12/2020 12:10 (Day)	40	WD: E WS: 1.0m/s Stab Class: B	55	Birds 27-64
				Traffic 25-58
				Insects 25-35
				Wind 25-36
				Vehicles Enter/Exit NPM Site
				Approx. 18
03/12/2020 18:00 (Evening)	46	WD: S WS: 0.5m/s Stab Class: E	55	Traffic 29-59
				Agriculture <25-36
				Birds 26-42
				Residential Noise 40-64
				Vehicles Enter/Exit NPM Site
				Approx. 99

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 LAeq(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. A concentrate truck contribution was not available this quarter due to very infrequent truck movements. Observations from operator observations identified a maximum of two movements per hour, which is in line with previous NPM quarterly measurements.

4.3 Unattended Noise Results

Unattended noise monitors are installed at the 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 LAeq(15min) and LA1(1min) metrics from the seven day monitoring period from Monday 30 November 2020 to Sunday 6 December 2020 for NM1, NM2, NM3 and NM4 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 LAeq(15min) ²	Weekly Average LA1(1min) ²
Location NM1, Hubberstone		
Day	74	--
Evening	61	--
Night	58	80
Location NM2, Lone Pine		
Day	56	--
Evening	50	--
Night	35	55
Location NM3, Milpose		
Day	69	--
Evening	63	--
Night	51	62
Location NM4, Hillview		
Day	52	--
Evening	48	--
Night	45	67

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.

Note 2: Arithmetic average.

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 December 2020 noise survey identified that NPM was not audible during any monitoring periods during the attended campaign. Generally, traffic, livestock, wind in trees, birds and insects 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 December 2020 noise survey identified that NPM was inaudible during the day measurements and audible throughout the evening and night periods, although NPM contribution was below the relevant criteria. Generally, wind in trees, birds, livestock, insects and operator noise 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 December 2020 noise survey identified that NPM was inaudible during all day, evening and night measurements. Generally, aircraft, agricultural noise, birds and operator 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 December 2020 noise survey identified that NPM was inaudible during all day, evening and night-time measurements. Generally, traffic, insects, agricultural noise, residential noise, and birds, 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 – Additional Location, Adavale

Attended measurement results for additional monitoring conducted at the location identified as Adavale for the December 2020 noise survey identified that NPM was inaudible during the day measurements and audible throughout the evening and night periods, although remained below relevant criteria. Contributions from NPM were characterised as exhaust fan noise from site during the evening and night periods, and onsite vehicle movements during the night period. Generally, traffic, wind in trees, dogs barking, insects, aircraft, and birds were all audible during the monitoring period.

6 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment (NMA) on behalf of CMOC Mining Services Pty Limited (CMOC). The assessment was completed to quantify site noise emissions against relevant noise criteria pertaining to NMP operations in accordance with Conditions 1 to 5 of Schedule 3 of the Development Consent Conditions (PA11_110060) and the Northparkes Noise Management Plan (NMP, 2019) for Quarter 4, ending December 2020.

Road noise monitoring identified that vehicle movements associated with shift change generated 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 are generally barely audible at monitoring locations. Extraneous non-mining sources such as traffic, insects, wind in trees, birds, aircraft, and agricultural noise were audible during the monitoring period.

Appendix A – Glossary of Terms

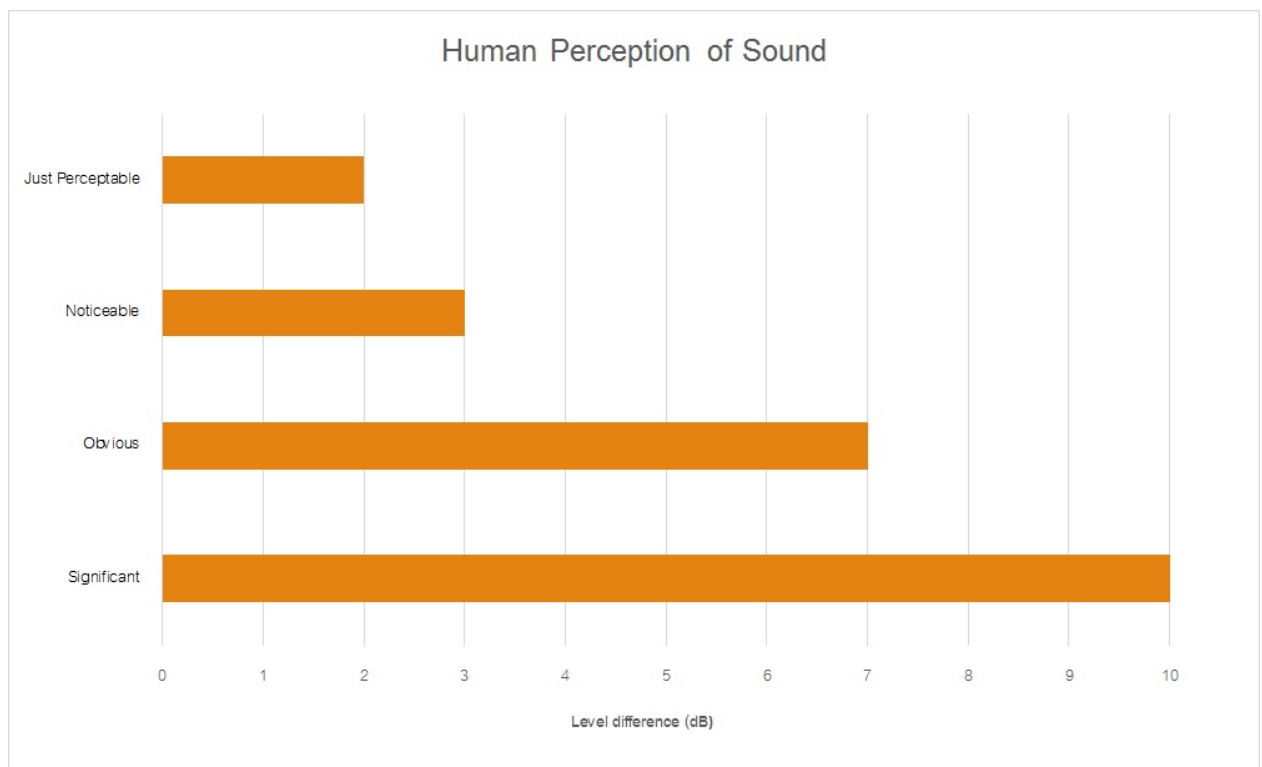
Table A1 provides a number of technical terms have been used in this report.

Table A1 Glossary of 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 LA90 statistical noise levels.
Adverse Weather	Weather effects that enhance noise (that is, wind and temperature inversions) that occur at a site for a significant period of time (that is, wind occurring more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of the nights in winter).
Ambient Noise	The noise associated with a given environment. Typically a composite of sounds from many 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 noise.
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 Linear or decibels Z-weighted.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A noise level which is exceeded 10 % of the time. It is approximately equivalent to the average of maximum noise levels.
LA90	Commonly referred to as the background noise, this is the level exceeded 90 % of the time.
LAeq	The summation of noise over a selected period of time. It is the energy average noise from a source, and is the equivalent continuous sound pressure level over a given period.
LAm _{ax}	The maximum root mean squared (rms) sound pressure level received at the microphone during a measuring interval.
RBL	The Rating Background Level (RBL) is an overall single figure background level representing each assessment period over the whole monitoring period. The RBL is used to determine the intrusiveness criteria for noise assessment purposes and is the median of the ABL's.
Sound power level (LW)	<p>This is a measure of the total power radiated by a source. The sound power of a source is a fundamental location of the source and is independent of the surrounding environment. Or a measure of the energy emitted from a source as sound and is given by :</p> $= 10 \cdot \log_{10} (W/W_0)$ <p>Where : W is the sound power in watts and W₀ is the sound reference power at 10-12 watts.</p>

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 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



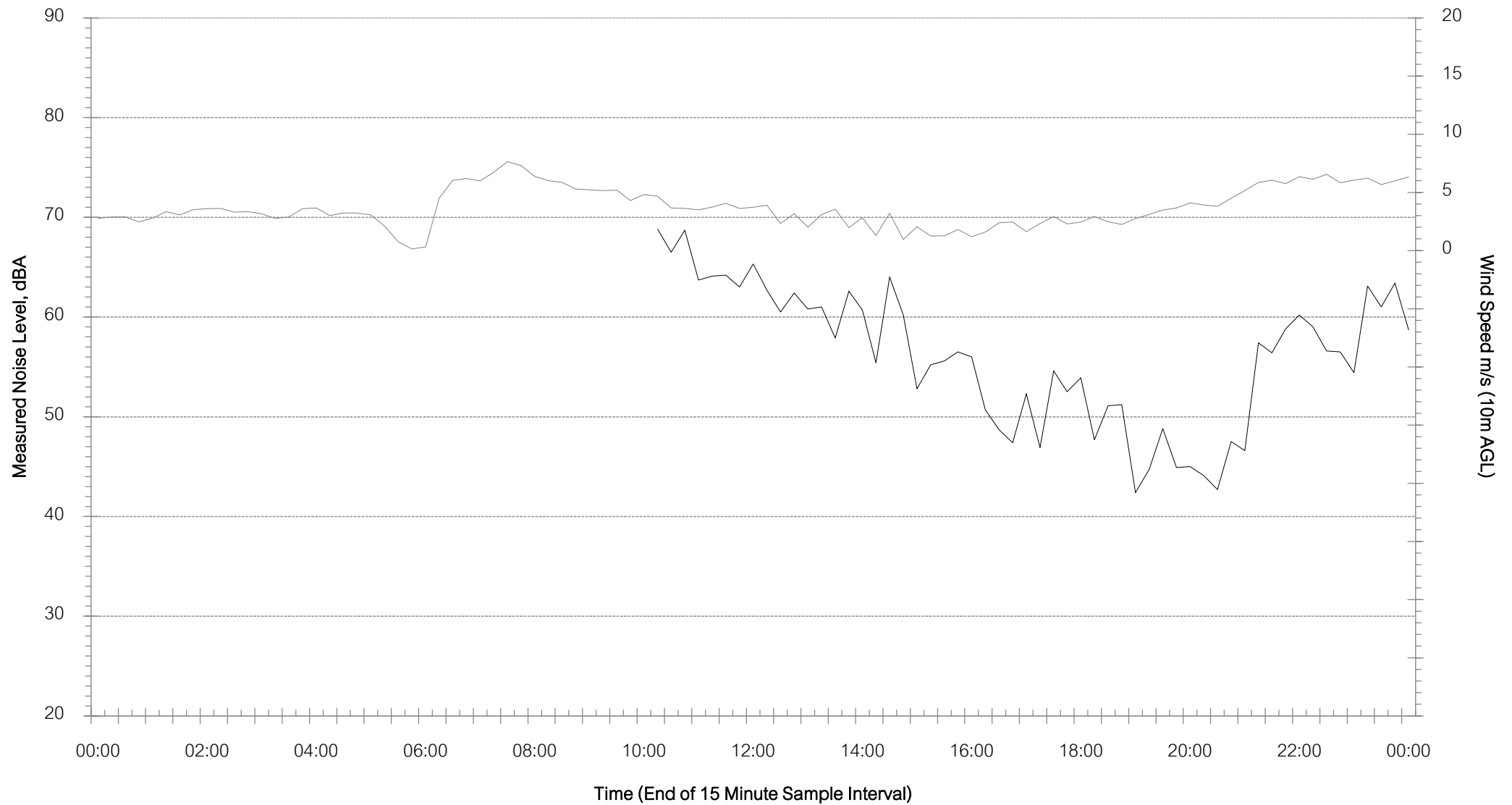
Appendix B – Regulatory Noise Limits

Appendix C – Unattended Monitoring Charts

Background Noise Levels

NM1 Hubberstone - Monday 30 November 2020

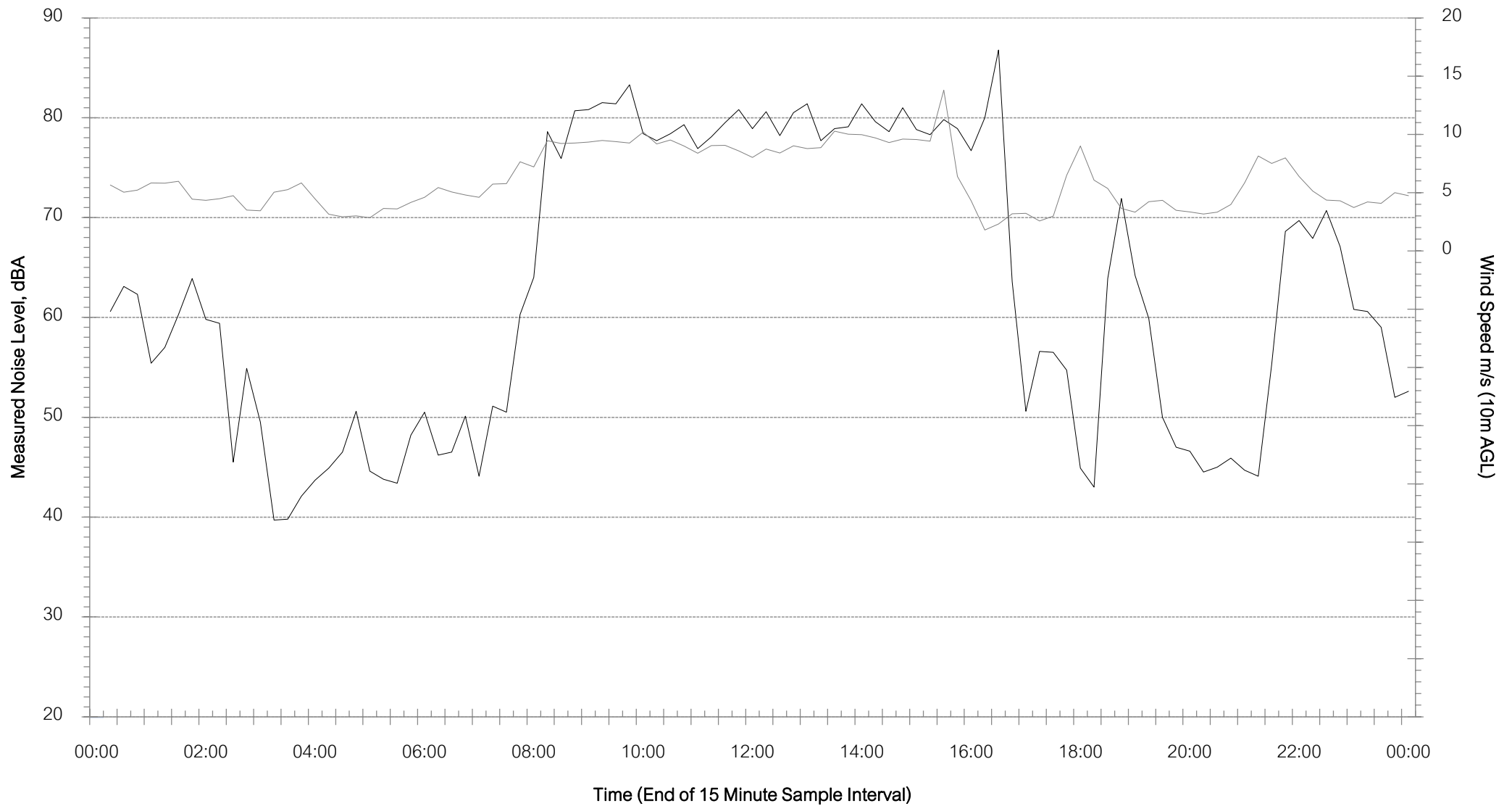
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM1 Hubberstone - Tuesday 1 December 2020

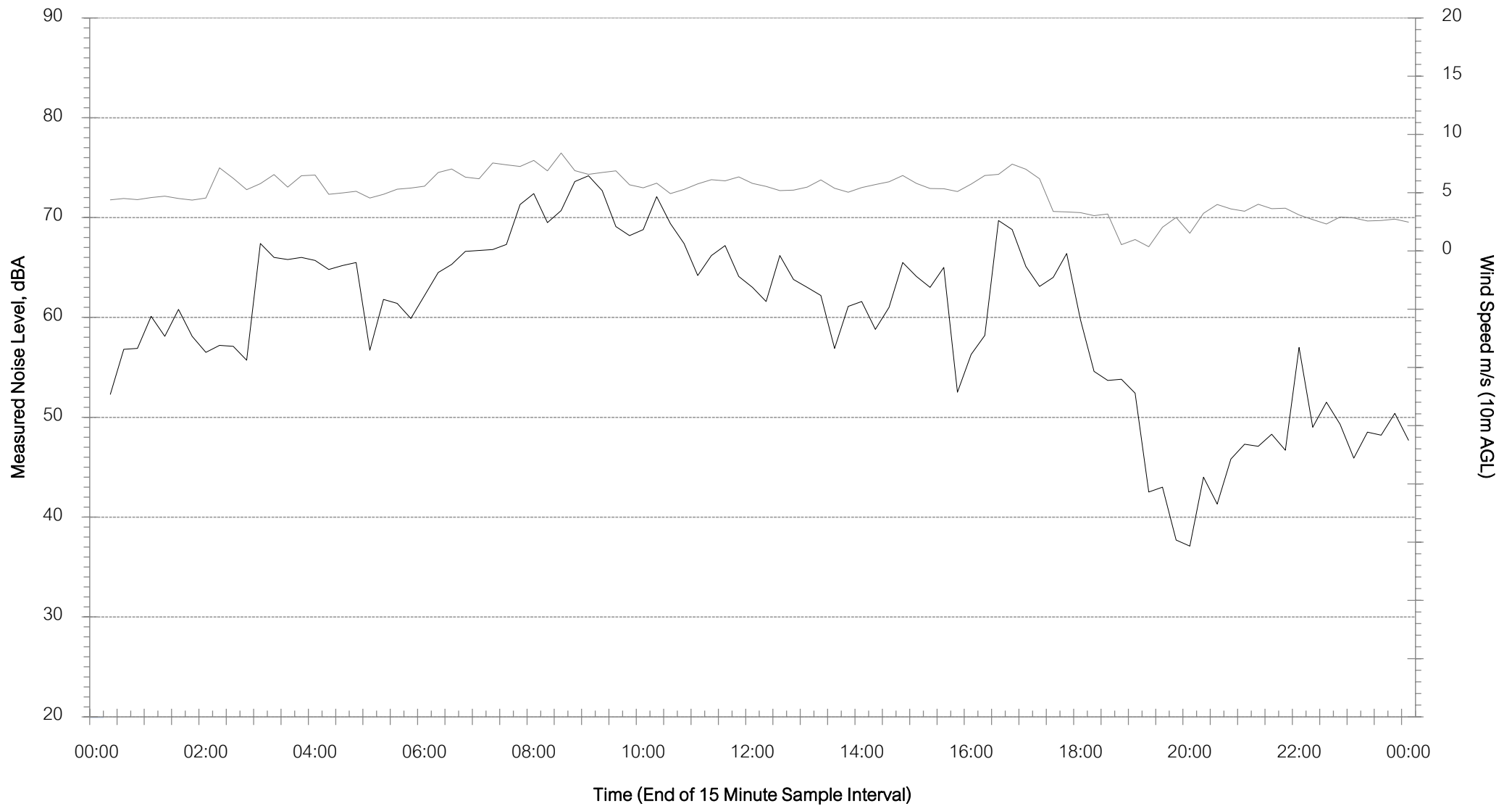
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM1 Hubberstone - Wednesday 2 December 2020

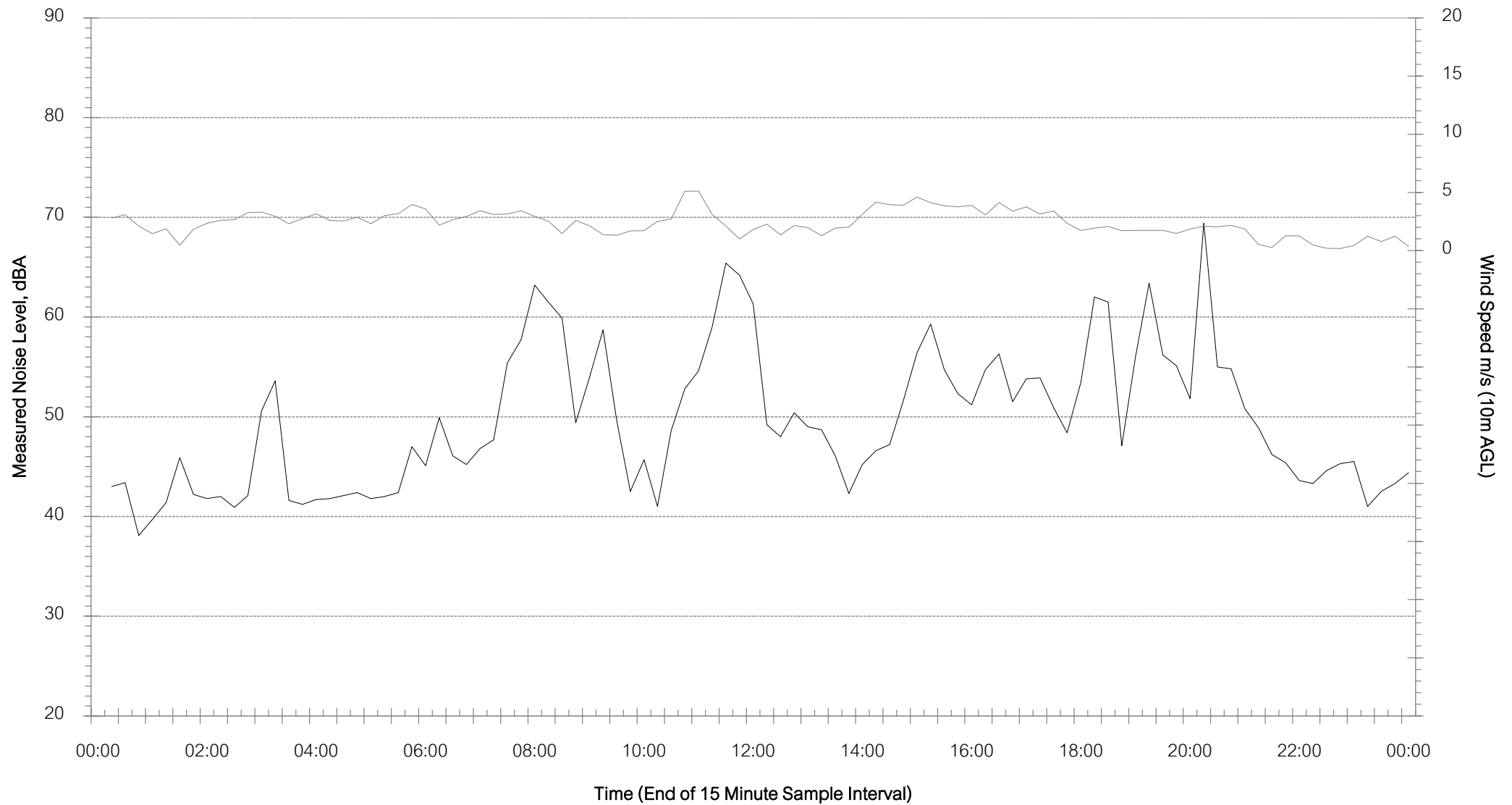
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM1 Hubberstone - Thursday 3 December 2020

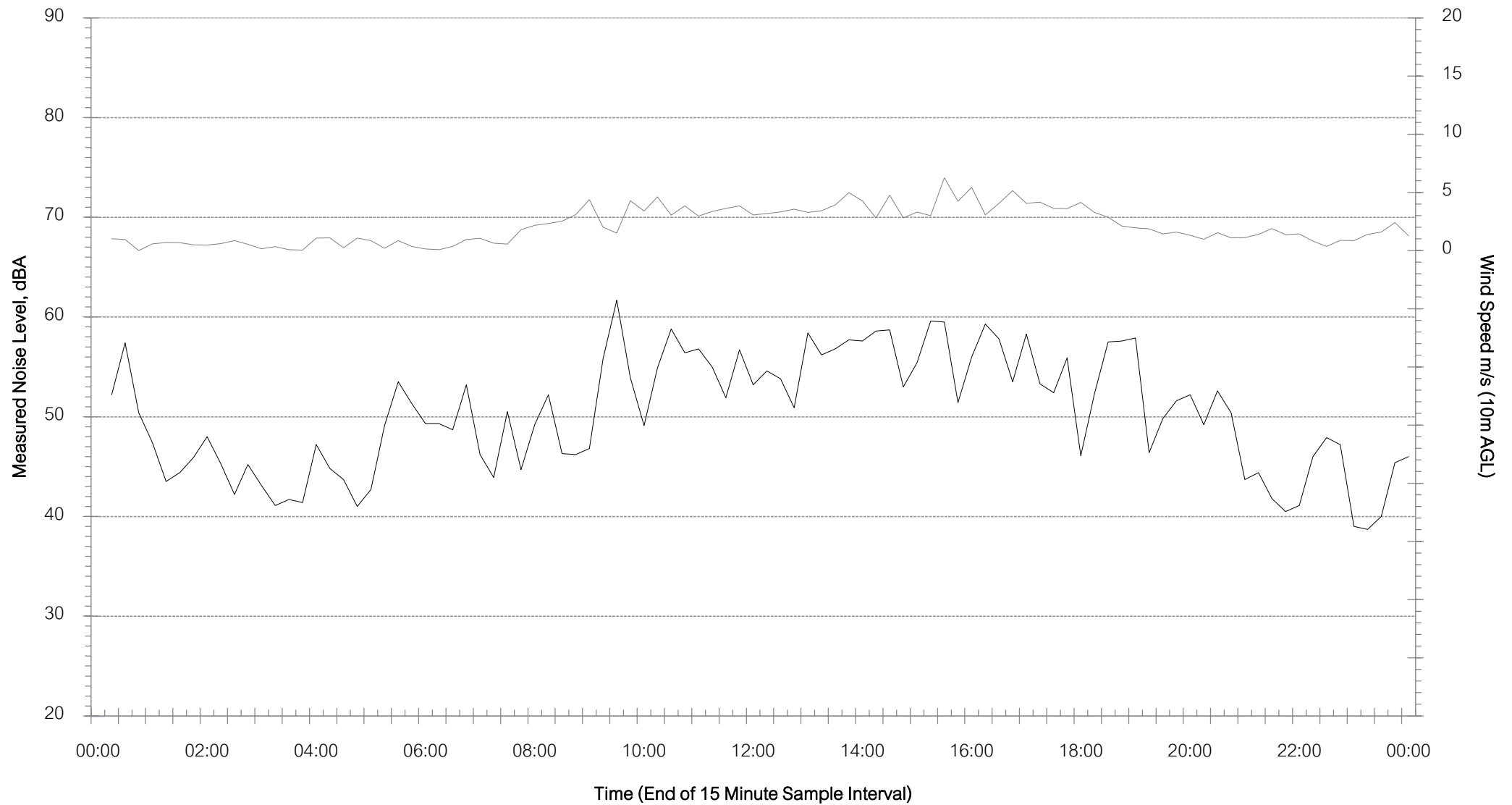
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM1 Hubberstone - Friday 4 December 2020

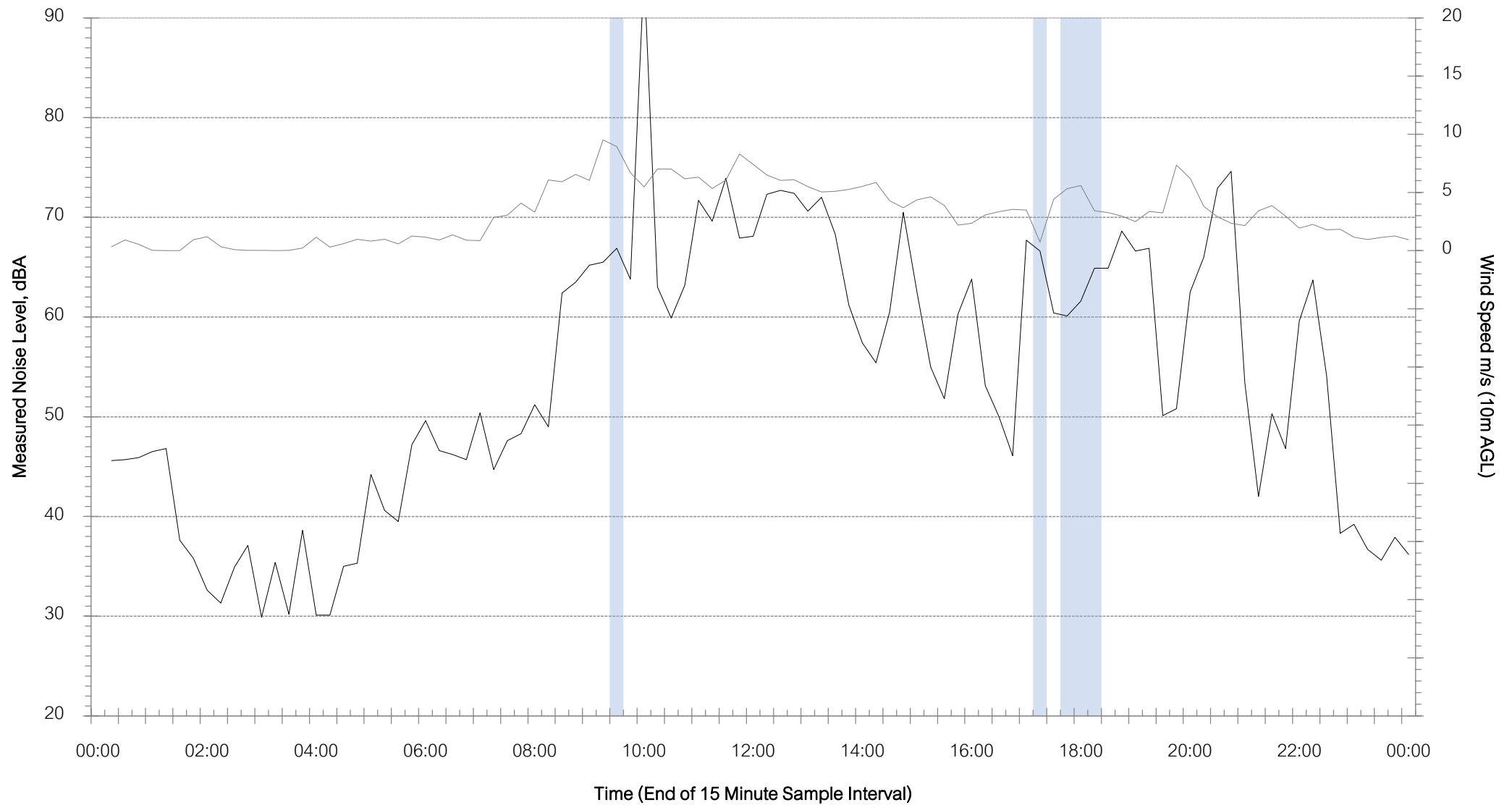
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM1 Hubberstone - Saturday 5 December 2020

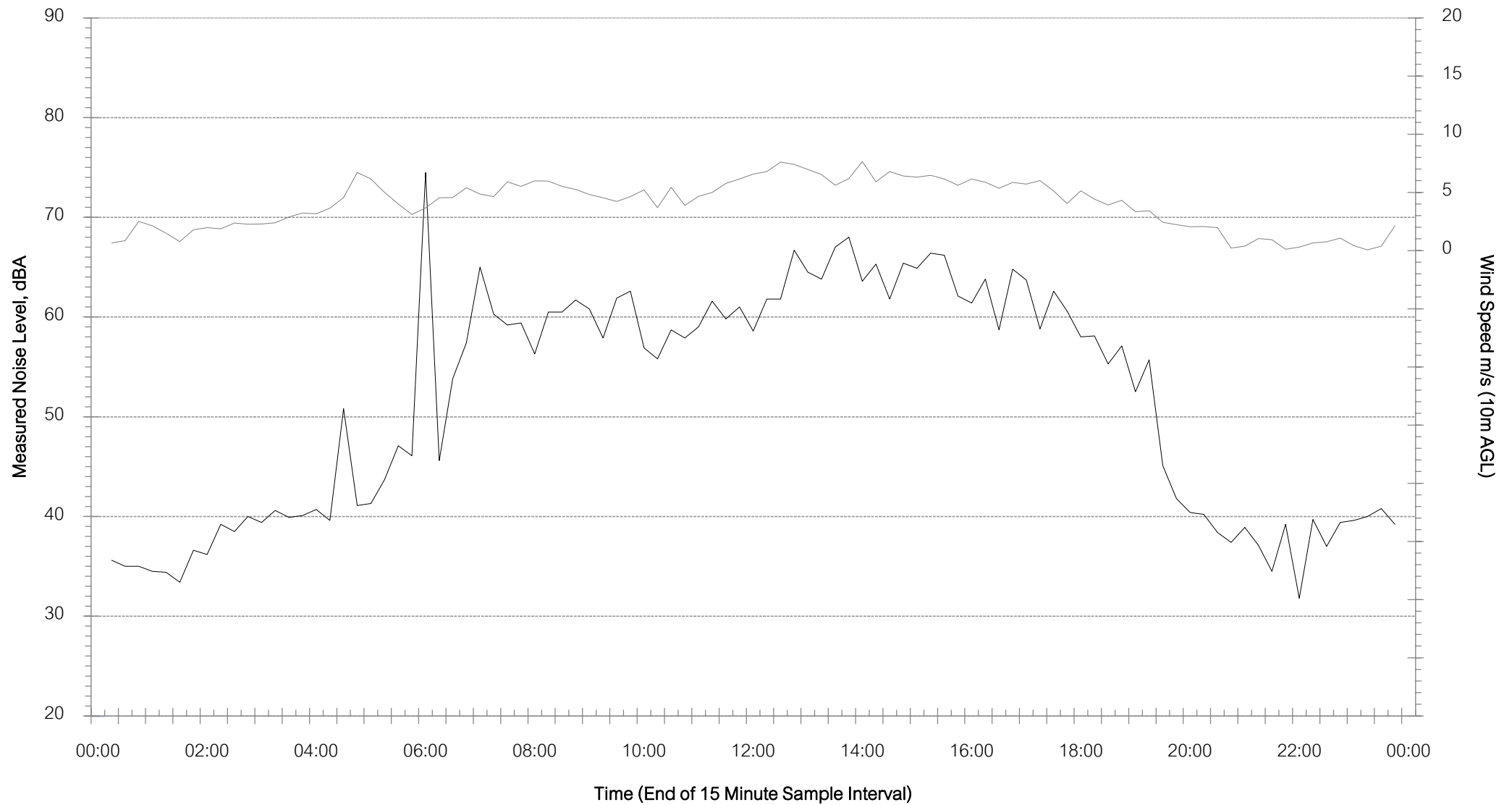
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM1 Hubberstone - Sunday 6 December 2020

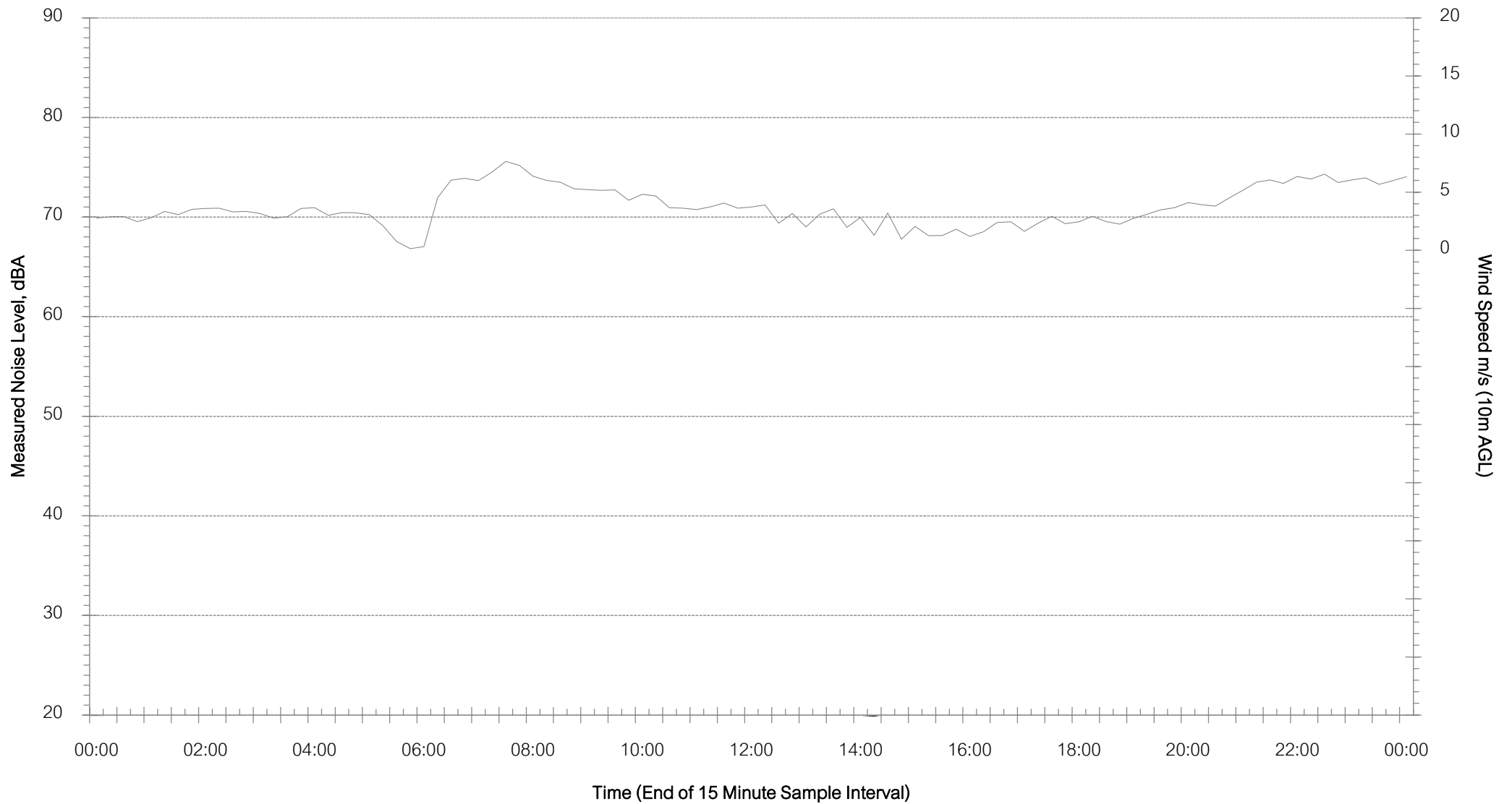
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Monday 30 November 2020

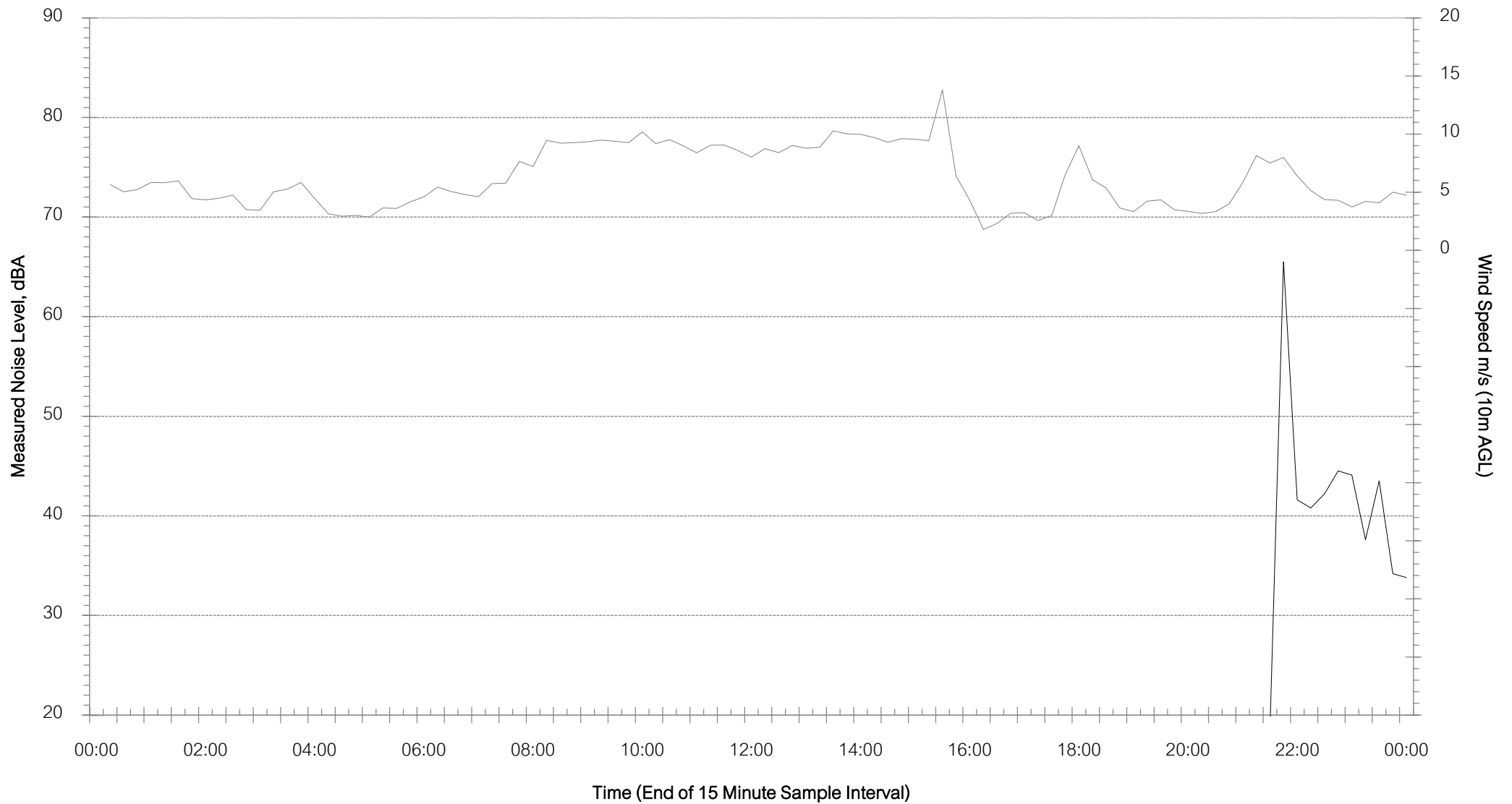
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Tuesday 1 December 2020

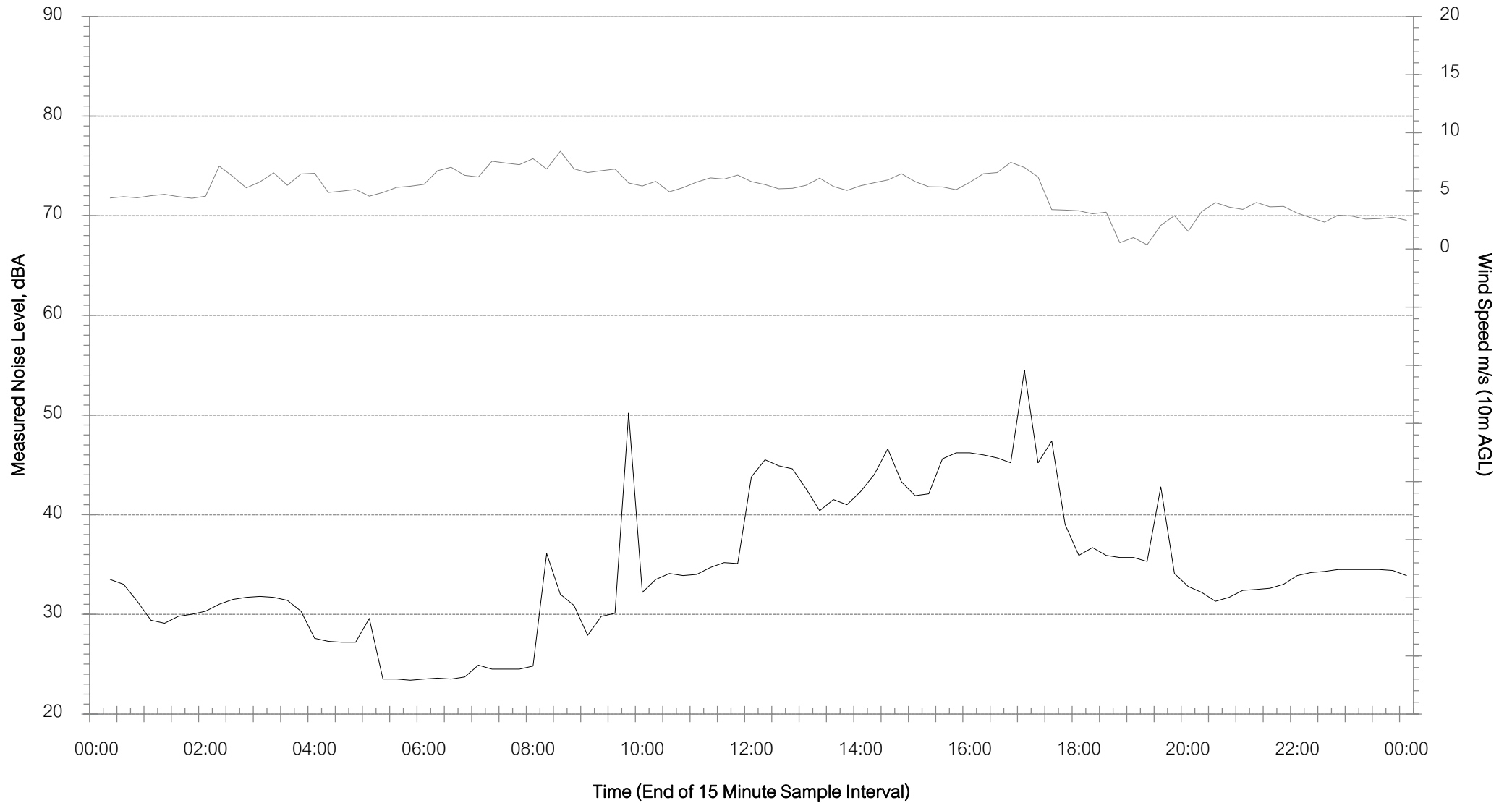
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Wednesday 2 December 2020

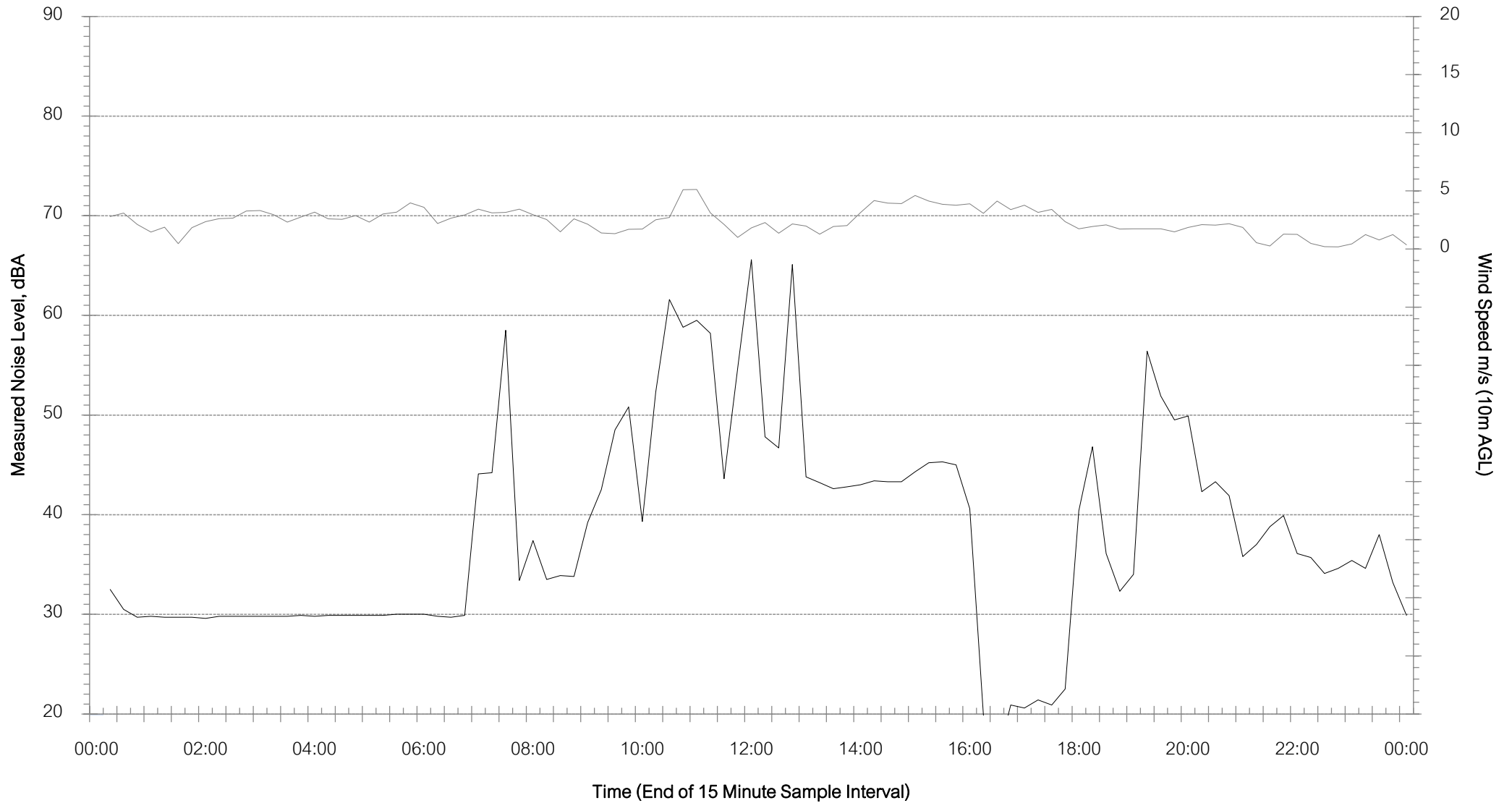
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Thursday 3 December 2020

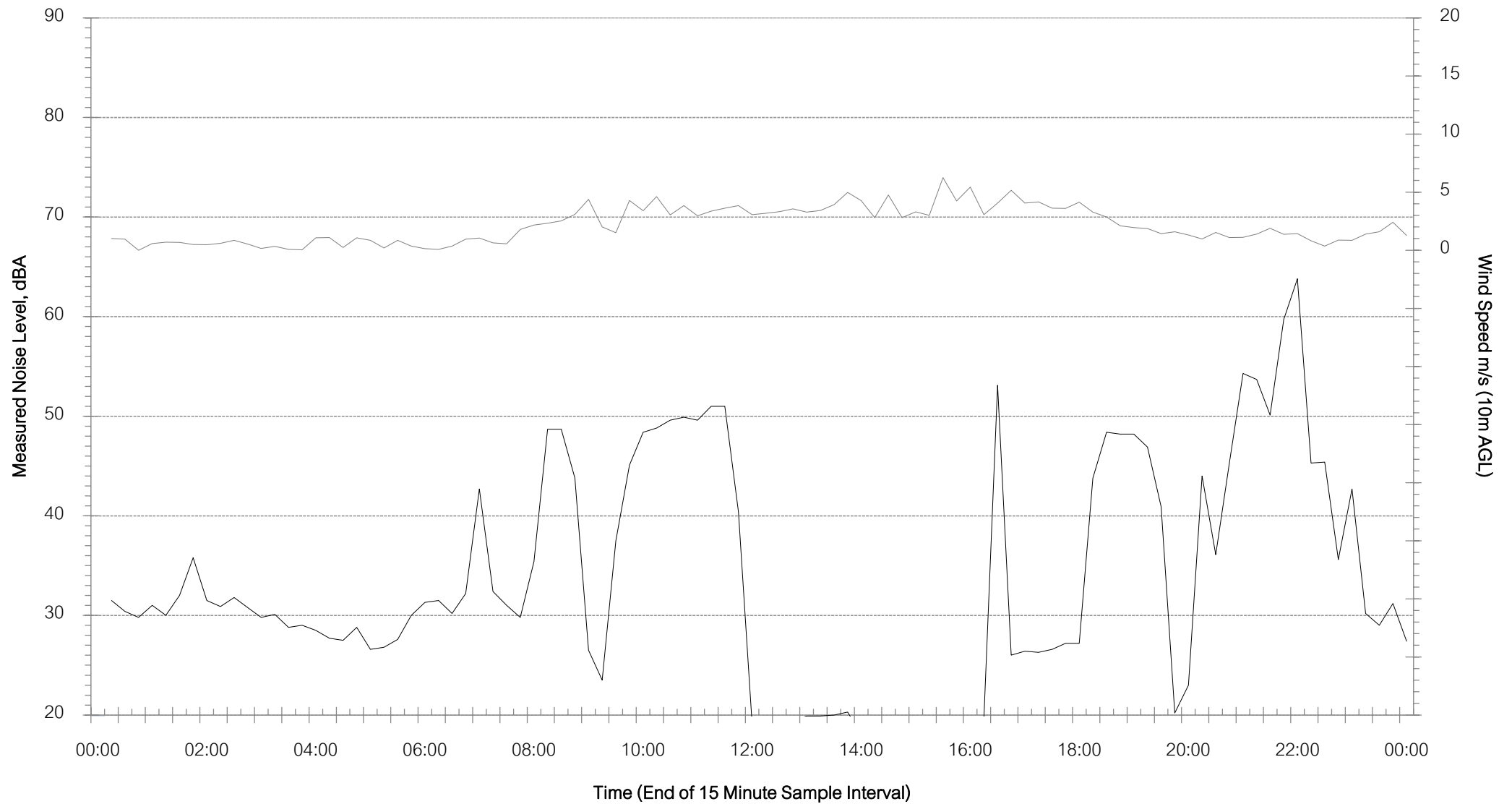
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Friday 4 December 2020

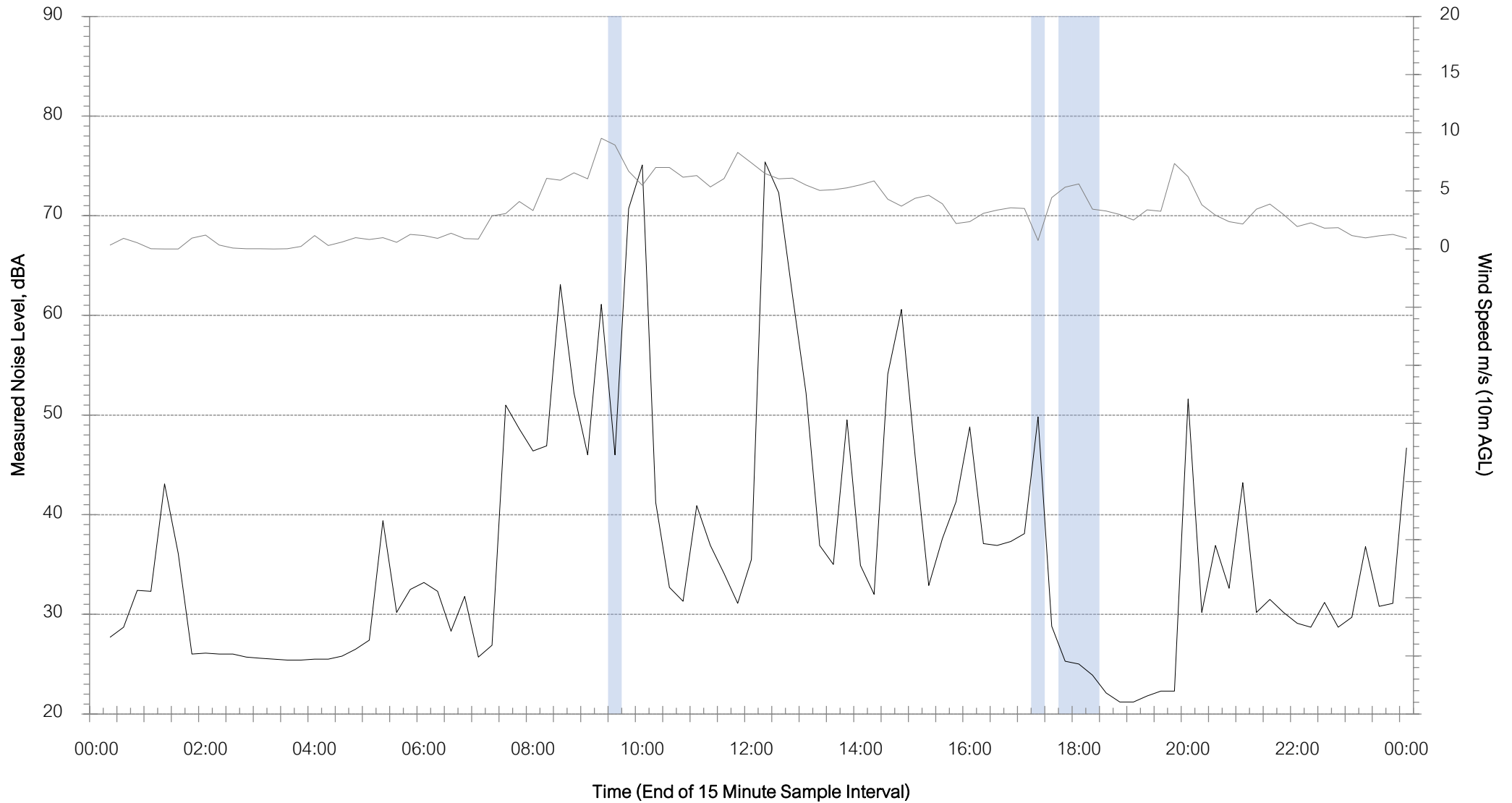
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Saturday 5 December 2020

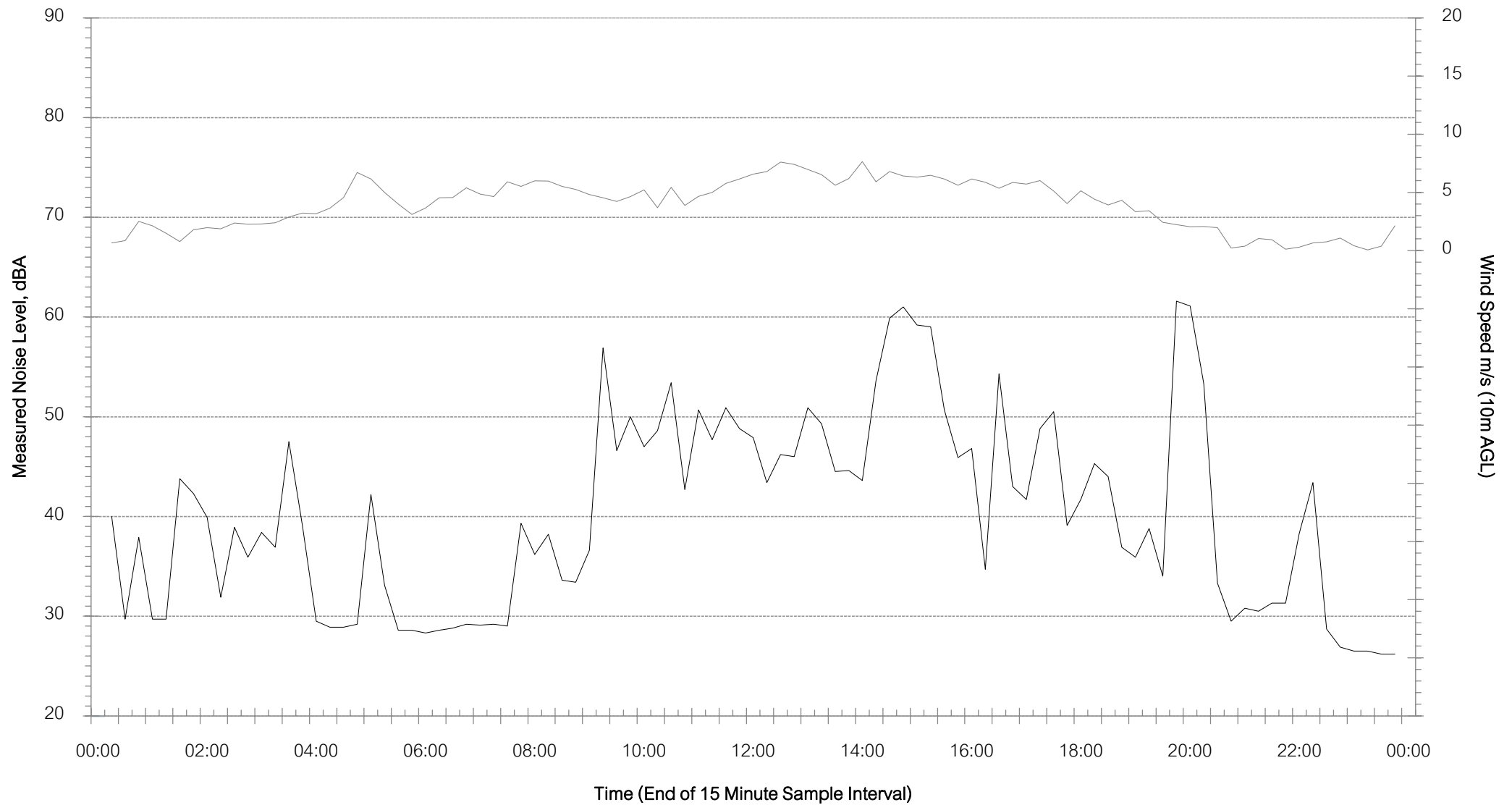
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM2 Lone Pine - Sunday 6 December 2020

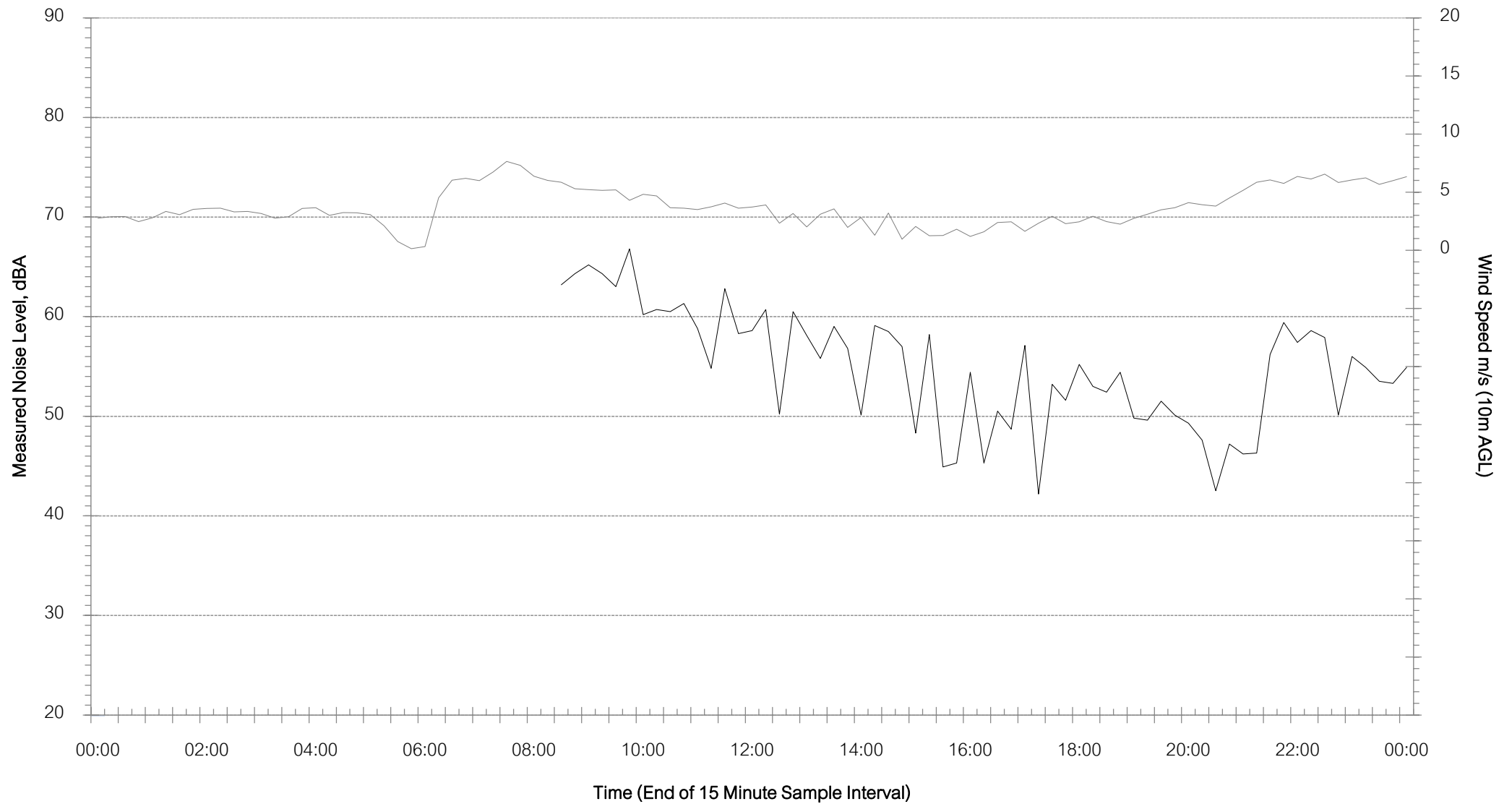
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Monday 30 November 2020

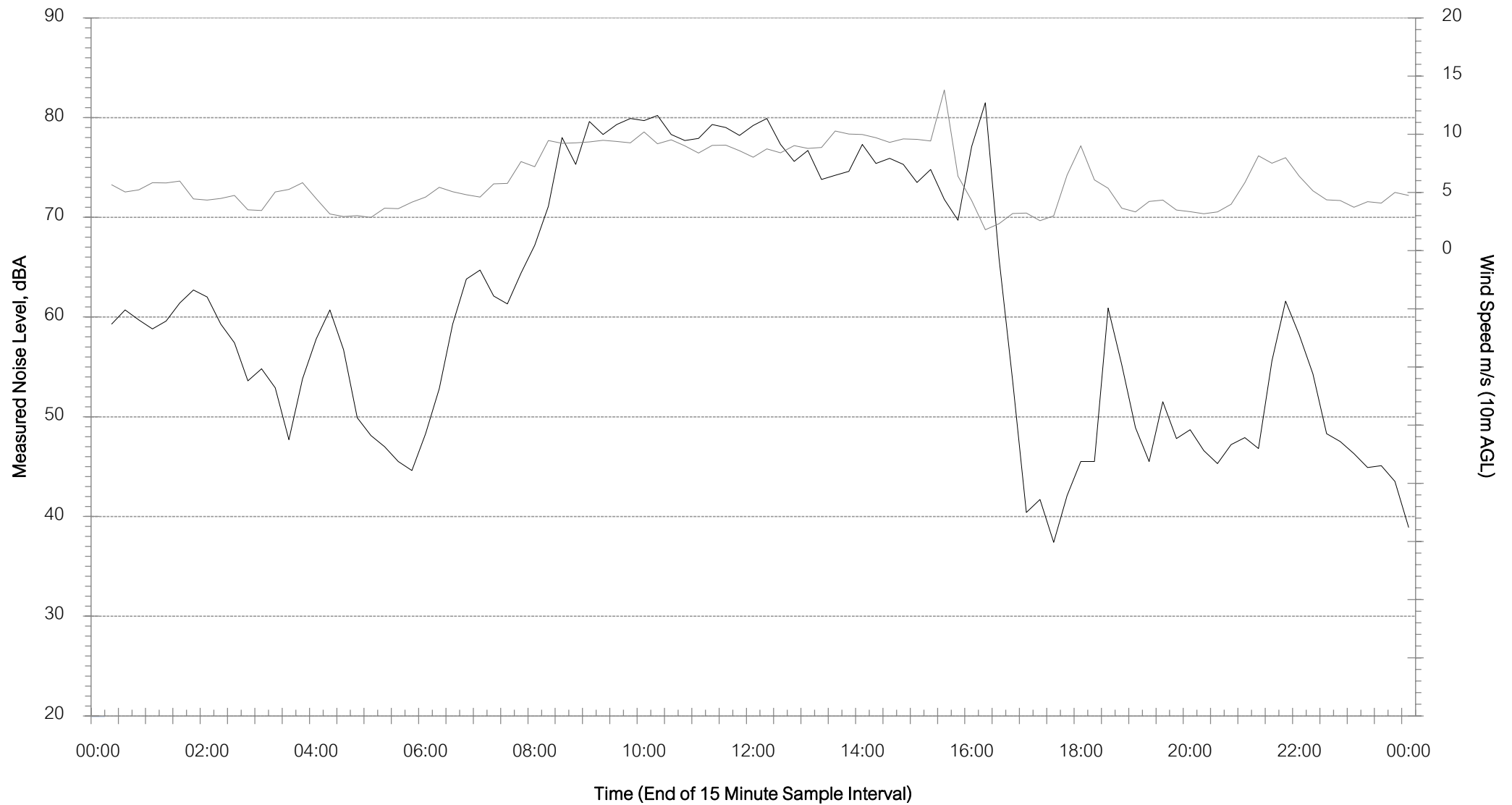
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Tuesday 1 December 2020

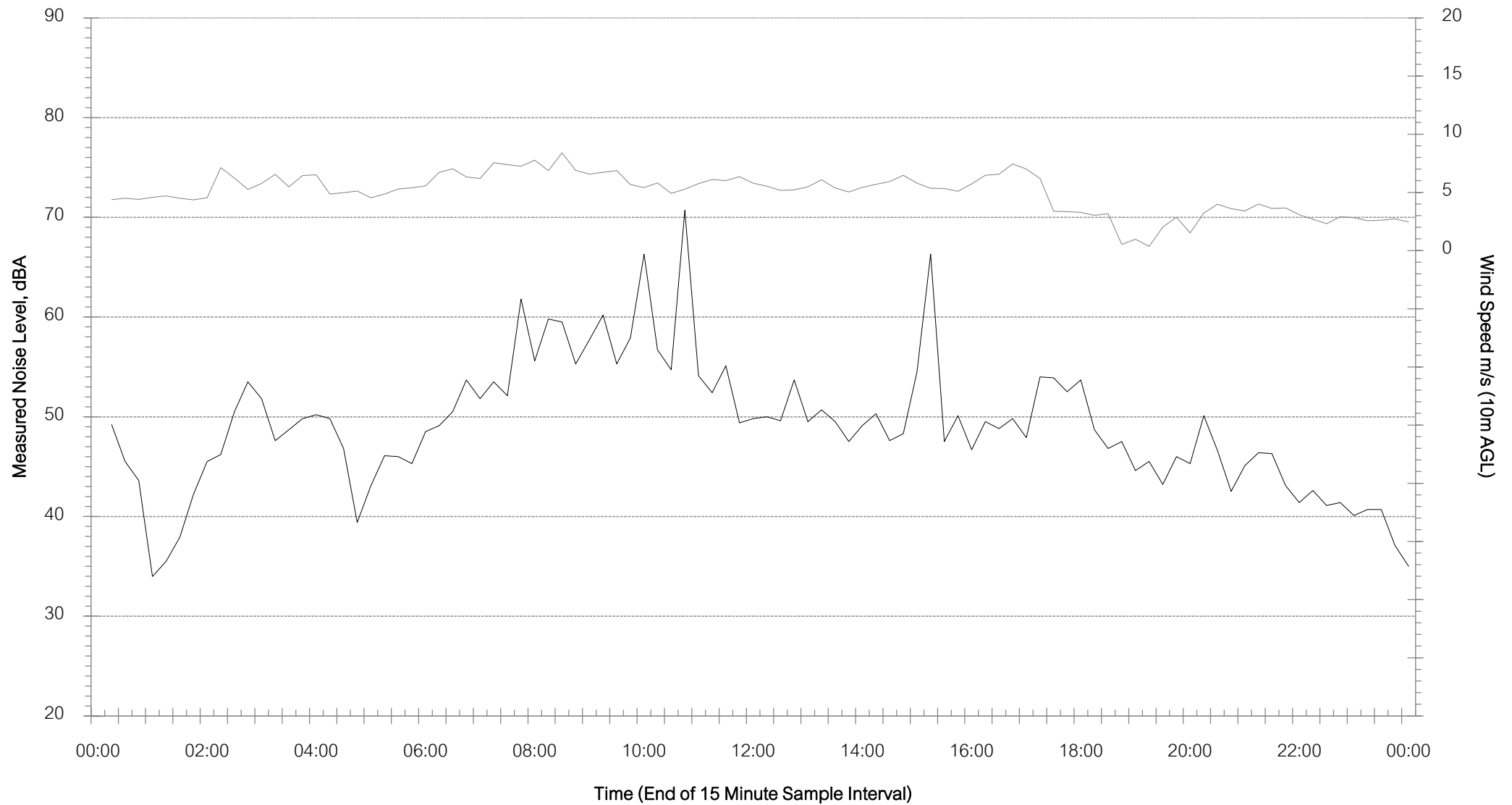
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Wednesday 2 December 2020

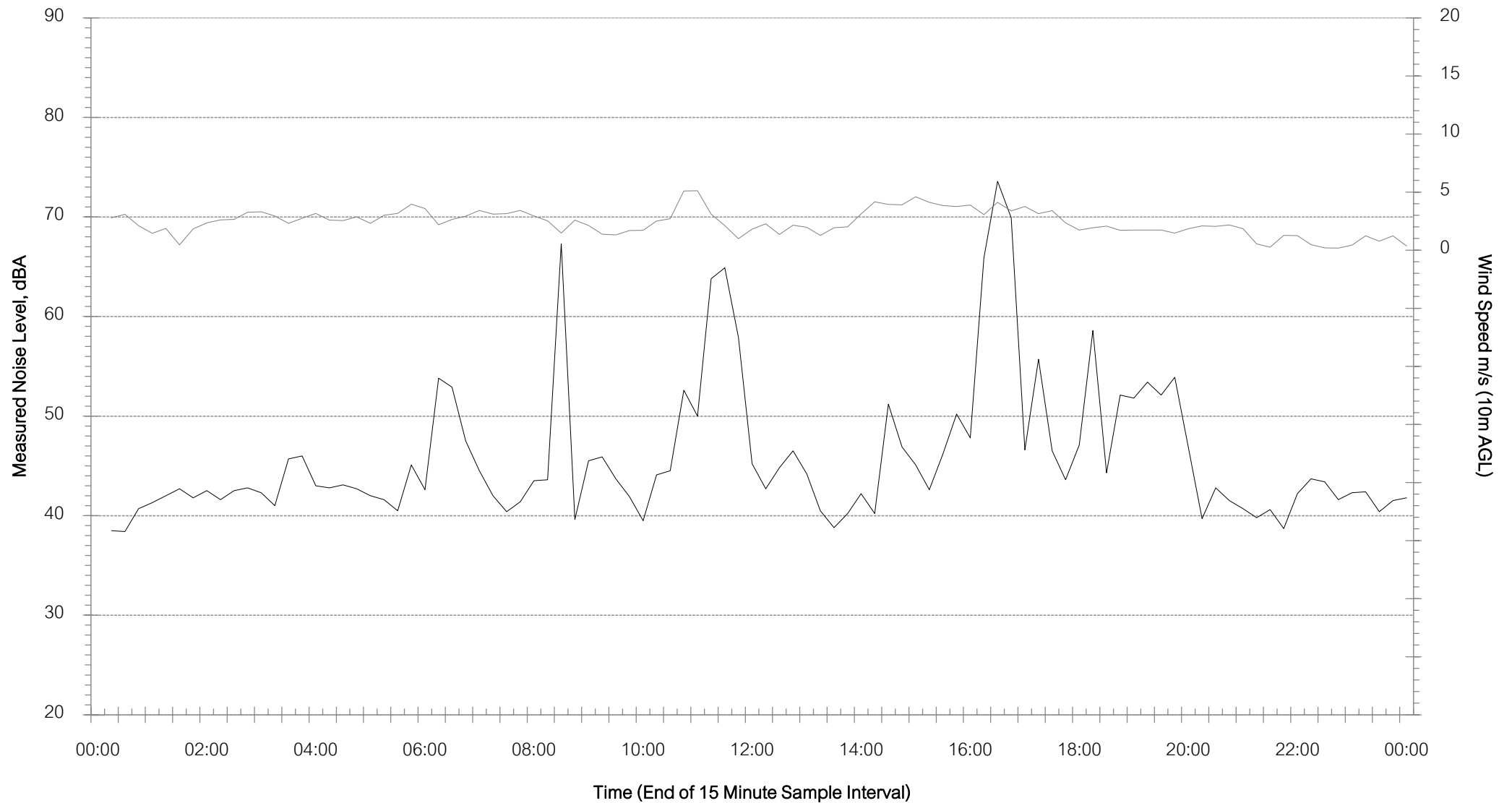
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Thursday 3 December 2020

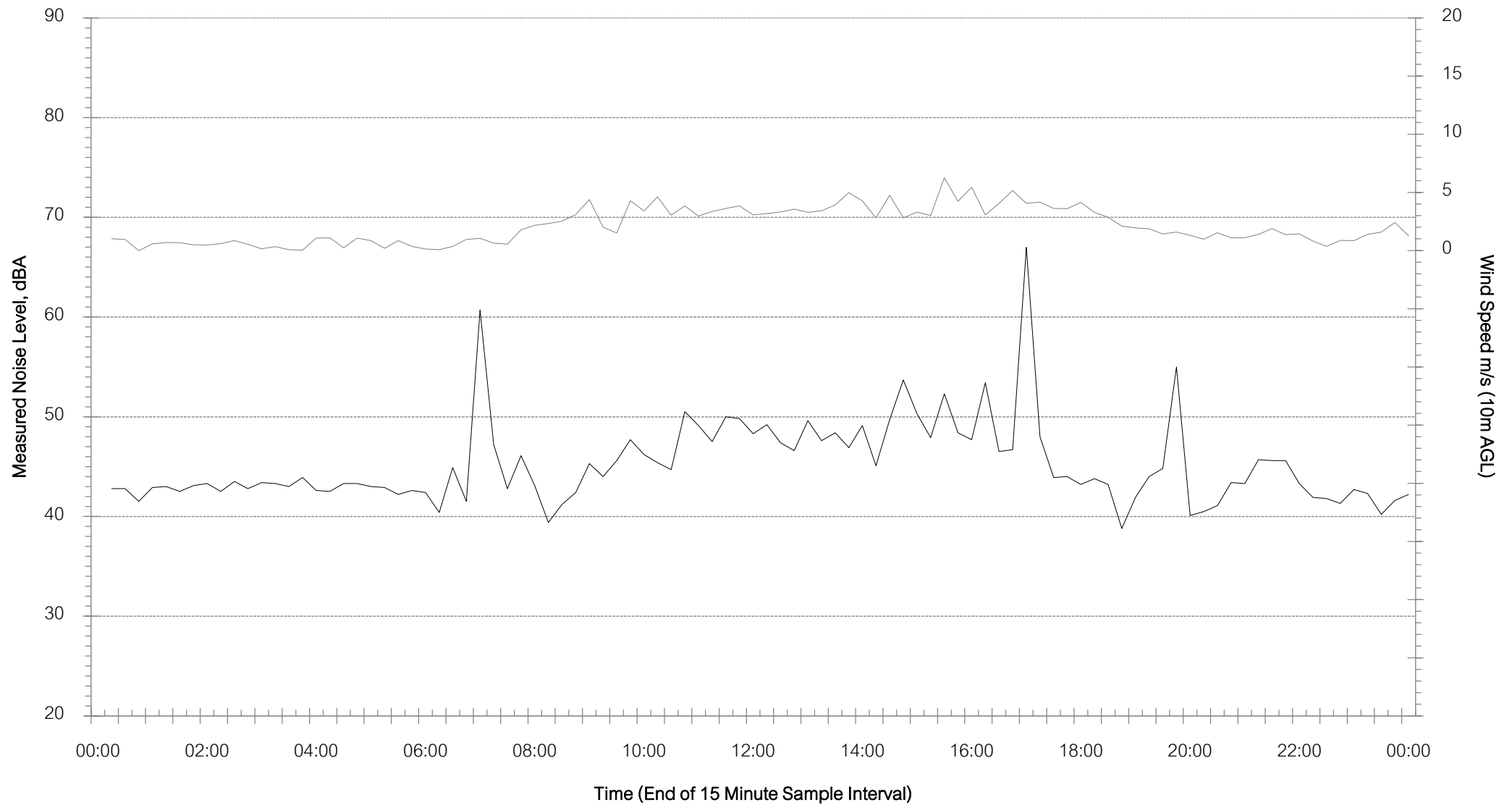
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Friday 4 December 2020

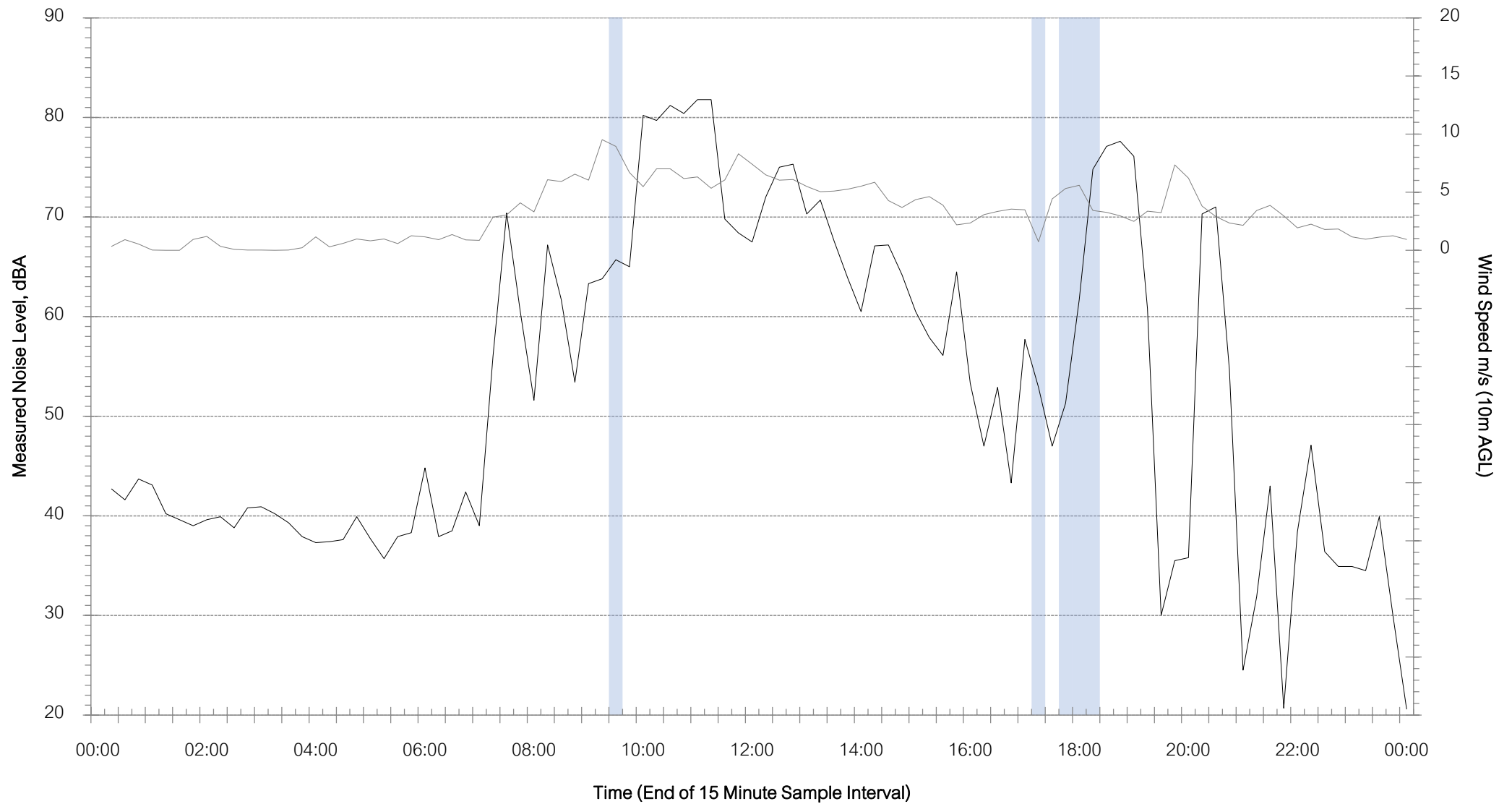
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Saturday 5 December 2020

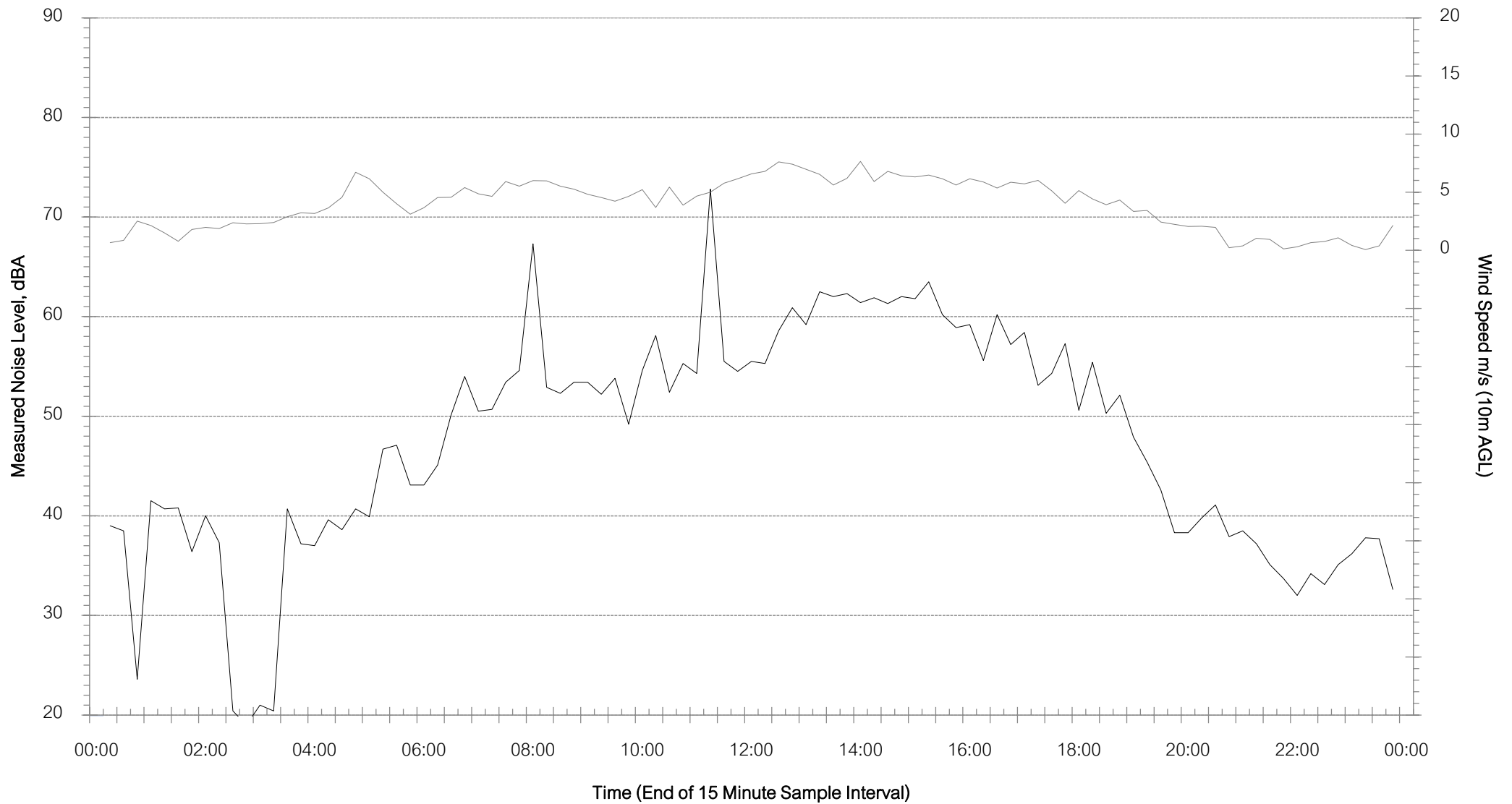
Rain $\geq 0.5\text{mm}$
— LAeq
— Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM3 Milpose - Sunday 6 December 2020

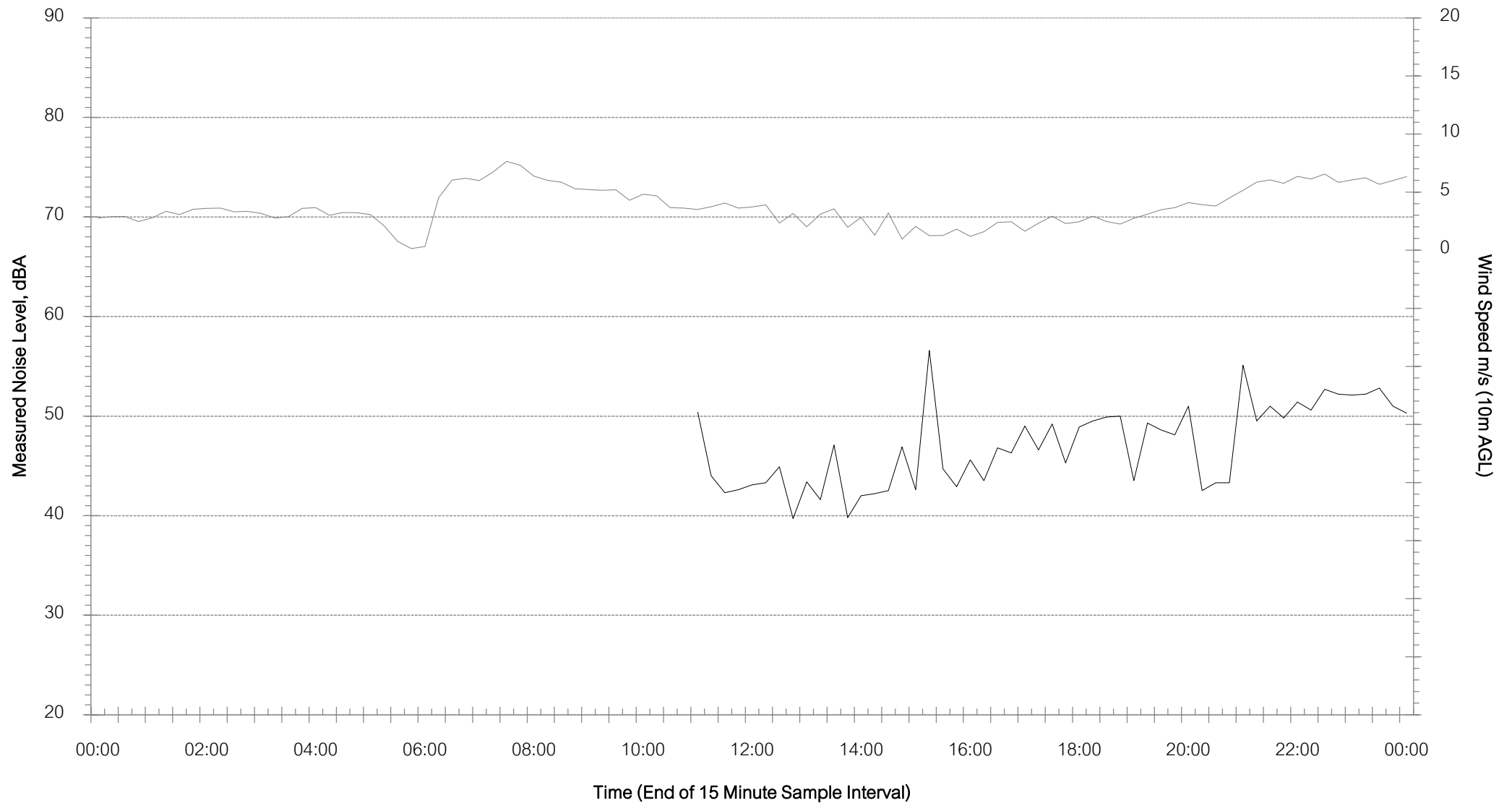
Rain $\geq 0.5\text{mm}$
 LAeq
 Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Monday 30 November 2020

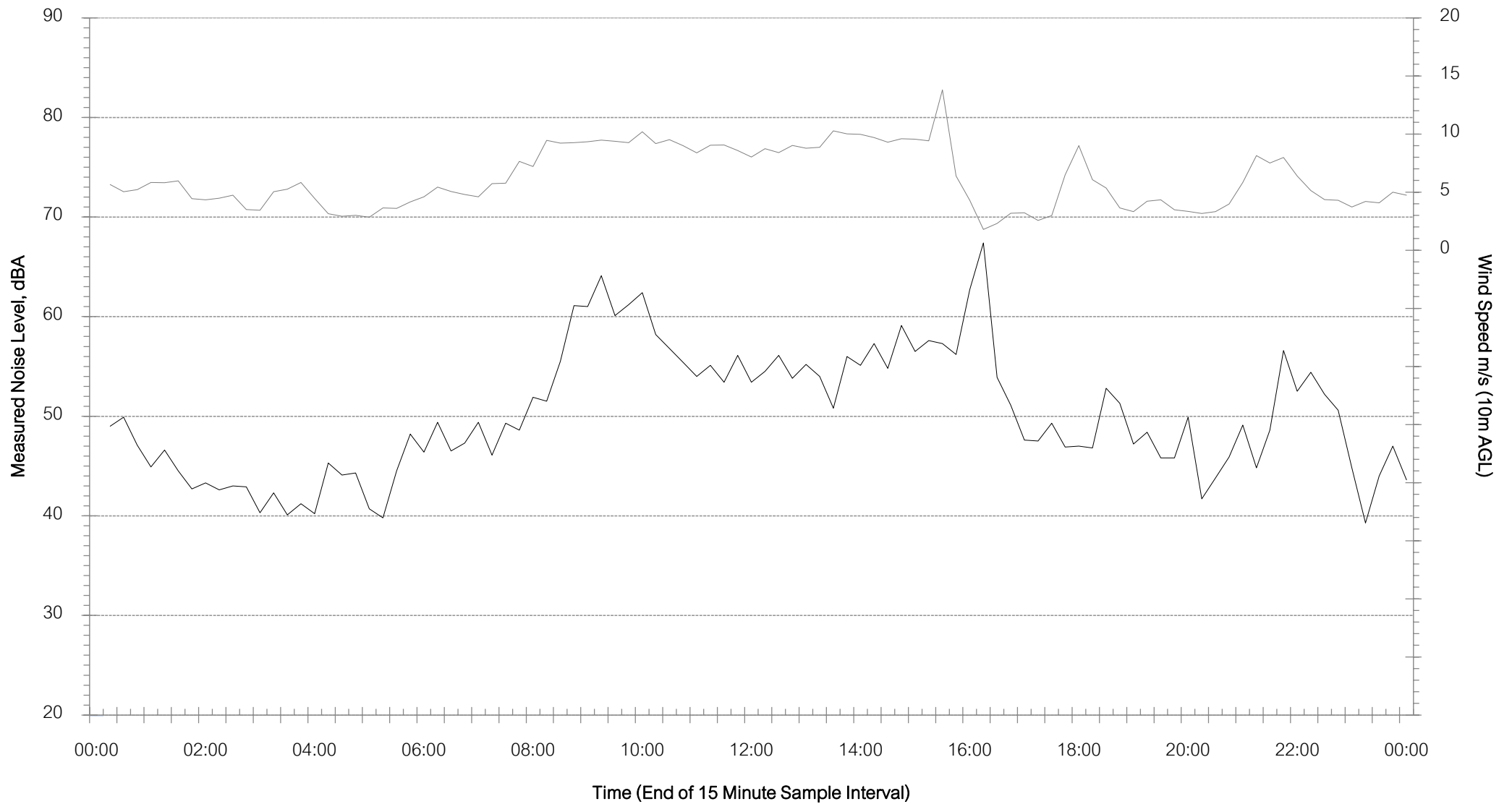
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Tuesday 1 December 2020

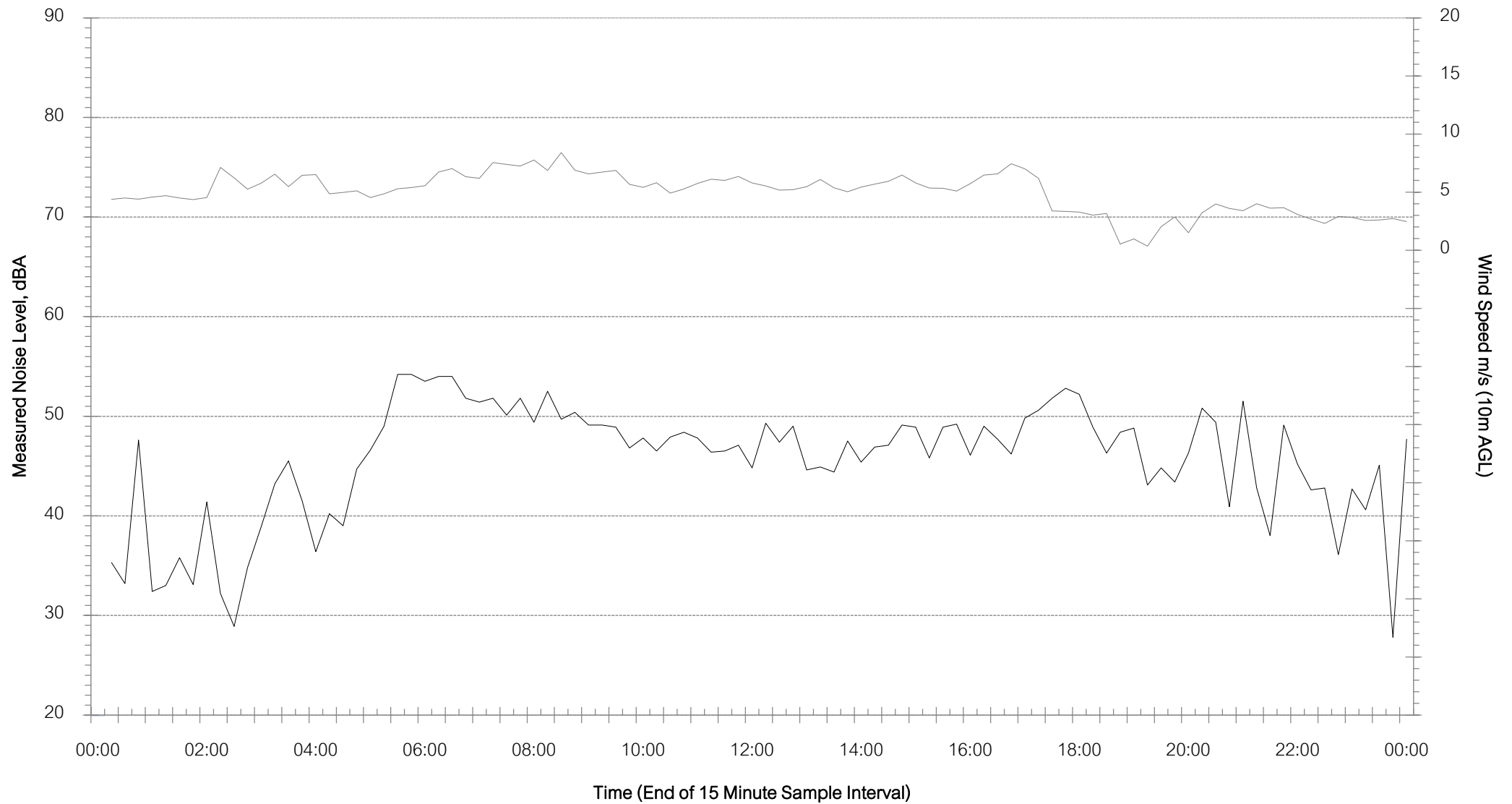
Rain $\geq 0.5\text{mm}$
 LAeq
 Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Wednesday 2 December 2020

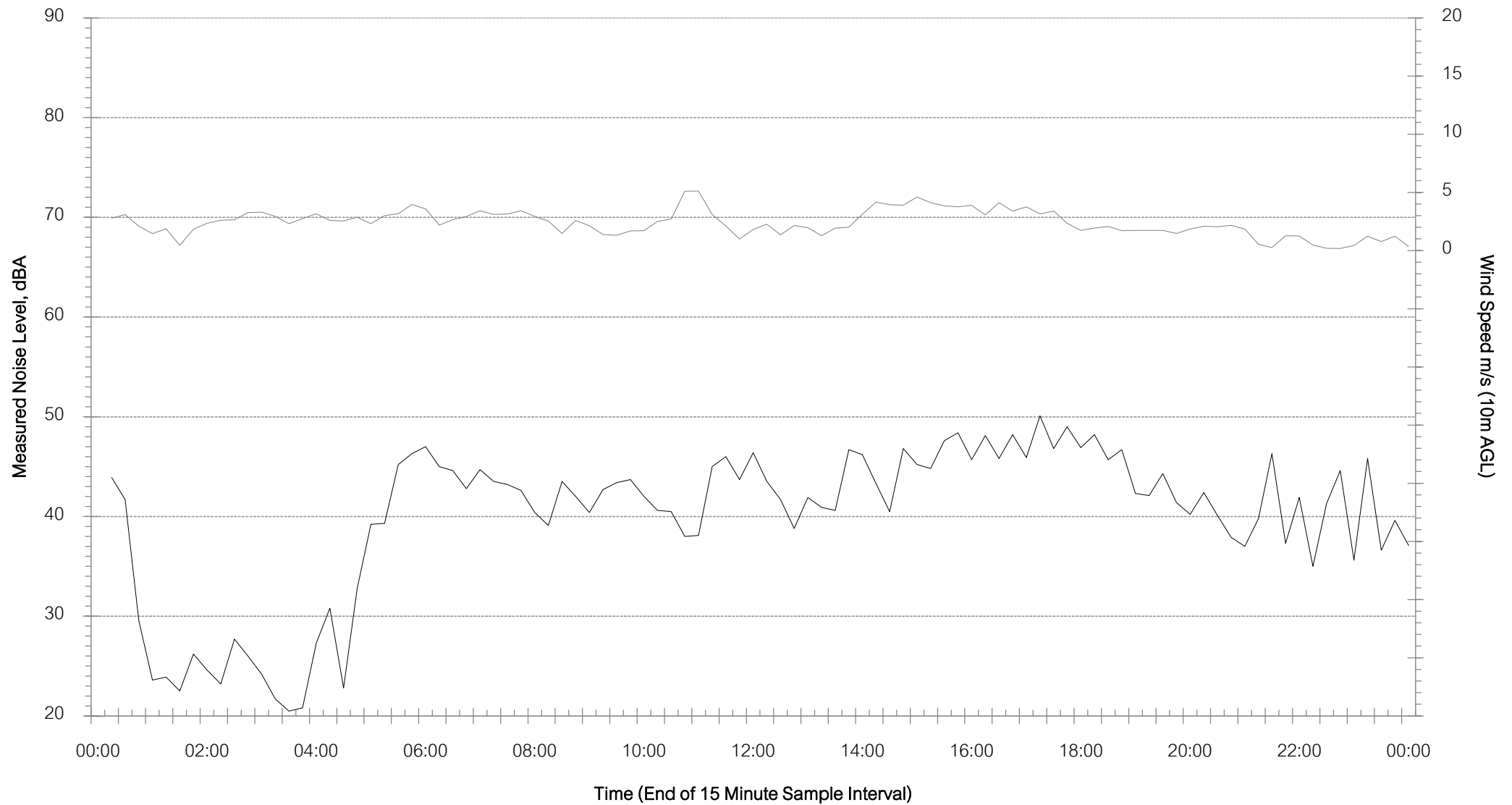
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Thursday 3 December 2020

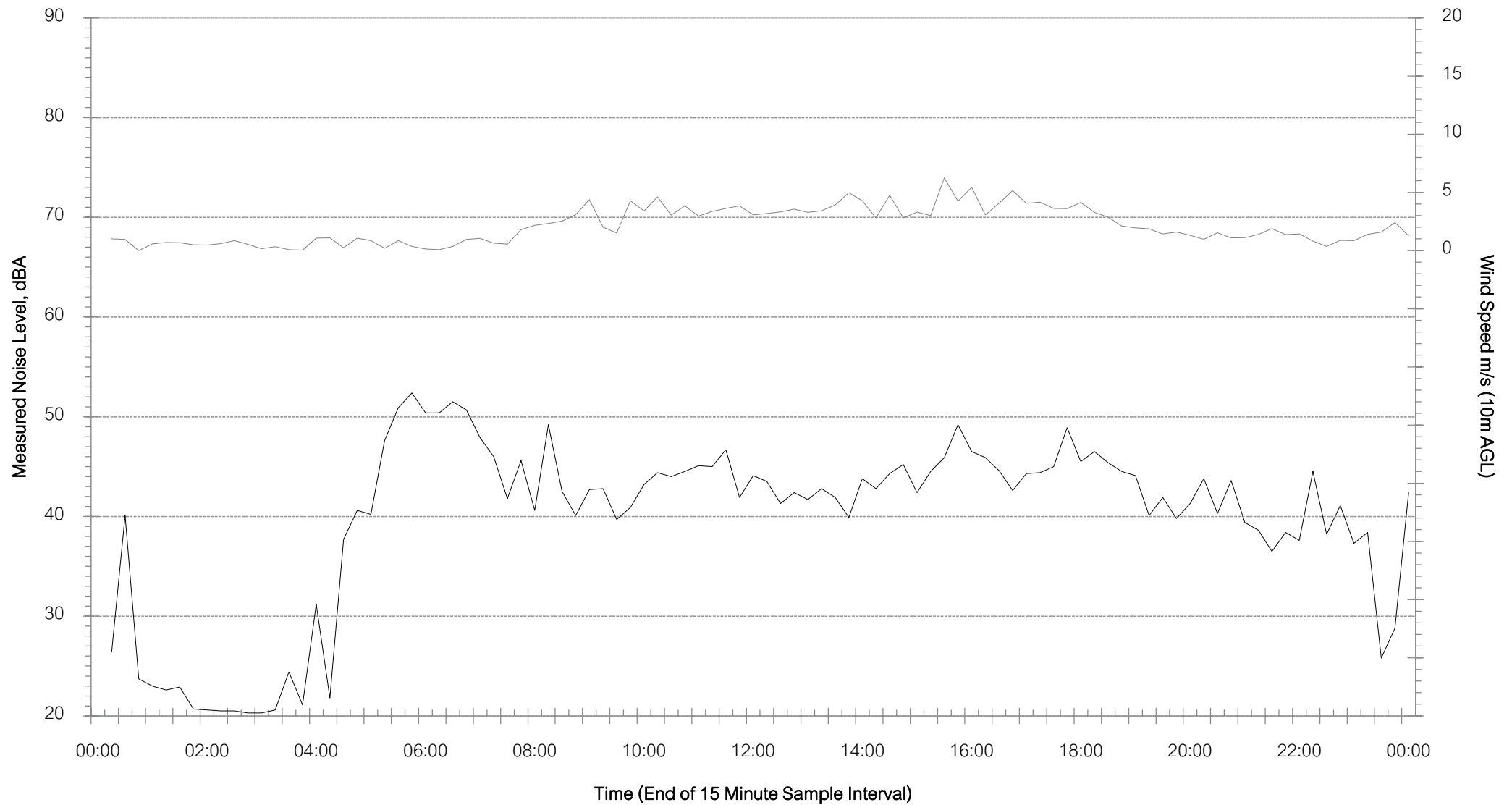
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Friday 4 December 2020

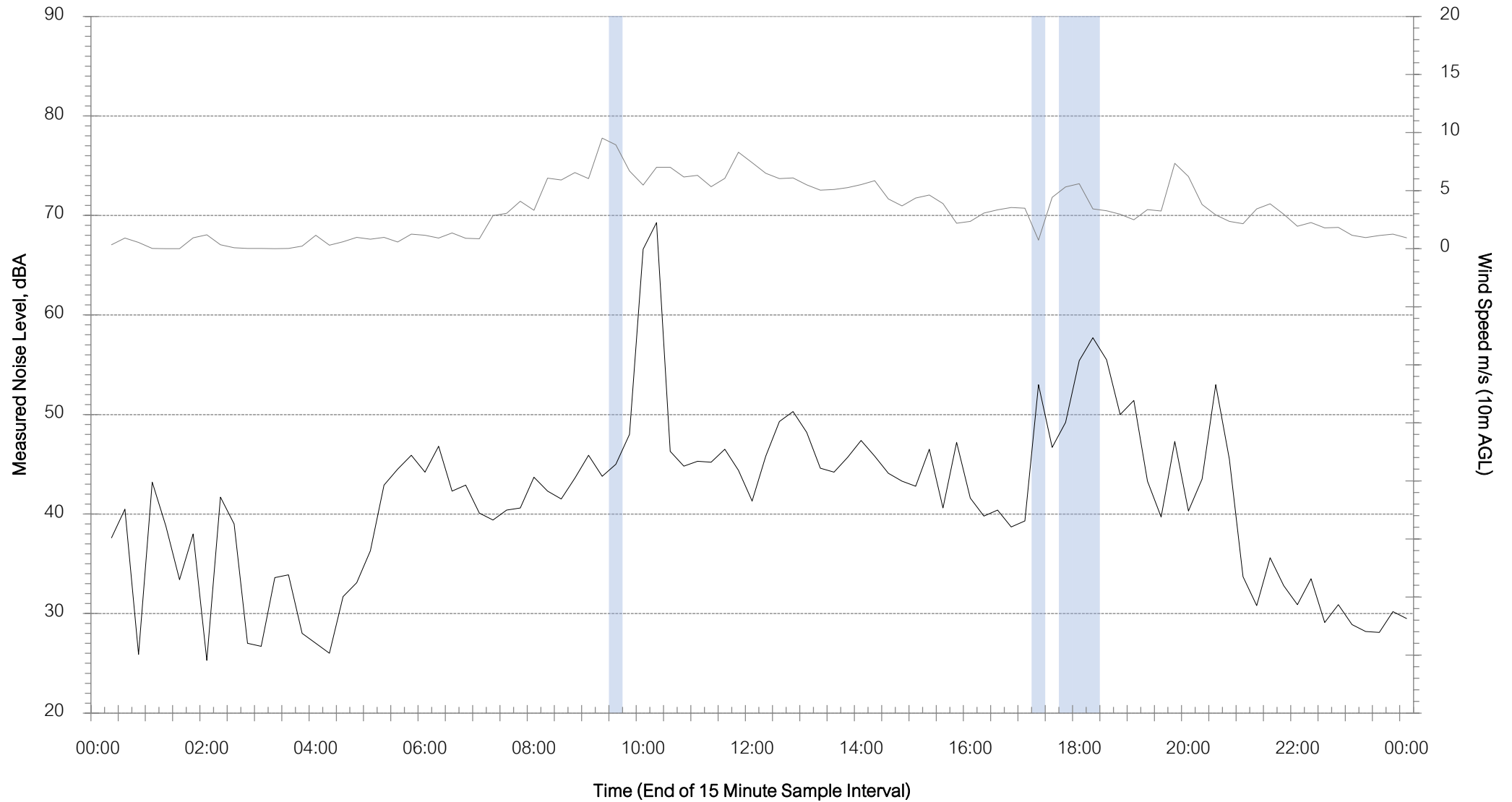
Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Saturday 5 December 2020

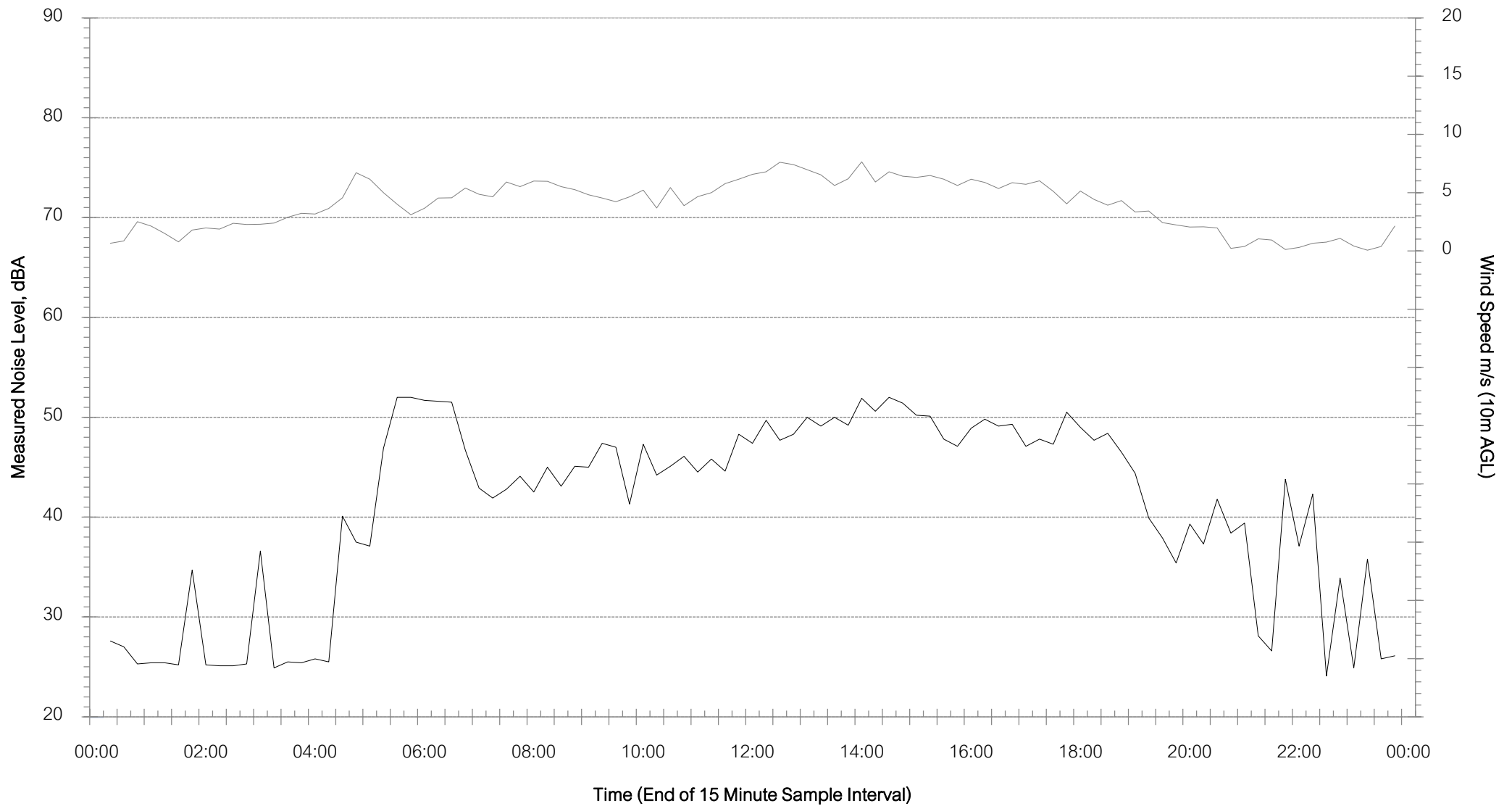
Rain $\geq 0.5\text{mm}$
 LAeq
 Mean Wind Speed m/s (10m AGL)



Background Noise Levels

NM4 Hillview - Sunday 6 December 2020

Rain $\geq 0.5\text{mm}$ LAeq Mean Wind Speed m/s (10m AGL)



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