

Noise Monitoring Assessment

Austen Quarry, Hartley, NSW
August 2021



Document Information

Noise Monitoring Assessment

Austen Quarry, Hartley, NSW

August 2021

Prepared for: RW Corkery & Co Pty Limited (on behalf of Hy-Tec Pty Ltd)


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	Status	Date	Prepared By	Signed	Reviewed By	Signed
MAC170523RP10	Final	7 September 2021	Nicholas Shipman		Oliver Muller	

DISCLAIMER

All documents produced by Muller Acoustic Consulting Pty Ltd (MAC) are prepared for a particular client's requirements and are based on a specific scope, circumstances and limitations derived between MAC and the client. Information and/or report(s) prepared by MAC may not be suitable for uses other than the original intended objective. No parties other than the client should use or reproduce any information and/or report(s) without obtaining permission from MAC. Any information and/or documents prepared by MAC is not to be reproduced, presented or reviewed except in full.

CONTENTS

1	INTRODUCTION	5
2	NOISE CRITERIA	7
2.1	ATTENDED NOISE COMPLIANCE	7
3	METHODOLOGY	9
3.1	LOCALITY	9
3.2	NOISE MONITORING LOCATIONS	9
3.3	ATTENDED MONITORING METHODOLOGY	9
3.4	UNATTENDED MONITORING METHODOLOGY	10
3.5	OPERATIONAL LOGS	10
4	RESULTS	13
4.1	ASSESSMENT RESULTS - LOCATION A, 200 JENOLAN CAVES ROAD	13
4.2	ASSESSMENT RESULTS - LOCATION B, 781 JENOLAN CAVES ROAD	14
4.3	ASSESSMENT RESULTS - LOCATION C, 64 CARROLL DRIVE	15
4.4	UNATTENDED NOISE MONITORING RESULTS	16
5	NOISE COMPLIANCE ASSESSMENT	17
6	DISCUSSION	19
6.1	DISCUSSION OF RESULTS - LOCATION A	19
6.2	DISCUSSION OF RESULTS - LOCATION B	19
6.3	DISCUSSION OF RESULTS - LOCATION C	19
7	CONCLUSION	21
	APPENDIX A – GLOSSARY OF TERMS	
	APPENDIX B – OPERATIONAL LOGS	
	APPENDIX C – NOISE MONITORING CHARTS	

This page has been intentionally left blank

1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by RW Corkery & Co Pty Limited (RWC) on behalf of Hy-Tec Industries Pty Ltd (HT) to complete a Noise Monitoring Assessment (NMA) for Austen Quarry Operations, Hartley, NSW.

The monitoring has been conducted in accordance with the approved Austen Quarry Noise Management Plan and in general accordance with Conditions L4.1 to L4.3 of EPL#12323 (EPL); at three representative monitoring locations.

The assessment was conducted in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- Environment Protection Licence EPL#12323;
- RW Corkery & Co Pty Limited, Austen Quarry Noise Management Plan (NMP); and
- Australian Standard AS 1055:2018 - Acoustics - Description and measurement of environmental noise.

This assessment was undertaken on Tuesday 17 August 2021 and Wednesday 18 August 2021 and forms part of the noise monitoring program to address conditions of EPL#12323, Austen Quarry Development Consent SSD 6084 (SSD-6084) and the Noise Management Plan.

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 Attended Noise Compliance

Schedule 3, Condition 3 of the Austen Quarry Development Consent (SSD-6084), approved and modified on 15 July 2019, outlines the applicable noise criteria for all privately owned residential receivers surrounding the quarry site. The operating criteria specified in SSD-6084 also aligns with criteria in EPL#12323 for the quarry at all receivers ie 35dB LAeq(15min).

Furthermore, SSD-6084 specifies an LAmax criteria for site operations of 52dBA during the morning shoulder period. **Table 1** presents the criteria for privately owned residential receivers surrounding the quarry, as outlined in SSD-6084 and EPL#12323.

Table 1 Noise Criteria				
Receiver	Day	Evening	Morning Shoulder	Morning Shoulder
	dB LAeq(15min)	dB LAeq(15min)	dB LAeq(15min)	dB LAmax
All privately owned residences	35	35	35	52

This page has been intentionally left blank

3 Methodology

3.1 Locality

The quarry is located on Jenolan Caves Road, Hartley, NSW, approximately 10km south of Lithgow, NSW. Receivers in the locality surrounding the quarry are primarily rural/residential. The Great Western Highway is situated to the north east of the site and Jenolan Caves Road to the west of the site.

3.2 Noise Monitoring Locations

Three monitoring locations have been selected as part of the NMA in accordance with the Noise Management Plan (NMP) and are summarised below:

- Location A (residence identifier R24A as per NMP), is located at 200 Jenolan Caves Road, Hartley, NSW, approximately 2.5km north of the project;
- Location B (residence identifier R31 as per NMP), is located at 781 Jenolan Caves Road, Good Forest, NSW, approximately 1km south west of the project site; and
- Location C (residential identifier R48 as per NMP) is located at 64 Carroll Drive, Hartley, NSW, approximately 2.5km north east of the quarry.

The monitoring locations with respect to quarry are presented in the locality plan shown in **Figure 1**.

3.3 Attended Monitoring Methodology

The attended noise surveys were conducted in general accordance with the procedures described in Australian Standard AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise" and EPL#12323. The measurements were carried out using a Svantek Type 1, 971 noise analyser on Tuesday 17 August 2021 and Wednesday 18 August 2021. The acoustic instrumentation used carries current NATA calibration and complies with AS 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 $\pm 0.5\text{dBA}$.

Noise measurements were of 15 minutes in duration and where possible, throughout each survey, the operator quantified the contribution of each significant noise source. One measurement was conducted at each of the monitoring locations during the day, evening and morning shoulder monitoring periods to quantify the noise sources in the ambient noise environment.

3.4 Unattended Monitoring Methodology

The unattended noise survey, undertaken at Location A - 200 Jenolan Caves Road, was conducted in general accordance with the procedures described in Australian Standard AS 1055:2018, "Acoustics - Description and Measurement of Environmental Noise". The measurements were carried out using a Svantek Type 1, 977 noise analyser. Monitoring was conducted from Tuesday 17 August 2021 to Wednesday 25 August 2021. The acoustic instrumentation used carries current NATA calibration and complies with AS/NZS IEC 61672:2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed $\pm 0.5\text{dBA}$.

A 60-second audio sample was recorded at the commencement of each 15-minute monitoring period to identify the dominant noise sources contributing to the ambient noise environment at that time. Data affected by adverse meteorological conditions (ie winds greater than 10m/s at 10m elevation and rain periods) have been excluded from the results.

3.5 Operational Logs

Operational logs for the primary and secondary crushers have been provided by Austen Quarry management. It is noted that transportation activities commence at 5am and processing equipment commences at 6am. Daily pre-shift meetings and safety checks often delay commencement of onsite operations until closer to 7am. It is also noted during that the primary crusher ceased operation at 11:05am on the 17 August 2021 due to a fault in the jaw crusher, halting crushing operations. The survey was undertaken to ensure maintenance operations also complied with the applicable noise criteria for the quarry. Morning shoulder measurements were conducted from 6am to 7am on Wednesday 18 August 2021 to capture the onsite operations at the nominated monitoring locations.

It is also noted that the secondary crushing ceased at approximately 4.30pm daily for the past several months, with no evening time crushing undertaken during this period. This is due to the reduced product demand during the COVID19 shutdown. **Table 2** presents a summary of the hours of operation of the primary and secondary crushers with the quarry operational logs which are reproduced **Appendix B**.

Table 2 Primary and Secondary Crushers Hours of Operation

Date	Primary Crusher		Secondary Crusher	
	Commenced Crushing	Ceased Crushing	Commenced Crushing	Ceased Crushing
17/08/2021	06:55	16:05	06:05	16:30
18/08/2021	Not Operational		08:55	16:45



FIGURE 1
LOCALITY PLAN
REF: MAC170523

0 500m

KEY

 **A** MONITORING LOCATION

 SITE LOCATION

This page has been intentionally left blank

4 Results

4.1 Assessment Results - Location A, 200 Jenolan Caves Road

Operational attended noise monitoring was completed in each assessment period at Location A on Tuesday 17 August 2021 and Wednesday 18 August 2021. **Table 3** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

Table 3 Operator-Attended Noise Survey Results – Location A							
Date	Time (hrs)	Period	Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
			L _A max	L _A eq	L _A 90		
17/08/2021	13:27	Day	88	62	40	WD: SW	Creek 38-39
						WS: 0.6m/s	Birds 38-64
						Rain: Nil	Traffic 38-88
							Quarry Inaudible
Austen Quarry Contribution ¹							<30dB L _A eq(15min)
17/08/2021	18:31	Evening	72	52	42	WD: SW	Creek 42-43
						WS: 0.2m/s	Traffic 43-72
						Rain: Nil	Insects <42
							Aircraft 43-46
Austen Quarry Contribution ¹							<32dB L _A eq(15min)
18/08/2021	06:23	Shoulder	82	63	42	WD: SW	Creek 39-41
						WS: 0.1m/s	Traffic 39-82
						Rain: Nil	Birds 41-58
							Quarry Inaudible
Austen Quarry Contribution ¹							<32dB L _A eq(15min)
							<32dB L _A max

Note 1: Estimated quarry noise contribution.

4.2 Assessment Results - Location B, 781 Jenolan Caves Road

Operational attended noise monitoring was completed in each assessment period at Location B on Tuesday 17 August 2021 and Wednesday 18 August 2021. **Table 4** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

Table 4 Operator-Attended Noise Survey Results – Location B							
Date	Time (hrs)	Period	Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
			L _A max	L _A eq	L _A 90		
17/08/2021	14:03	Day	57	33	25	WD: SW WS: 0.6m/s Rain: Nil	Birds 22-57
							Dog 22-48
							Wind in trees 22-42
							Traffic 22-38
							Quarry Inaudible
Austen Quarry Contribution ¹							<20dB L _A eq(15min)
17/08/2021	18:04	Evening	66	41	23	WD: SW WS: 0.4m/s Rain: Nil	Livestock 40-66
							Insects 20-25
							Dog bark 20-38
							Local residential noise 20-36
							Aircraft 20-53
Austen Quarry Contribution ¹							<20dB L _A eq(15min)
18/08/2021	06:48	Shoulder	60	39	33	WD: SW WS: 0.1m/s Rain: Nil	Livestock 29-60
							Birds 29-54
							Traffic 29-43
							Quarry Inaudible
							Austen Quarry Contribution ¹
							<30dB L _A max

Note 1: Estimated quarry noise contribution.

4.3 Assessment Results - Location C, 64 Carroll Drive

Operational attended noise monitoring was completed in each assessment period at Location C on Tuesday 17 August 2021 and Wednesday 18 August 2021. **Table 5** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

Table 5 Operator-Attended Noise Survey Results – Location C							
Date	Time (hrs)	Period	Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
			L _{Amax}	L _{Aeq}	L _{A90}		
17/08/2021	13:04	Day	57	35	28	WD: SW	Wind in trees 25-40
						WS: 1.2m/s	Traffic 25-38
						Rain: Nil	Birds 25-57
							Quarry Inaudible
Austen Quarry Contribution ¹							<25dB L _{Aeq} (15min)
17/08/2021	18:52	Evening	64	40	26	WD: SW	Traffic 23-64
						WS: 0.2m/s	Insects 23-26
						Rain: Nil	Quarry Inaudible
						Austen Quarry Contribution ¹	
18/08/2021	06:00	Shoulder	60	42	37	WD: SW	Traffic 33-48
						WS: 0.1m/s	Birds 33-60
						Rain: Nil	Quarry Inaudible
						Austen Quarry Contribution ¹	
							<30dB L _{Amax}

Note 1: Estimated quarry noise contribution.

4.4 Unattended Noise Monitoring Results

Unattended noise monitoring was conducted at Location A from Tuesday 17 August 2021 and Wednesday 25 August 2021 while the quarry was operational. A comparison of attended and unattended noise monitoring data has been completed. **Table 6** presents the result of this comparison, focusing on the 15-minute statistics for the corresponding measurement times.

Table 6 Unattended Logging versus Operator-Attended Noise Survey – Location A

Date	Time (hrs)	Attended descriptors (dBA re 20 µPa)			Un-attended descriptors (dBA re 20 µPa)		
		dB LA _{max}	dB LA _{eq}	dB LA ₉₀	dB LA _{max}	dB LA _{eq}	dB LA ₉₀
17/08/2021	13:27	88	62	40	77	55	36
17/08/2021	18:31	72	52	42	65	46	37
18/08/2021	06:23	82	63	42	75	55	38

Results of the comparison identify that measured levels are generally consistent. Some variation in the metrics are expected due to the proximity of noise sources to the microphones, the moderate separation between the unattended and attended monitoring positions and the variance in the monitored 15-minute period.

Attended noise monitoring identified that quarry noise was generally inaudible at Location A. Accordingly, it is deemed that the monitored unattended noise levels are not representative of the quarry emissions but rather representative of the ambient local environment. A summary of daily metrics for the assessment period from Tuesday 17 August 2021 and Wednesday 25 August 2021 is presented in **Table 7**. **Appendix C** presents the logger charts of the results of the unattended monitoring survey.

Table 7 Unattended Noise Logging Summary – Location A

Date	Unattended descriptors (dBA re 20 µPa)		
	dB LA _{eq}		
	Day	Evening	Night
Tuesday, 17 August 2021	N/A	48	53
Wednesday, 18 August 2021	57	51	53
Thursday, 19 August 2021	56	51	53
Friday, 20 August 2021	57	48	52
Saturday, 21 August 2021	52	42	47
Sunday, 22 August 2021	46	46	54
Monday, 23 August 2021	57	51	54
Tuesday, 24 August 2021	57	51	53
Wednesday, 25 August 2021	56	N/A	N/A

5 Noise Compliance Assessment

The compliance assessment for the nominated monitoring locations are presented in **Table 8** to **Table 11** for day, evening and morning shoulder assessment periods.

Table 8 Daytime LAeq(15min) Noise Compliance Assessment

Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant
	dB LAeq(15min)	dB LAeq(15min)	
A	<30	35	✓
B	<20	35	✓
C	<25	35	✓

Table 9 Evening LAeq(15min) Noise Compliance Assessment

Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant
	dB LAeq(15min)	dB LAeq(15min)	
A	<32	35	✓
B	<20	35	✓
C	<25	35	✓

Table 10 Morning Shoulder LAeq(15min) Noise Compliance Assessment

Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant
	dB LAeq(15min)	dB LAeq(15min)	
A	<32	35	✓
B	<30	35	✓
C	<30	35	✓

Table 11 Morning Shoulder LAmax Noise Compliance Assessment

Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant
	dB LAmax	dB LAmax	
A	<32	52	✓
B	<30	52	✓
C	<30	52	✓

This page has been intentionally left blank

6 Discussion

6.1 Discussion of Results - Location A

Monitoring conducted at Location A, 200 Jenolan Caves Road, Hartley, NSW, was dominated by passing traffic. Traffic included trucks from Austen Quarry, adjacent (non-project) quarries and several transport firms. Local light vehicle traffic also contributed to the overall ambient environment. Quarry noise emissions were inaudible during all three monitoring periods during the August 2021 survey. Other extraneous noise sources audible during the three attended surveys included birds, aircraft, the creek flowing and insects.

The measured quarry day, evening and morning shoulder noise contribution for Location A are consistent with the noise levels predicted in the Noise and Blasting Impact Assessment (NBIA) (Ref: MAC170511RP1, Muller Acoustic Consulting, 2018) prepared for the Stage 2 extension of the quarry.

6.2 Discussion of Results - Location B

Monitoring results at Location B, 781 Jenolan Caves Road, Good Forest, NSW, identified that the quarry remained inaudible at this monitoring location during the monitoring periods. Extraneous noise sources dominated the noise environment which included birds, dogs, wind in trees, local residential noise, livestock, aircraft, distant traffic hum and insect noise.

The measured quarry day, evening and morning shoulder noise contribution for Location B are consistent with the noise levels predicted in the NBIA.

6.3 Discussion of Results - Location C

Quarry noise was inaudible during all three survey periods at Location C, 64 Carroll Drive, Hartley, NSW, during the attended noise survey for the period of August 2021. Highway traffic, birds and insects dominated the ambient noise environment.

The measured quarry day, evening and morning shoulder noise contribution for Location C are consistent with the noise levels predicted in the NBIA.

This page has been intentionally left blank

7 Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Monitoring Assessment for RW Corkery & Co Pty Limited on behalf of Hy-Tec Industries Pty Ltd for Austen Quarry, Hartley, NSW. The assessment was completed to assess the quarry's compliance with the relevant criteria outlined in EPL#12323 and SSD-6084 for three nominated residential receivers surrounding the quarry.

Operator attended noise monitoring was undertaken on Tuesday 17 August 2021 and Wednesday 18 August 2021 at the nominated monitoring locations with quarry noise contributions compared against the relevant criteria.

The assessment has identified that noise emissions generated by Austen Quarry comply with relevant noise criteria specified in EPL#12323 and SSD-6084 at all assessed locations for the three relevant assessment periods.

This page has been intentionally left blank

Appendix A – Glossary of Terms

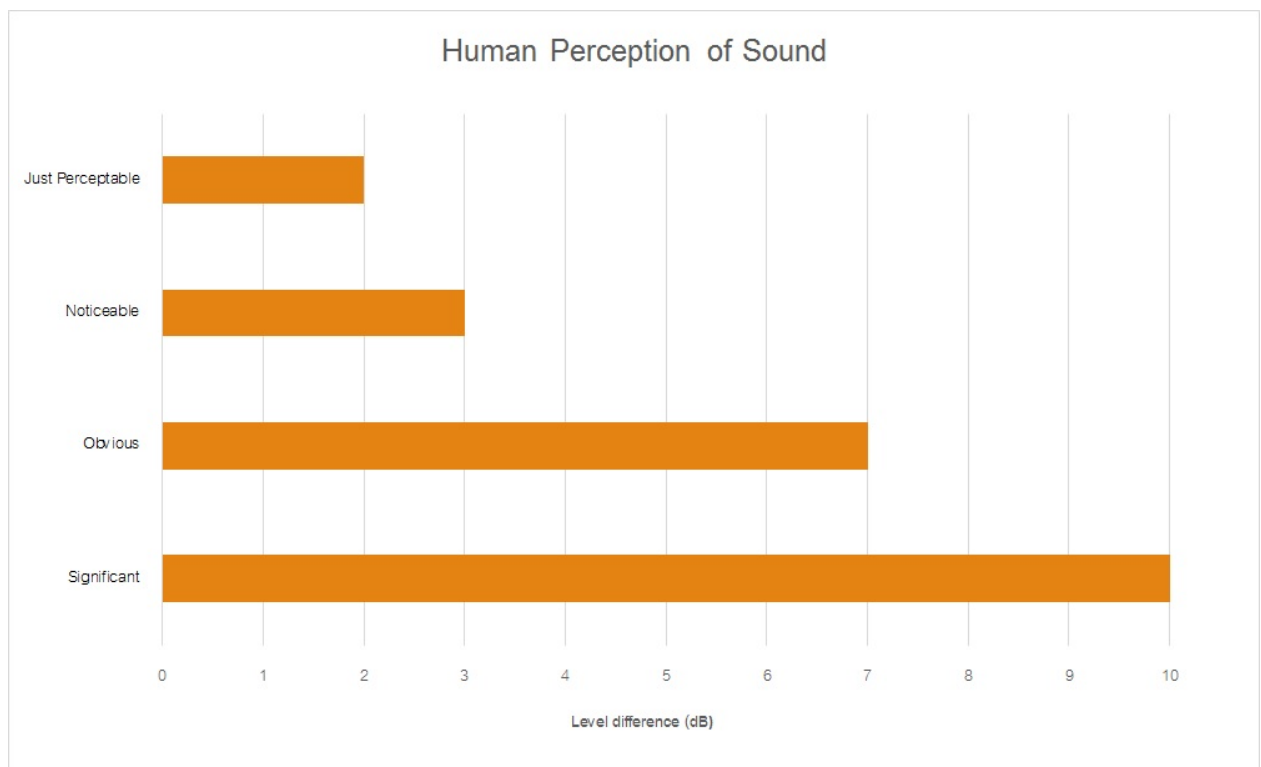
Table A1 provides a number of technical terms have been used in this report.

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



This page has been intentionally left blank

Appendix B – Operational Logs



DAILY PRODUCTION LOG & CHECKLIST - PRIMARY

Date: 17.8.21 Operator: Kirg

Weather Conditions: fine Quarry Bench ID: 730

Shift Start Time	6.00	Shift Finish Time	1.36
Crusher Start Time	6.55	End of day Crusher stopped	11.05

Belt Weightometer Reading - Daily

Conveyor 1 Start	Conveyor 1 Finish	Total Tonnes Crushed
Conveyor 6 Scalps Start	Conveyor 6 Scalps Finish	Total Tonnes Stockpiled

Cartage of Raw Feed from Face to Boot – Number of loads

KK1 Loads to Boot	19	KK3 Loads to Boot	
KK2 Loads to Boot	19	Contractor Loads to Boot	

Stoppages due to Trucks	Stoppages due to Jaw
-------------------------	----------------------

Plant Stopped	Plant Started	Downtime (Hrs/Min)	Reason
6.00	6.40	40	tool box - cv3 General Fault?
9.25	9.55	30m	smoke.
11.05			belts at crusher - end crusher

Pre start checks;

Generator hours: 30649 Generator oil level: ✓

Plant Visual: ✓ Pilot hours

COMMENTS

Owner: Quarry Manager	HY-TEC CONCRETE & QUARRIES	Form: HTQY-P-SFT-035
Forms & Templates	Revision: 3	Status: Approved
		Issue Date: 14.02.12

DAILY PRODUCTION LOG & CHECKLIST - SECONDARY

Date: 18-8-21 Operator: Brendan / Peter

Weather Conditions; Frost / Fine

8:36

Shift Start Time	<u>5:30am</u>	Shift Finish Time	<u>10:00h</u>
Crusher Start Time	<u>8:55am</u>	End of day Crusher stopped	<u>4:45</u>

Weightometer Reading; Start: 4562811 Finish: 4565630

Plant Stopped	Plant Started	Downtime (Hrs/Min)	Reason
<u>5:30am</u>	<u>8:55</u>	<u>2hrs 25M</u>	<u>bolter Present Frost</u>
<u>9:27</u>	<u>9:48</u>	<u>21 min</u>	<u>Airsep blocked</u>
<u>1:58pm</u>	<u>2PM</u>	<u>2</u>	<u>Adj 450 + 550</u>
<u>3:15</u>	<u>3:35</u>	<u>20M</u>	<u>Metal detector Alarm Nil found.</u>
			<u>Went off twice <u>PLEASE FIX IT</u></u>

PRODUCTION SUMMARY

165

Belts	Size	Description	Total	Gate open	Comments
CV 8	20 mm	Concrete Aggregate	<u>1273</u>		
CV 20	Course Sand 4-0mm	Manufactured Sand	<u>664</u>		
CV19*	10-7mm Blend*	Concrete Blend	<u>704</u>		
CV19	7mm	Concrete Aggregate			
CV17	10mm	Concrete Aggregate			
CV15	14mm	Concrete Aggregate			
CV5	Ballast/40mm	Non Spec Aggregate			

2806

COMMENTS

Owner: Quarry Manager	HY-TEC CONCRETE & QUARRIES	Form: HTQY-P-SFT-035
Forms & Templates	Revision: 3	Status: Approved
		Issue Date: 14.02.12

DAILY PRODUCTION LOG & CHECKLIST - SECONDARY

Date: 17-8-21 Operator: BRENDEN

Weather Conditions; Fine

Shift Start Time	<u>5:30am</u>	Shift Finish Time	<u>8:36</u> <u>10PM</u>
Crusher Start Time	<u>605</u>	End of day Crusher stopped	<u>430</u>

Weightometer Reading; Start: 4560689 Finish: 4562811

Plant Stopped	Plant Started	Downtime (Hrs/Min)	Reason
<u>5:30am</u>	<u>605</u>	<u>35m</u>	<u>-bolbox present</u>
<u>605</u>	<u>623</u>	<u>18m</u>	<u>Estop CUB</u>
<u>7:32</u>	<u>12:00pm</u>	<u>4hrs 28m</u>	<u>Inspect CUB snub roller and remove it</u>
<u>1243</u>	<u>1247</u>	<u>4m</u>	<u>450 Hydraulics tripped</u>
<u>114</u>	<u>115</u>	<u>1m</u>	<u>Adj 450 + 550</u>
<u>124</u>	<u>130</u>	<u>6m</u>	<u>Check CRUSHER</u>
<u>3PM</u>	<u>302</u>	<u>2m</u>	<u>Adj 450 + 550</u>

PRODUCTION SUMMARY

Belts	Size	Description	Total	Gate open	Comments
CV 8	20 mm	Concrete Aggregate	<u>932</u>		
CV 20	Course Sand 4-0mm	Manufactured Sand	<u>542</u>		
CV19*	10-7mm Blend*	Concrete Blend	<u>547</u>		
CV19	7mm	Concrete Aggregate			
CV17	10mm	Concrete Aggregate			
CV15	14mm	Concrete Aggregate	<u>30</u>		
CV5	Ballast/40mm	Non Spec Aggregate			

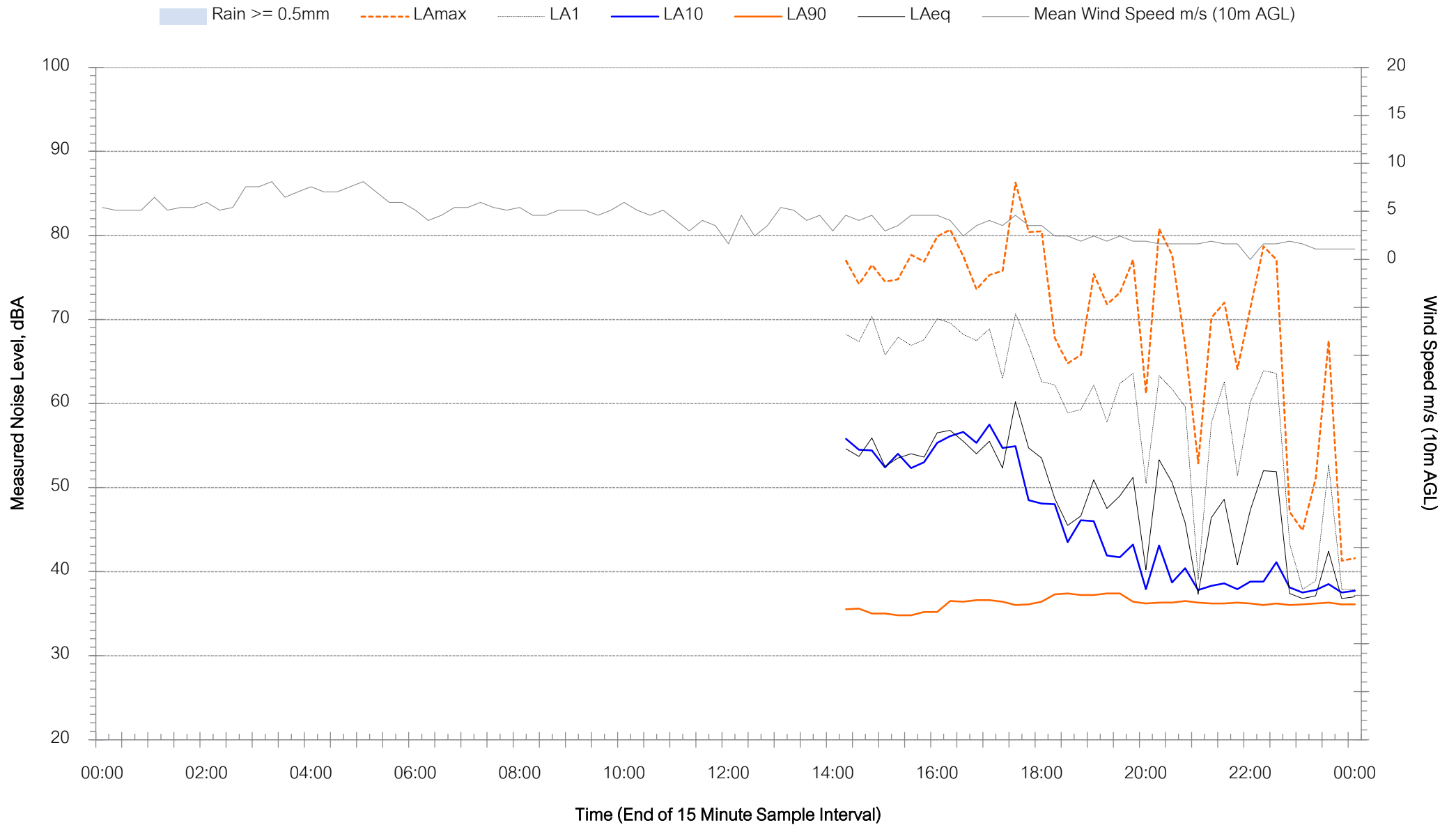
2152

COMMENTS

Appendix C – Noise Monitoring Charts

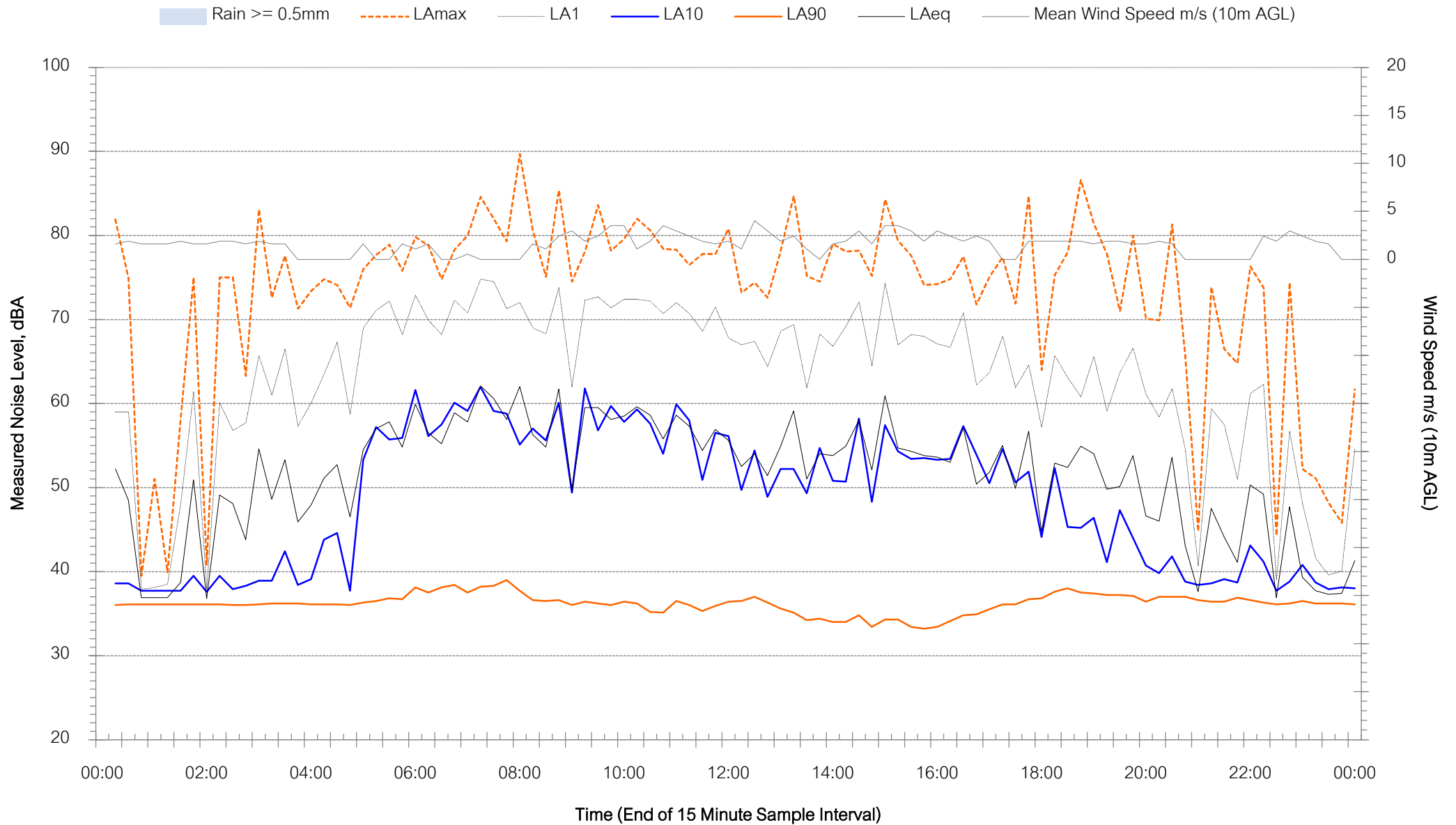
Background Noise Levels

200 Jenolan Caves Road, Hartley - Tuesday 17 August 2021



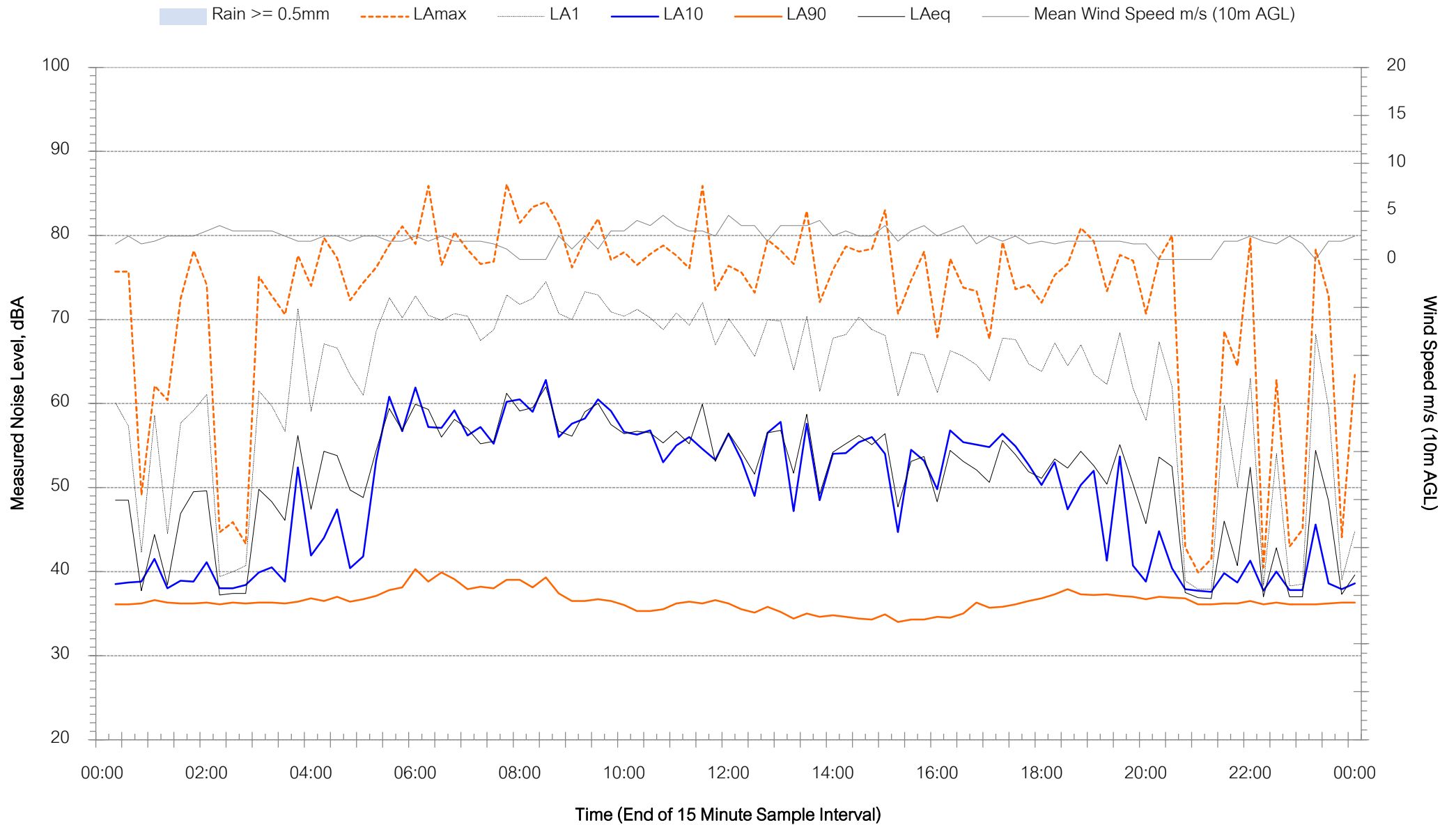
Background Noise Levels

200 Jenolan Caves Road, Hartley - Wednesday 18 August 2021



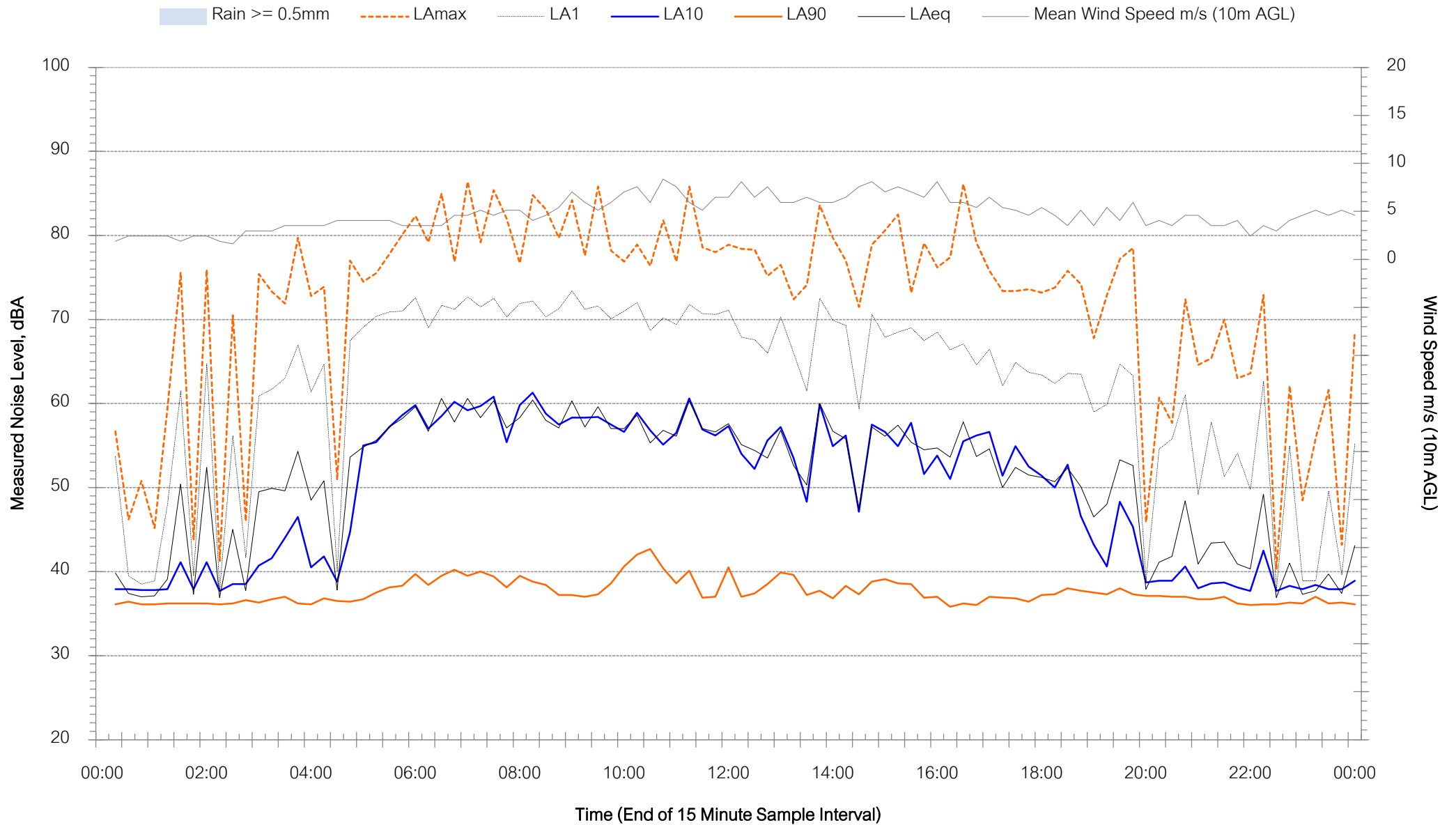
Background Noise Levels

200 Jenolan Caves Road, Hartley - Thursday 19 August 2021



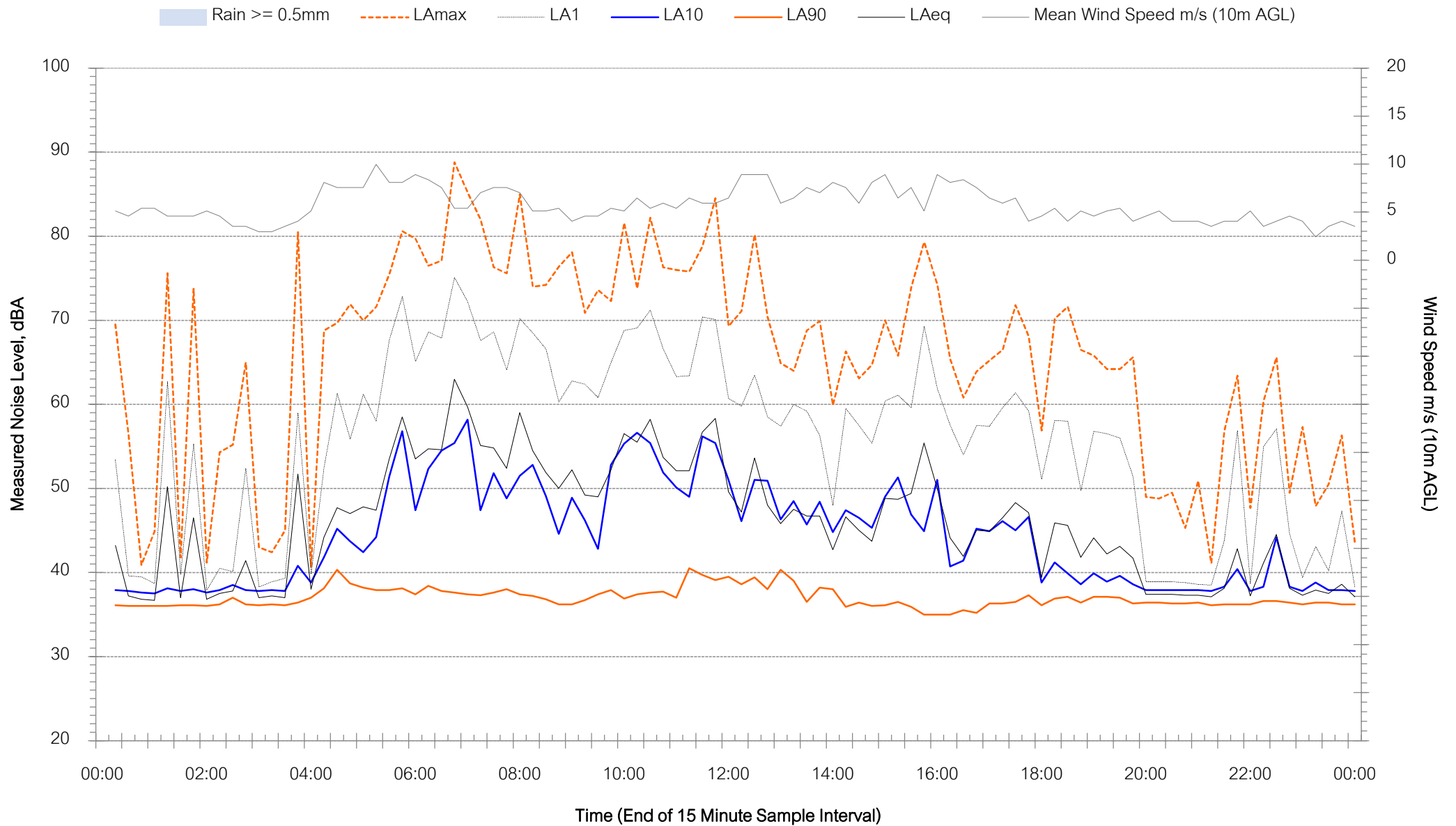
Background Noise Levels

200 Jenolan Caves Road, Hartley - Friday 20 August 2021



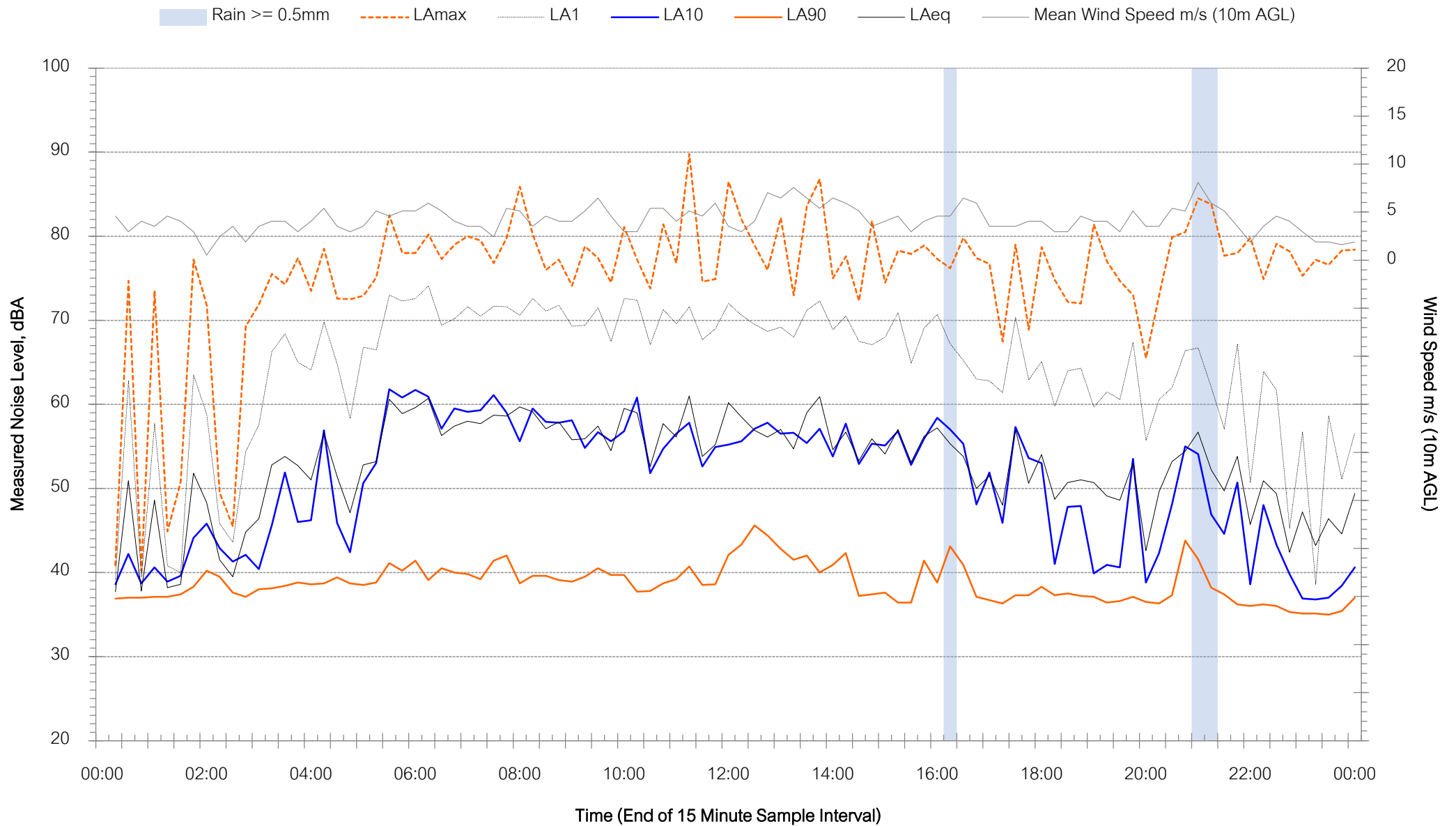
Background Noise Levels

200 Jenolan Caves Road, Hartley - Saturday 21 August 2021



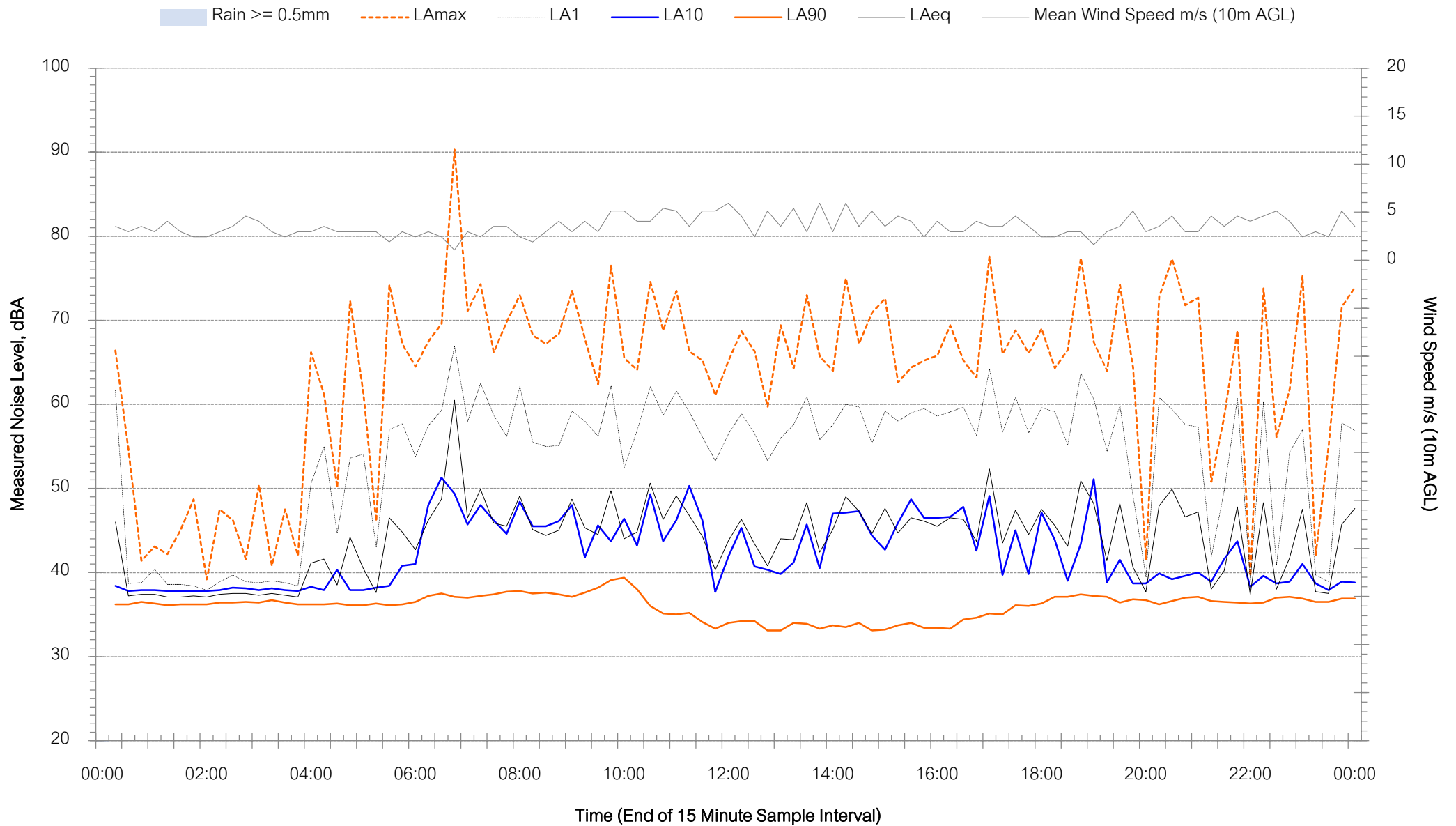
Background Noise Levels

200 Jenolan Caves Road, Hartley - Monday 23 August 2021



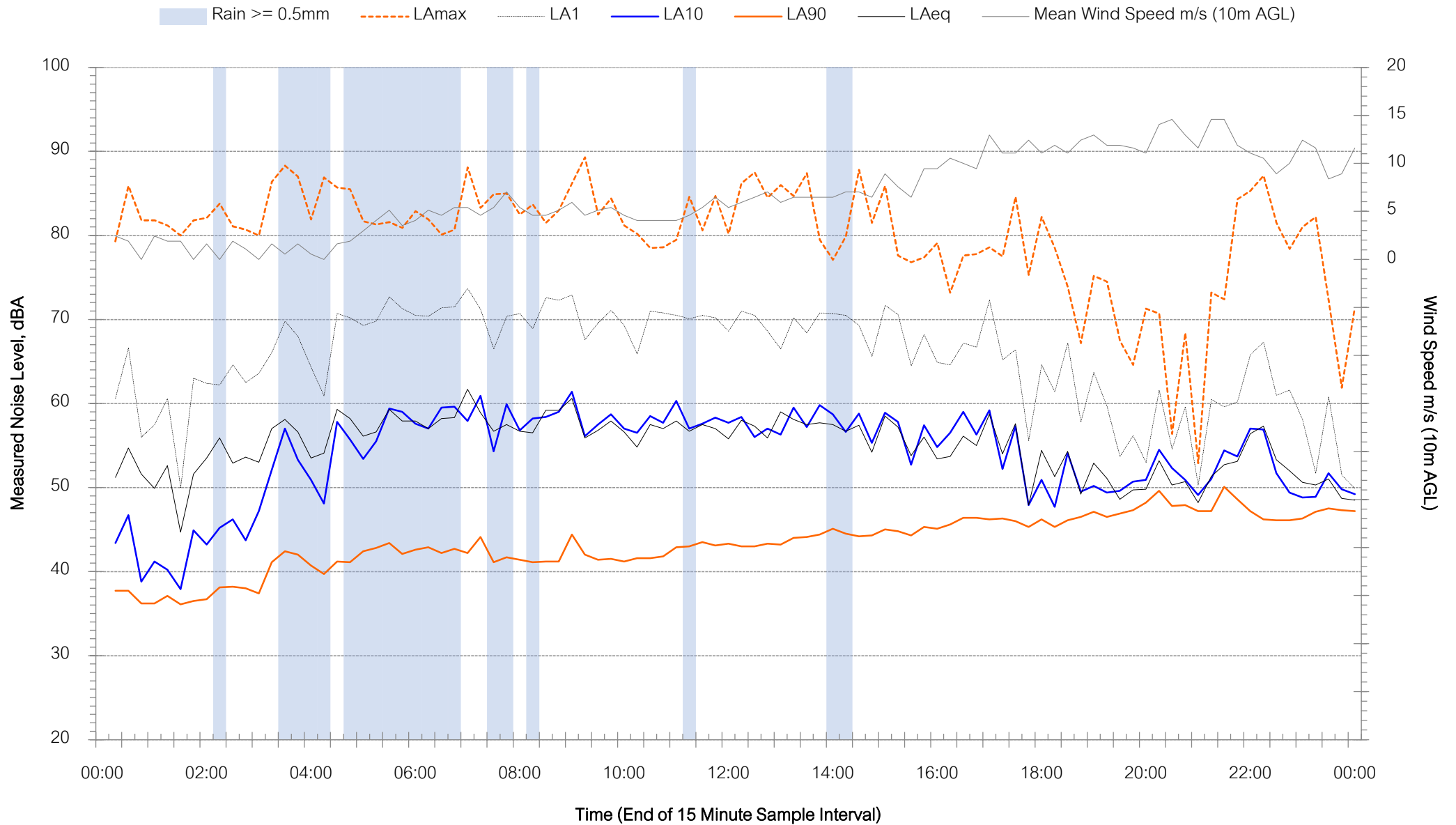
Background Noise Levels

200 Jenolan Caves Road, Hartley - Sunday 22 August 2021



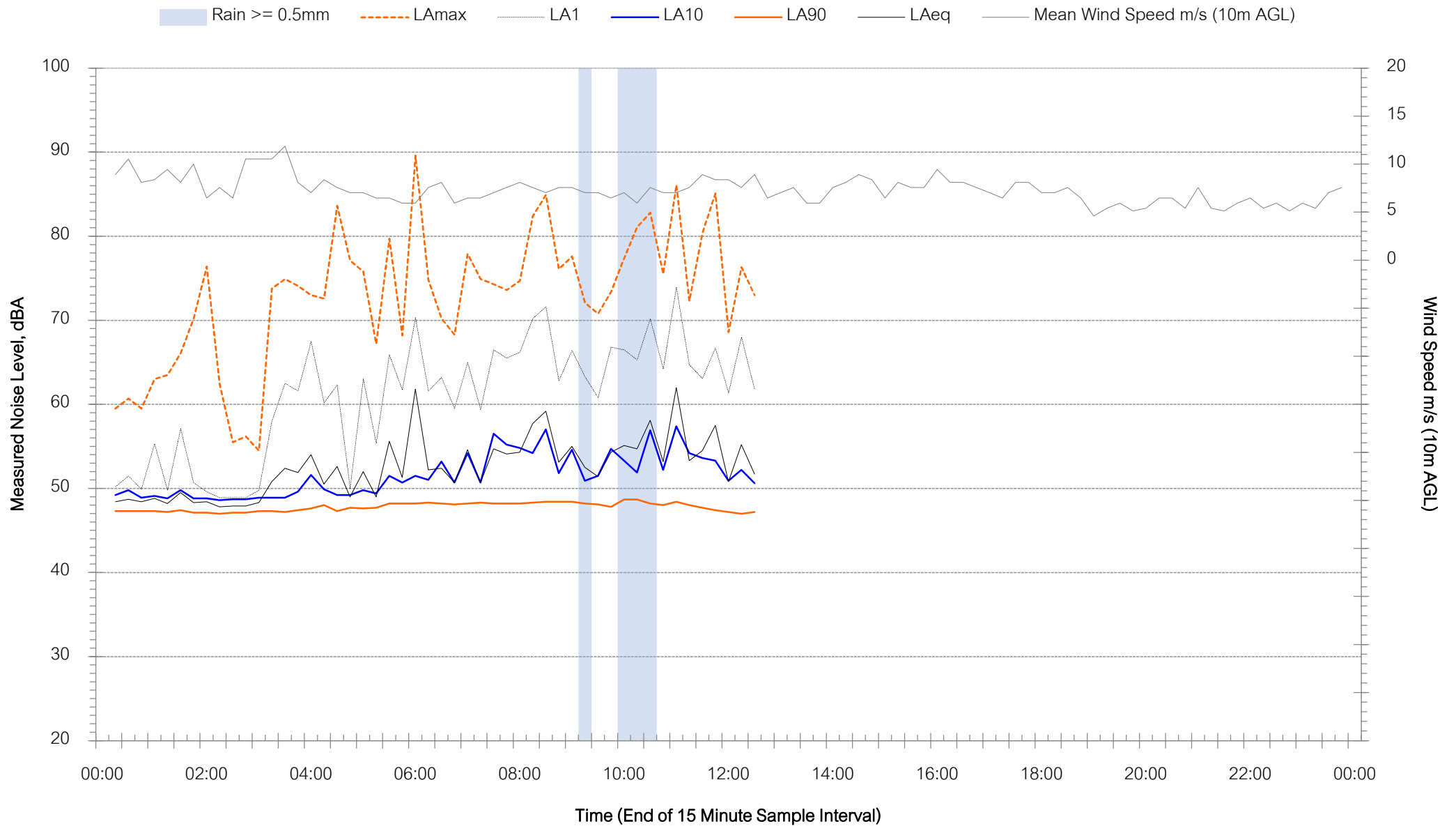
Background Noise Levels

200 Jenolan Caves Road, Hartley - Tuesday 24 August 2021



Background Noise Levels

200 Jenolan Caves Road, Hartley - Wednesday 25 August 2021



Muller Acoustic Consulting Pty Ltd

PO Box 678, Kotara NSW 2289

ABN: 36 602 225 132

Ph: +61 2 4920 1833

www.mulleracoustic.com

