# Noise Monitoring Assessment

Austen Quarry, Hartley, NSW
April 2024

Prepared for: RW Corkery & Co Pty Limited
April 2024
MAC170523RP15

Muller Acoustic Consulting

# *Document Information*

## Noise Monitoring Assessment

## Austen Quarry, Hartley, NSW

## April 2024

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

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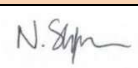
| MAC170523RP15 | 30 April 2024 | Nicholas Shipman |  | Oliver Muller |  |

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# 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);
- NSW Environment Protection Authority (EPA's), Approved Methods for the measurement and analysis of environmental noise in NSW, 2022;
- RW Corkery & Co Pty Limited, Austen Quarry Noise Management Plan (NMP); and
- Standards Australia AS 1055:2018 - Acoustics - Description and measurement of environmental noise.

This assessment was completed on Monday 8 April 2024 and Tuesday 9 April 2024 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**.

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# 2 Noise Criteria

## 2.1 Environmental Protection License Noise Limits

Section L4 of the project's EPL (EPL #12323) outlines the applicable operational noise criteria for all privately owned receivers surrounding the mine. The criteria outlined in the EPL is reproduced below:

> *L4.1 Noise from the premises must not exceed 35 dB(A)LAeq (15 minute) at any time.*
>
> *Where LAeq means the equivalent continuous noise level - the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.*
>
> *L4.2 To determine compliance with condition(s) L4.1 noise must be measured at, or computed for, any affected noise sensitive locations (such as a residence, school or hospital). A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "Environmental Noise Management - NSW Industrial Noise Policy (January 2000)".*
>
> *L4.3 The noise emission limits identified in this licence apply under all meteorological conditions except:*
>
> a) *during rain and wind speeds (at 10m height) greater than 3m/s; and*
> b) *under "non-significant weather conditions".*
>
> *Note: Field meteorological indicators for non-significant weather conditions are described in the NSW Industrial Noise Policy, Chapter 5 and Appendix E in relation to wind and temperature inversions.*

## 2.2 State Significant Development Consent Noise Limits

The operating criteria specified in Schedule 3, Condition 3 of the Austen Quarry Development Consent (SSD-6084), approved and modified on 15 July 2019 aligns with criteria outlined in EPL #12323 for the quarry at all privately owned receivers, ie 35dB $LA_{eq(15min)}$. Furthermore, SSD-6084 specifies an $LA_{max}$ criteria for site operations of 52dBA during the morning shoulder period.

## 2.3 Noise Limits Summary

**Table 1** presents a summary of the noise criteria for privately owned residential receivers surrounding the quarry, as outlined in SSD-6084 and EPL #12323.

**Table 1 Noise Criteria**

| Receiver | Day<br>dB $LA_{eq(15min)}$ | Evening<br>dB $LA_{eq(15min)}$ | Morning Shoulder<br>dB $LA_{eq(15min)}$ | Morning Shoulder<br>dB $LA_{max}$ |
|---|---|---|---|---|
| All privately owned residences | 35 | 35 | 35 | 52 |

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# 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 northeast 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 southwest of the project site; and
- Location C (residential identifier R48 as per NMP) is located at 64 Carroll Drive, Hartley, NSW, approximately 2.5km northeast 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 Standards Australia 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 Monday 8 April 2024 and Tuesday 9 April 2024. 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.

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, completed at Location A - 200 Jenolan Caves Road, Hartley, NSW, was conducted in general accordance with the procedures described in Standards Australia 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 between Monday 8 April 2024 and Thursday 18 April 2024. 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 ±0.5dBA. 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 processing equipment commences at 6am. Daily pre-shift meetings and safety checks often delay commencement of onsite operations until closer to 7am. Morning shoulder measurements were conducted from 6am to 7am on Tuesday 9 April 2024 to capture the onsite operations at the nominated monitoring locations.

**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 (hrs) | Ceased Crushing (hrs) | Commenced Crushing (hrs) | Ceased Crushing (hrs) |
| 08/04/2024 | 06:50 | 16:30 | 06:40 | 21:25 |
| 09/04/2024 | 06:55 | 20:30 | 06:50 | 18:30 |


# FIGURE 1

## LOCALITY PLAN

REF: MAC170523

0 500m

KEY

A MONITORING LOCATION

SITE LOCATION

MAC
Muller Acoustic Consulting

*Imagery Source : nearmaps

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# 4 Results

## 4.1 Meteorological Conditions – Location B

As prescribed in Condition L3.2 of the EPL (EPL #12323) weather data for the noise assessment period was sourced from the onsite weather station #3490 as well as operator measured conditions on site of EPL nominated receiver Location B to determine prevailing meteorological conditions at the time of the attended measurements and are presented in **Table 3**.

**Table 3 Prevailing Meteorological Conditions**

| Date & Time | Onsite Weather Station Station #3490 (10mAGL) | | Operator Measured Weather EPL Monitoring Location (1.8m AGL) | |
|---|---|---|---|---|
| | Wind Direction | Wind (m/s) | Wind Direction | Wind (m/s) |
| 08/04/2024 17:22 | SSW | 1.6 | S | 0.1 |
| 08/04/2024 17:45 | SW | 1.0 | S | 0.1 |
| 08/04/2024 18:03 | S | 1.6 | S | 0.1 |
| 08/04/2024 18:29 | WSW | 0.9 | S | 0.1 |
| 08/04/2024 18:51 | SW | 1.0 | S | 0.1 |
| 09/04/2024 06:01 | E | 0.4 | S | 0.1 |
| 09/04/2024 06:26 | NNE | 0.1 | S | 0.1 |
| 09/04/2024 06:47 | SSW | 0.2 | S | 0.1 |
| 09/04/2024 07:04 | SE | 0.4 | S | 0.1 |

Location B was selected as the nearest monitoring location to weather station #3490

## 4.2 Assessment Results - Location A

Operational attended noise monitoring was completed in each assessment period at Location A, 200 Jenolan Caves Road, on Monday 8 April 2024 and Tuesday 9 April 2024. **Table 4** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

**Table 4 Operator-Attended Noise Survey Results – Location A**

| Date | Time (hrs) | Descriptor (dBA re 20µPa) | | | Meteorology | Description and SPL, dBA |
|---|---|---|---|---|---|---|
| | | $L_{Amax}$ | $L_{Aeq}$ | $L_{A90}$ | | |
| 08/04/2024 | 17:22 (Day) | 80 | 59 | 46 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Birds 46-58<br>Insects <46<br>Creek flow 46-48<br>Traffic 46-80<br>Quarry inaudible |
| Austen Quarry Contribution[1] | | | | | | <35 dB $L_{Aeq(15min)}$ |
| 08/04/2024 | 18:29 (Evening) | 76 | 57 | 47 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Creek flow 47-49<br>Insects <47<br>Traffic 47-76<br>Quarry inaudible |
| Austen Quarry Contribution[1] | | | | | | <35 dB $L_{Aeq(15min)}$ |
| 09/04/2024 | 06:26 (Morning Shoulder) | 92 | 68 | 47 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Creek flow 46-47<br>Birds 46-58<br>Traffic 48-92<br>Quarry inaudible |
| Austen Quarry Contribution[1] | | | | | | <35 dB $L_{Aeq(15min)}$<br><35 dB $L_{Amax}$ |

Note 1: Estimated quarry noise contribution.

## 4.3 Assessment Results - Location B

Operational attended noise monitoring was completed in each assessment period at Location B, 781 Jenolan Caves Road, on Monday 8 April 2024 and Tuesday 9 April 2024. **Table 5** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

**Table 5 Operator-Attended Noise Survey Results – Location B**

| Date | Time (hrs) | Descriptor (dBA re 20µPa) | | | Meteorology | Description and SPL, dBA |
|---|---|---|---|---|---|---|
| | | $L_{Amax}$ | $L_{Aeq}$ | $L_{A90}$ | | |
| 08/04/2024 | 17:45 (Day) | 66 | 42 | 33 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Birds 31-66<br>Insects 31-33<br>Traffic 31-36<br>Livestock 31-34<br>Quarry inaudible |
| Austen Quarry Contribution[1] | | | | | | <30 dB $L_{Aeq(15min)}$ |
| 08/04/2024 | 18:03 (Evening) | 51 | 41 | 31 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Birds 34-51<br>Aircraft 31-44<br>Insects 31-34<br>Quarry inaudible |
| Austen Quarry Contribution[1] | | | | | | <30 dB $L_{Aeq(15min)}$ |
| 09/04/2024 | 06:01 (Morning Shoulder) | 59 | 39 | 30 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Birds 30-59<br>Traffic 30-38<br>Insects <27<br>Wind in vegetation 27-31<br>Quarry inaudible |
| Austen Quarry Contribution[1] | | | | | | <30 dB $L_{Aeq(15min)}$<br><30 dB $L_{Amax}$ |

Note 1: Estimated quarry noise contribution.

## 4.4 Assessment Results - Location C

Operational attended noise monitoring was completed in each assessment period at Location C, 64 Carroll Drive, on Monday 8 April 2024 and Tuesday 9 April 2024. **Table 6** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

**Table 6 Operator-Attended Noise Survey Results – Location C**

| Date | Time (hrs) | Descriptor (dBA re 20µPa) | | | Meteorology | Description and SPL, dBA |
|---|---|---|---|---|---|---|
| | | $L_{Amax}$ | $L_{Aeq}$ | $L_{A90}$ | | |
| 09/04/2024 | 07:04 (Day) | 60 | 43 | 38 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Birds 35-60<br>Traffic 35-50<br>Quarry inaudible |
| | | Austen Quarry Contribution[1] | | | | <30 dB $L_{Aeq(15min)}$ |
| 08/04/2024 | 18:51 (Evening) | 56 | 41 | 37 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Insects 35-37<br>Traffic 35-56<br>Quarry inaudible |
| | | Austen Quarry Contribution[1] | | | | <30 dB $L_{Aeq(15min)}$ |
| 09/04/2024 | 06:47 (Morning Shoulder) | 68 | 42 | 36 | WD: S<br>WS: 0.1m/s<br>Rain: Nil | Traffic 34-46<br>Birds 34-68<br>Quarry inaudible |
| | | Austen Quarry Contribution[1] | | | | <30 dB $L_{Aeq(15min)}$<br><30 dB $L_{Amax}$ |

Note 1: Estimated quarry noise contribution.

## 4.5 Unattended Noise Monitoring Results

Unattended noise monitoring was conducted at Location A from Monday 8 April 2024 and Friday 19 April 2024 while the quarry was operational. A comparison of attended and unattended noise monitoring data has been completed. **Table 7** presents the result of this comparison, focusing on the 15-minute statistics for the corresponding measurement times.

**Table 7 Unattended Logging and Operator-Attended Comparison – Location A**

| Date | Time (hrs) | Attended descriptors (dBA re 20µPa) | | | Unattended descriptors (dBA re 20µPa) | | |
|---|---|---|---|---|---|---|---|
| | | dB $L_{Amax}$ | dB $L_{Aeq}$ | dB $L_{A90}$ | dB $L_{Amax}$ | dB $L_{Aeq}$ | dB $L_{A90}$ |
| 08/04/2024 | 17:22 | 80 | 59 | 46 | 69[1] | 55[1] | 44[1] |
| 08/04/2024 | 18:29 | 76 | 57 | 47 | 71 | 53 | 43 |
| 09/04/2024 | 06:26 | 92 | 68 | 47 | 72 | 57 | 43 |

Note 1: 7pm measurement period has been adopted for correlation, during secondary crushing operations.

Results of the comparison identify that the unattended results are generally lower due to the offset to the road, although results remain relativity consistent during the measurement periods.

Attended noise monitoring identified that quarry noise remained inaudible during the monitoring period. 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 Monday 8 April 2024 and Friday 19 April 2024 is presented in **Table 8**. **Appendix C** presents the logger charts of the results of the unattended monitoring survey.

**Table 8 Unattended Noise Logging Summary – Location A**

| Date | Unattended descriptors (dBA re 20µPa) | | |
|---|---|---|---|
| | dB $L_{Aeq}$ | | |
| | Day | Evening | Night |
| Monday 08 April 2024 | N/A | 52 | 52 |
| Tuesday 09 April 20243 | 57 | 50 | 51 |
| Wednesday 10 April 2024 | 55 | 51 | 52 |
| Thursday 11 April 2024 | 54 | 52 | 52 |
| Friday 12 April 2024 | 53 | 51 | 47 |
| Saturday 13 April 2024 | 53 | 50 | 41 |
| Sunday 14 April 2024 | 53 | 50 | 51 |
| Monday 15 April 2024 | 55 | 50 | 53 |
| Tuesday 16 April 2024 | 56 | 50 | 52 |
| Wednesday 17 April 2024 | 55 | 51 | 52 |
| Thursday 18 April 2024 | 53 | 51 | 52 |
| Friday 19 April 2024 | 56 | N/A | N/A |

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# 5 Noise Compliance Assessment

The compliance assessment for the nominated monitoring locations is presented in **Table 9** to **Table 12** for day, evening and morning shoulder assessment periods.

**Table 9 Daytime $LA_{eq(15min)}$ Noise Compliance Assessment**

| Location. | Quarry Noise Contribution | Quarrying Noise Criteria | Compliant |
|---|---|---|---|
| | dB $LA_{eq(15min)}$ | dB $LA_{eq(15min)}$ | |
| A | <35 | 35 | ✓ |
| B | <35 | 35 | ✓ |
| C | <35 | 35 | ✓ |

**Table 10 Evening $LA_{eq(15min)}$ Noise Compliance Assessment**

| Location. | Quarry Noise Contribution | Quarrying Noise Criteria | Compliant |
|---|---|---|---|
| | dB $LA_{eq(15min)}$ | dB $LA_{eq(15min)}$ | |
| A | <30 | 35 | ✓ |
| B | <30 | 35 | ✓ |
| C | <30 | 35 | ✓ |

**Table 11 Morning Shoulder $LA_{eq(15min)}$ Noise Compliance Assessment**

| Location | Quarry Noise Contribution | Quarrying Noise Criteria | Compliant |
|---|---|---|---|
| | dB $LA_{eq(15min)}$ | dB $LA_{eq(15min)}$ | |
| A | <30 | 35 | ✓ |
| B | <30 | 35 | ✓ |
| C | <30 | 35 | ✓ |

**Table 12 Morning Shoulder $LA_{max}$ Noise Compliance Assessment**

| Location | Quarry Noise Contribution | Quarrying Noise Criteria | Compliant |
|---|---|---|---|
| | dB $LA_{max}$ | dB $LA_{max}$ | |
| A | <35 | 52 | ✓ |
| B | <30 | 52 | ✓ |
| C | <30 | 52 | ✓ |

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# 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 for the April 2024 survey. Other extraneous noise sources audible during the three attended surveys included insects, birds, traffic, and creek flow.

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) (Report Reference: MAC170511RP1, Muller Acoustic Consulting Pty Ltd, 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 was inaudible during all three assessment periods. Notwithstanding, emissions from the quarry therefore remained below applicable noise criteria for all measurements. Extraneous noise sources dominated the noise environment which included insects, traffic, wind in vegetation, aircraft, birds, livestock, and aircraft.

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

Monitoring results at Location C, 64 Carroll Drive, Hartley, NSW, identified that the quarry remained inaudible during all three assessment periods for the April 2024 survey. Extraneous noise sources dominated the noise environment which included traffic, insects, and birds.

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

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# 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 Monday 8 April 2024 and Tuesday 9 April 2024 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.

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# Appendix A – Glossary of Terms

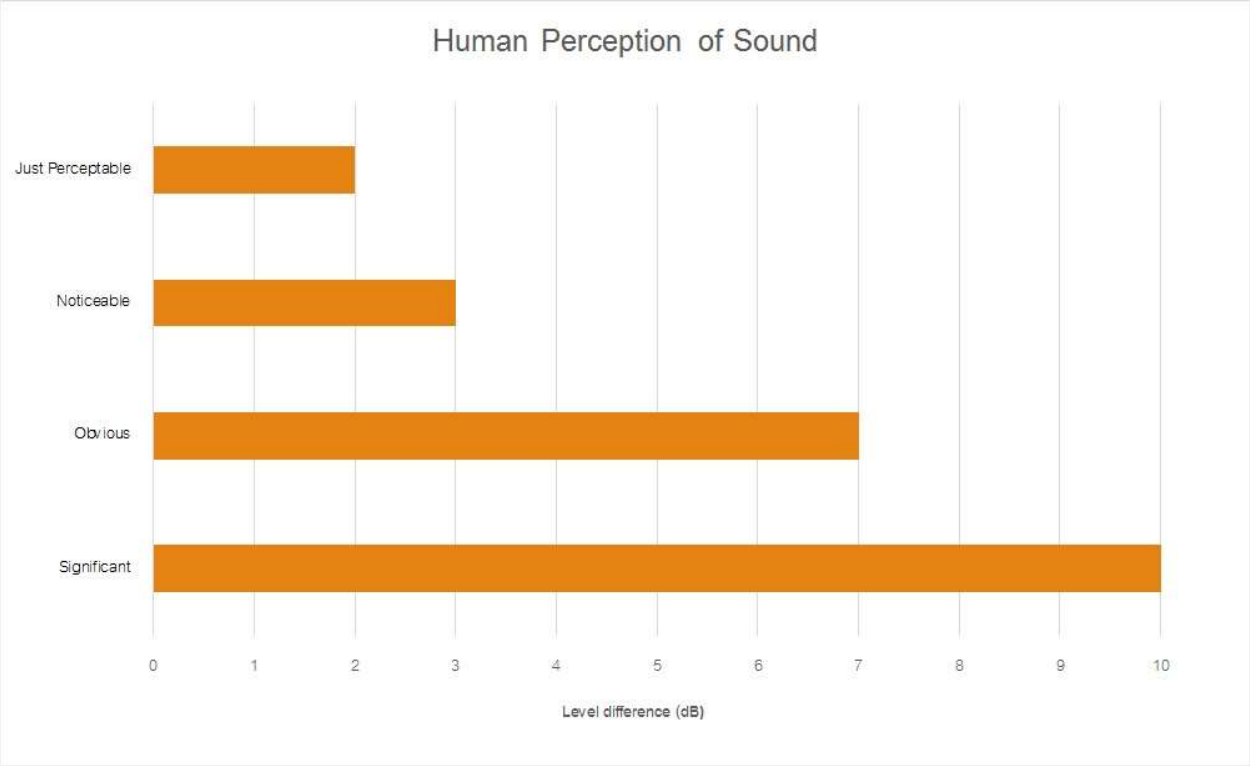
**Table A1** provides a number of technical terms have been used in this report.

| 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. |
| LAmax | 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) | 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 :<br>= 10.log10 (W/Wo)<br>Where : W is the sound power in watts and Wo is the sound reference power at 10-12 watts. |

**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



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# Appendix B – Operational Logs

## DAILY PRODUCTION LOG & CHECKLIST - PRIMARY

HY-TEC an ADBRI company

Date: 9/4/24 Operator: BRETT

Weather Conditions; FINE Quarry Bench ID. 745

| Shift Start Time | 6AM | Shift Finish Time | 5PM |
|---|---|---|---|
| Crusher Start Time | 6·55 | End of day Crusher stopped | 4·35 |

### Belt Weightometer Reading - Daily

| Conveyor 1 Start | Conveyor 1 Finish | Total Tonnes Crushed |
|---|---|---|
| | | 2863 ? |

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

| DT4 Loads to Boot | 46 | DT1 Loads to Boot | |
|---|---|---|---|
| DT6 Loads to Boot | 40 | Loader tonnes to Boot | |

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

| Plant Stopped | Plant Started | Downtime (Hrs/Min) | Reason |
|---|---|---|---|
| 9·15 | 10·20 | 1H 5M | SMOKO & JAW ADJSTMENT |
| 12·00 | 1·00 | 1H | STICK IN CV2 CHUTE |
| | | | |
| | | | |
| | | | |
| | | | |

Pre start checks;

Generator hours. 28613 Generator oil level..

Plant Visual Pilot hours

**COMMENTS**

HY-TEC
an ADBRI company

## DAILY PRODUCTION LOG & CHECKLIST - PRIMARY

Date: 9/4/24 Operator: Brett D

Weather Conditions; Raining Quarry Bench ID. 745

| | | | |
|---|---|---|---|
| **Shift Start Time** | ~~5.00pm~~ 1.00 pm | **Shift Finish Time** | ~~5.30 pm~~ 10.00 pm. |
| **Crusher Start Time** | 5.45 pm | **End of day Crusher stopped** | 8.30 pm. |

### Belt Weightometer Reading - Daily

| Conveyor 1 Start | Conveyor 1 Finish | Total Tonnes Crushed |
|---|---|---|
| 0 | 0 | 1029 (Loader) |

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

| | | | |
|---|---|---|---|
| **DT4 Loads to Boot** | | **DT1 Loads to Boot** | |
| **DT6 Loads to Boot** | | **Loader tonnes to Boot** | |

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

| Plant Stopped | Plant Started | Downtime (Hrs/Min) | Reason |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Pre start checks;

Generator hours. ..... Generator oil level.. .....

Plant Visual ..... Pilot hours .....

**COMMENTS**

# DAILY PRODUCTION LOG & CHECKLIST - SECONDARY

HY-TEC an ADBRI company

Date: 9-4-24 Operator: Chris

Weather Conditions; Fine

| Shift Start Time | 5-30 | Shift Finish Time | |
|---|---|---|---|
| Crusher Start Time | 9-50 | End of day Crusher stopped | 6·30 |

**Weightometer Reading; Start:** 7694300 **Finish:**

| Plant Stopped | Plant Started | Downtime (Hrs/Min) | Reason |
|---|---|---|---|
| 11.00 | 11.01 | 1 min | CLOSE UP 450 CRUSHER. |
| 11-11 | 11-12 | .1 | Nip up 550 1 m |
| 11-15 | 11-16 | .1 | Nip up 450 5 teeth |
| 12 10 | 12-11 | .1 | Nip up 450 3 teeth |
| 126 | 127 | .1 | Adj 450 |
| 146 | 156 | 10min | Rezero 550 |
| 3-25 | 4·00 | 30m | Add prompt-as with the PRC Belt |
| 4-25 | 615 | 1.50 | CV19 Slipping |
| 6·15 | 6·30 | .15 | run out plant |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## PRODUCTION SUMMARY

| Belts | Size | Description | Total Tonnes | Comments |
|---|---|---|---|---|
| CV 8 | 20 mm | Concrete Aggregate | 1441 | |
| CV 20 | Course Sand 4-0mm | Manufactured Sand | | |
| CV 20 | Old Man Sand | Man sand By-Pass Air-Sep | 768 | |
| CV 21 | Super Fine –50micron | Super Fine Sand | | |
| CV19* | 10-7mm Blend* | Concrete Blend | | |
| CV19 | 7mm | Concrete Aggregate | | |
| CV17 | 10mm | Concrete Aggregate | | |
| CV15 | 14mm | Concrete Aggregate | 250 | |
| CV5 | Ballast/40mm | Non Spec Aggregate | | |

3759

## DAILY PRODUCTION LOG & CHECKLIST - PRIMARY

HY-TEC an ADBRI company

Date: 8/4/24 Operator: BRETT

Weather Conditions; FINE Quarry Bench ID. 745

| Shift Start Time | 6AM | Shift Finish Time | 5PM |
|---|---|---|---|
| Crusher Start Time | 650 | End of day Crusher stopped | 430 |

### Belt Weightometer Reading - Daily

| Conveyor 1 Start | Conveyor 1 Finish | Total Tonnes Crushed |
|---|---|---|
| | | 4030 |

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

| DT4 Loads to Boot | 44 | DT1 Loads to Boot | |
|---|---|---|---|
| DT6 Loads to Boot | 36 | Loader tonnes to Boot | |

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

| Plant Stopped | Plant Started | Downtime (Hrs/Min) | Reason |
|---|---|---|---|
| 9.30 | 11.15 | 1H40m | SMOKO & DRUG TESTING |
| 1.00 | 1.30 | 30 | LUNCH |
| | | | |
| | | | |
| | | | |
| | | | |

Pre start checks;

Generator hours. 38602 Generator oil level.. .....

Plant Visual ..... Pilot hours .....

**COMMENTS**

# DAILY PRODUCTION LOG & CHECKLIST - SECONDARY

HY-TEC an ADBRI company

Date: 8-4-24 Operator: Chris

Weather Conditions; Fine

| Shift Start Time | 5-30 | Shift Finish Time | 10PM |
|---|---|---|---|
| Crusher Start Time | 6-40 | End of day Crusher stopped | 925 PM |

**Weightometer Reading; Start:** 7687058 **Finish:** 7694300 = 7167

| Plant Stopped | Plant Started | Downtime (Hrs/Min) | Reason |
|---|---|---|---|
| 6-54 | 6-55 | .1 | N.IP up 550 |
| 7.01 | 7-02 | .1 | N IP up 450 |
| 8-48 | 8-49 | .1 | N.IP up 450 |
| 9-00 | 9-01 | .1 | N.IP up 550 |
| 9-58 | 9-59 | .1 | N IP up 450 |
| 11-44 | 11-45 | .1 | N IP up 450 |
| 12-30 | 12-31 | .1 | N IP up 550 |
| 13.09 | 13-10. | .1 | NIP UP 450. |
| 2-24 | 2-25 | .1 | N IP up 550 |
| 4.09 | 4-10 | .1 | N IP up 550 |
| 4-32 | 4-33 | .1 | N IP up 450 |
| 7PM | 705 | .5 | Re zero 550 CRUSHER |
| 725 | 726 | .1 | Adj 450 |
| 818 | 820 | .2 | Adj 550 |
| 838 | 840 | .2 | Adj 450 .21 |
| 9:25 | | | Shutdown |

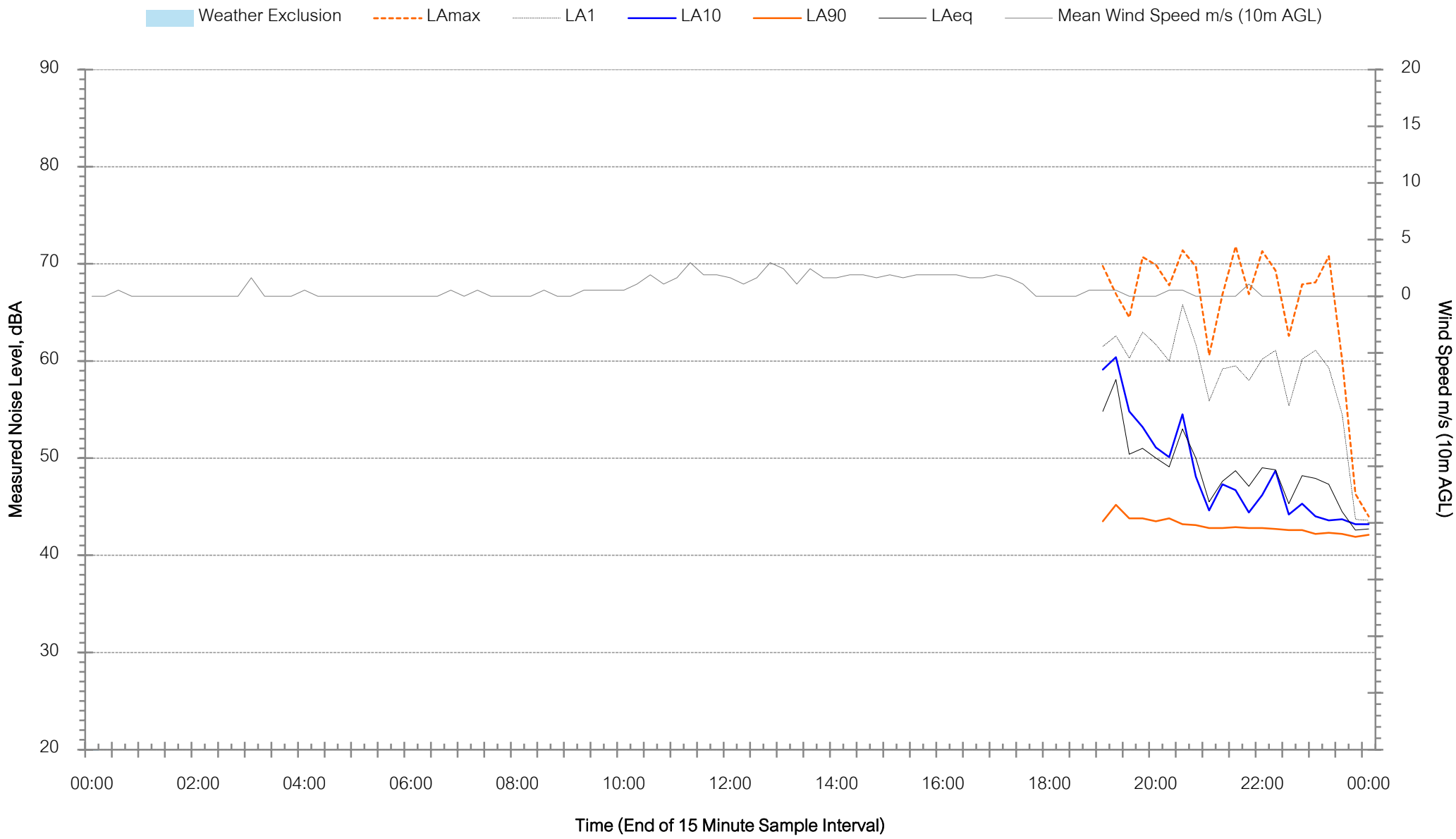
## PRODUCTION SUMMARY

| Belts | Size | Description | Total Tonnes | Comments |
|---|---|---|---|---|
| CV 8 | 20 mm | Concrete Aggregate | 4162 | |
| CV 20 | Course Sand 4-0mm | Manufactured Sand | | |
| CV 20 | Old Man Sand | Man sand By-Pass Air-Sep | 1230 | |
| CV 21 | Super Fine –50micron | Super Fine Sand | — | |
| CV19* | 10-7mm Blend* | Concrete Blend | — | counter Not working |
| CV19 | 7mm | Concrete Aggregate | | |
| CV17 | 10mm | Concrete Aggregate | | |
| CV15 | 14mm | Concrete Aggregate | 445 | |
| CV5 | Ballast/40mm | Non Spec Aggregate | | |
| | | | 5475 | |

# Appendix C – Noise Monitoring Charts

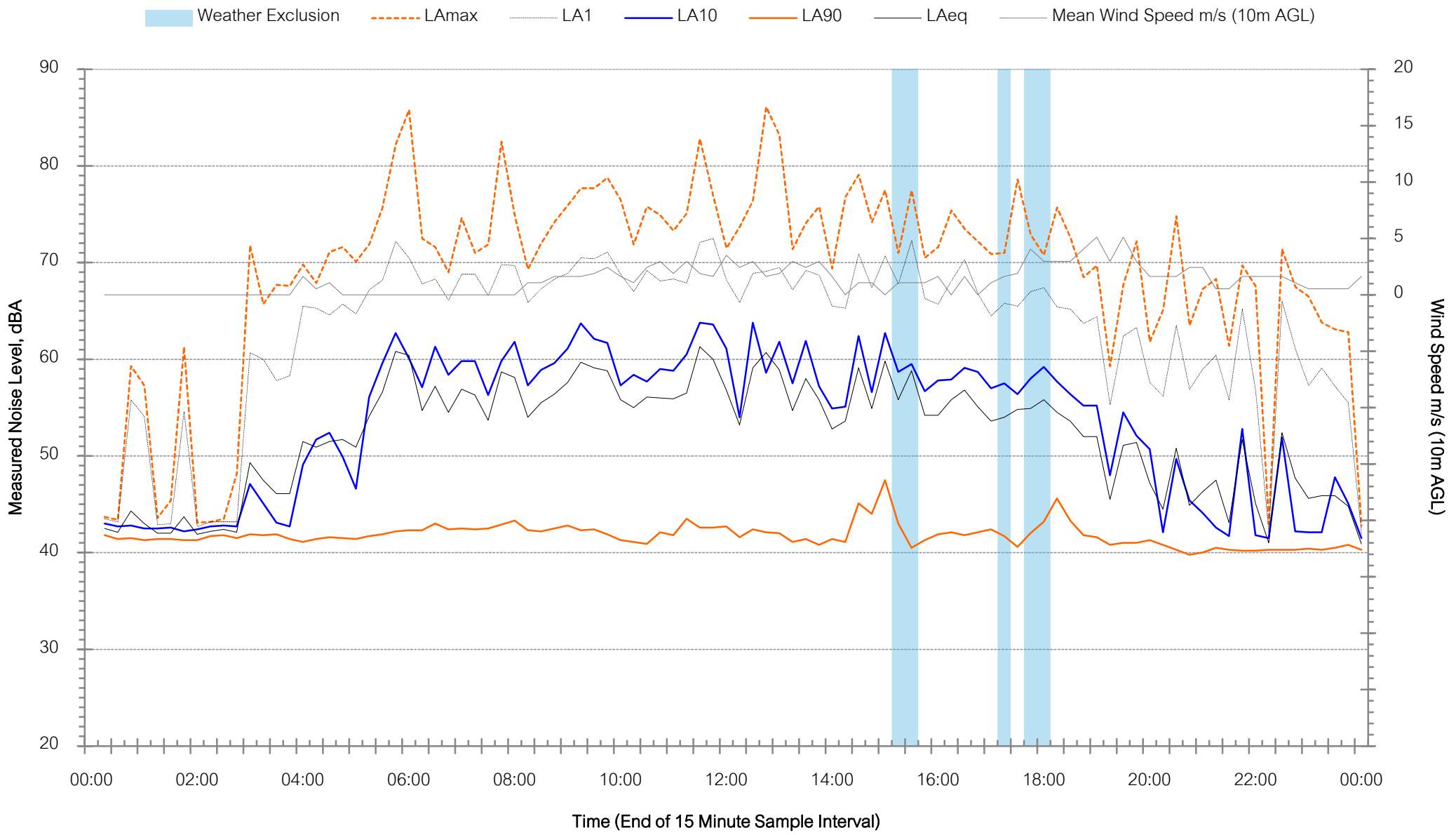
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Monday 8 April 2024



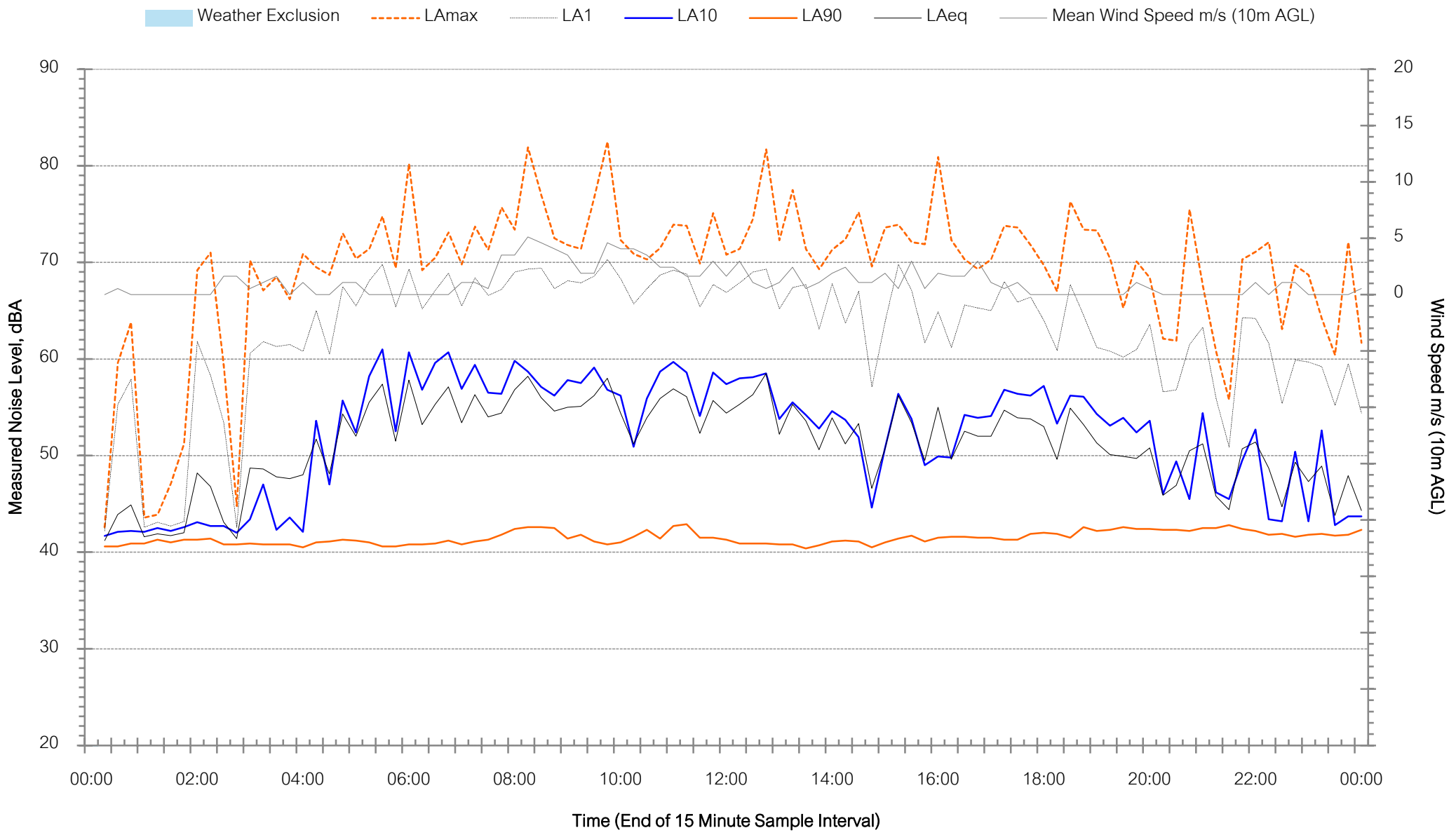
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Tuesday 9 April 2024



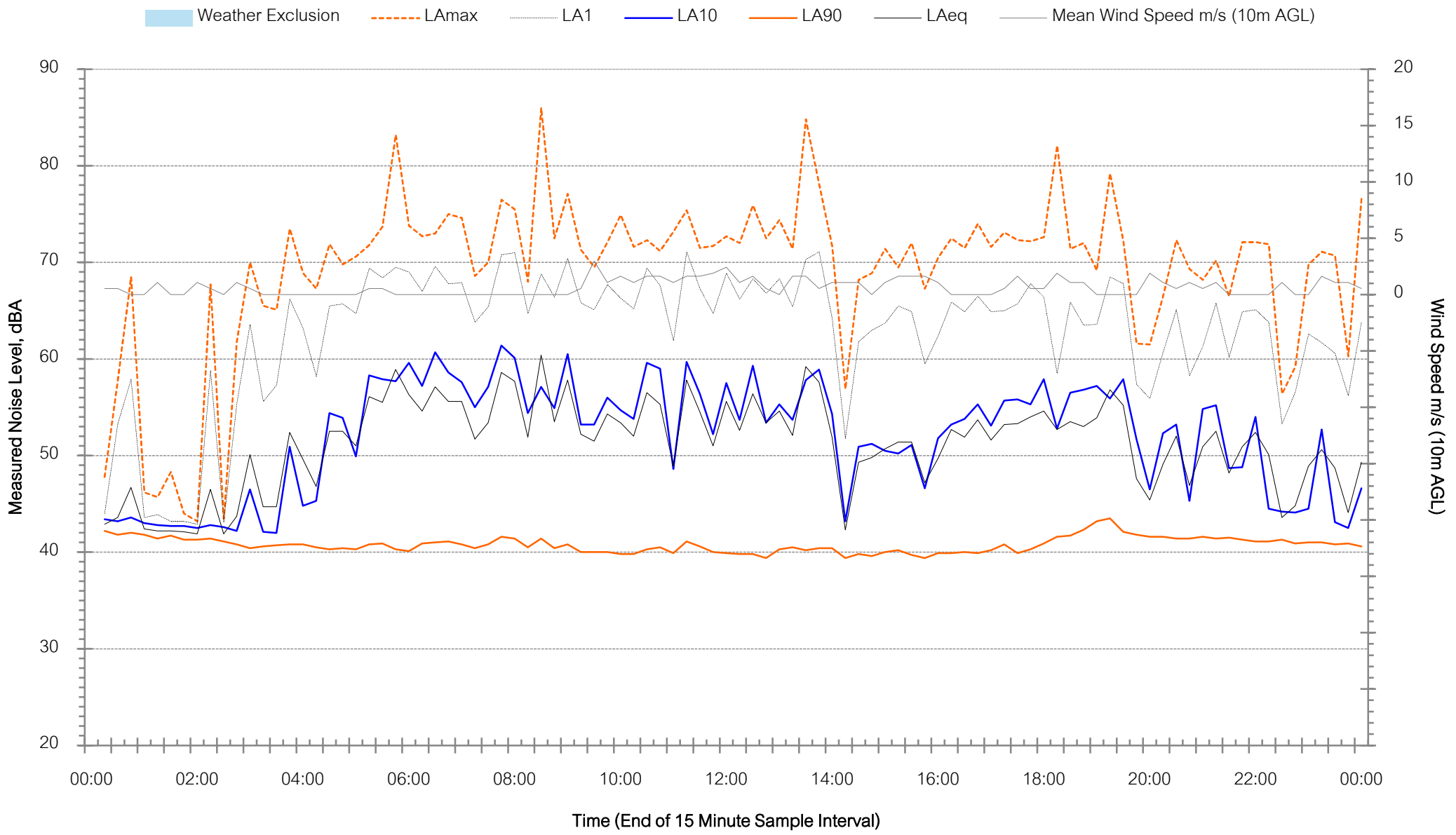
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Wednesday 10 April 2024



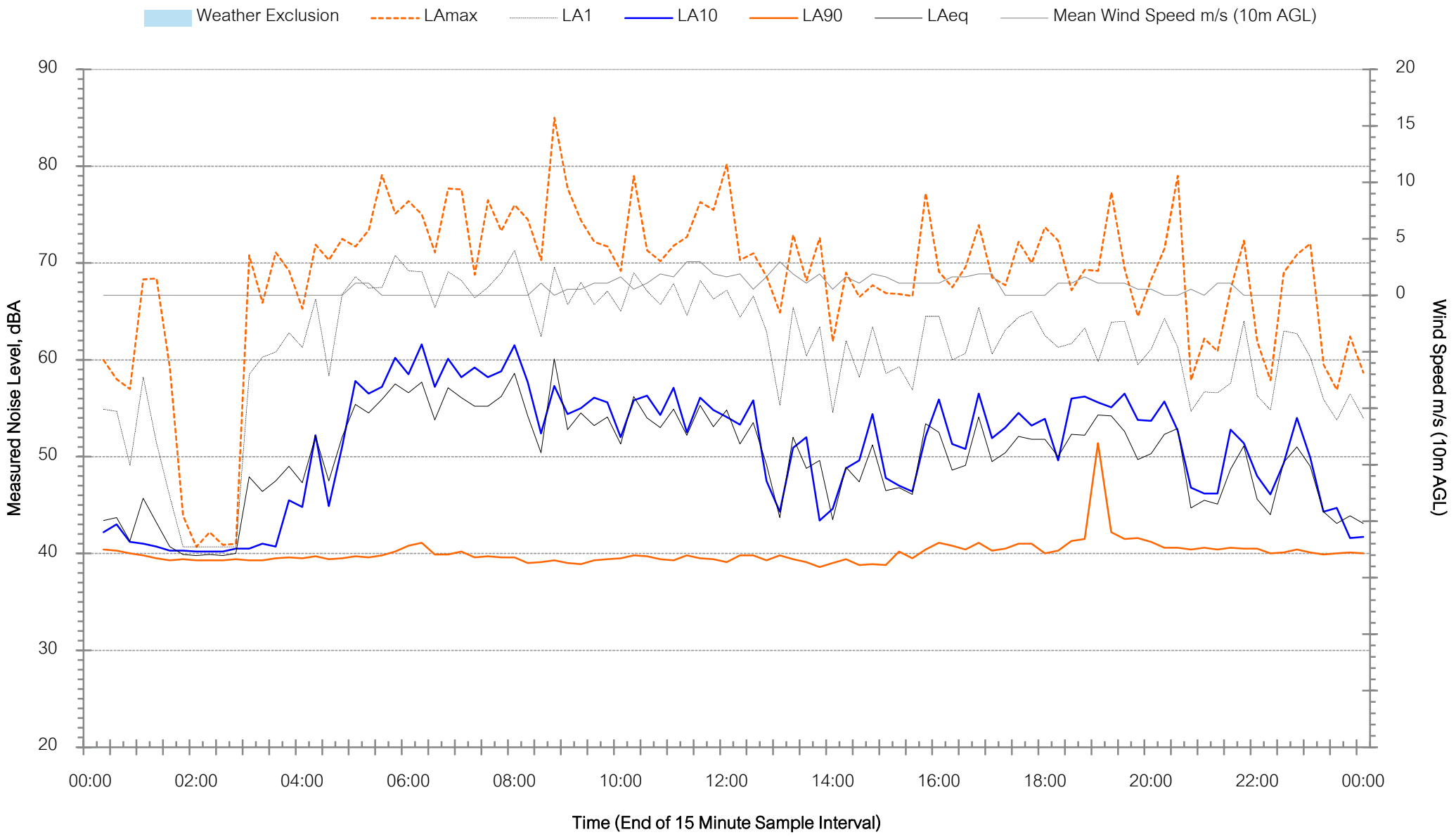
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Thursday 11 April 2024



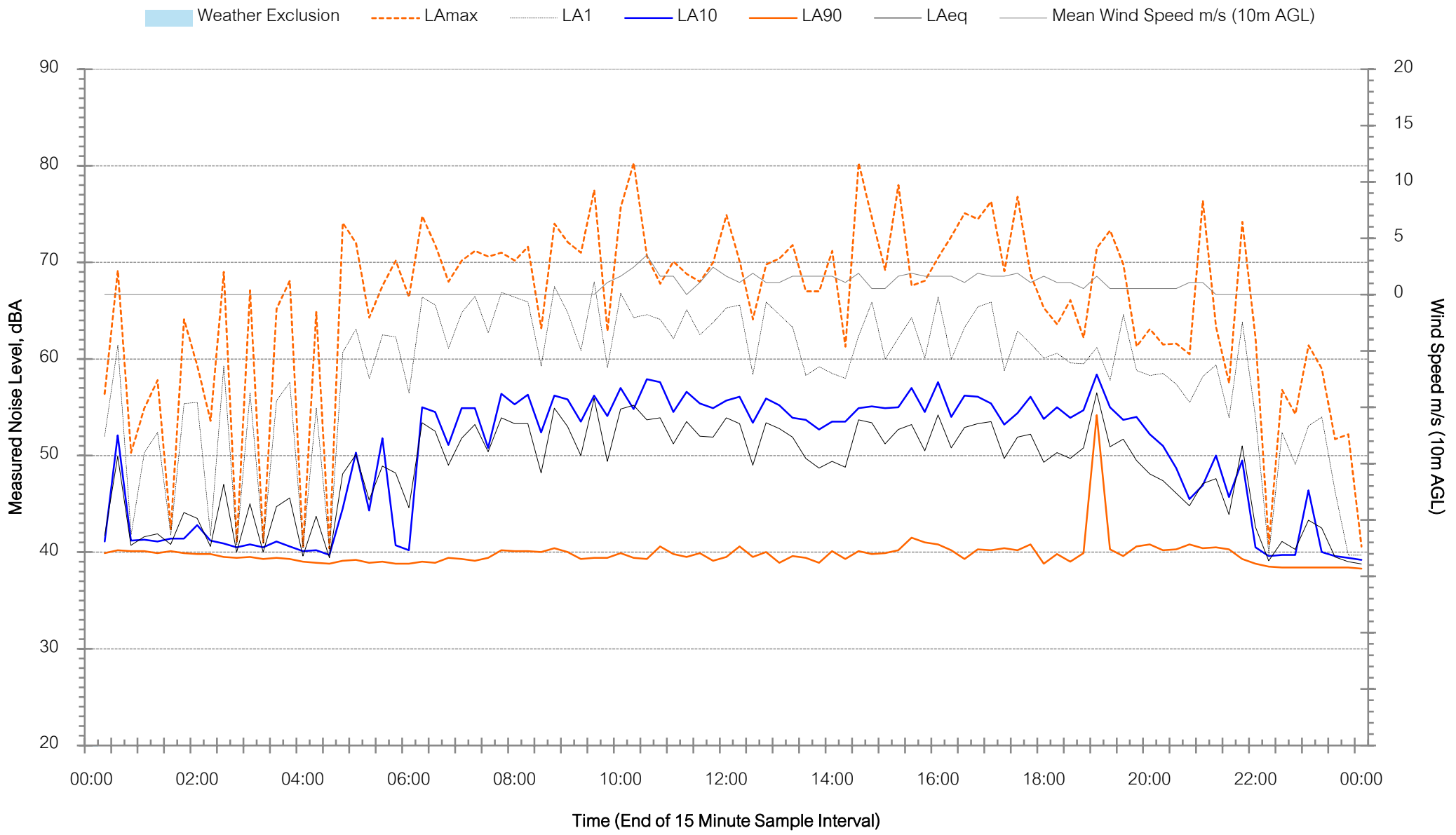
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Friday 12 April 2024



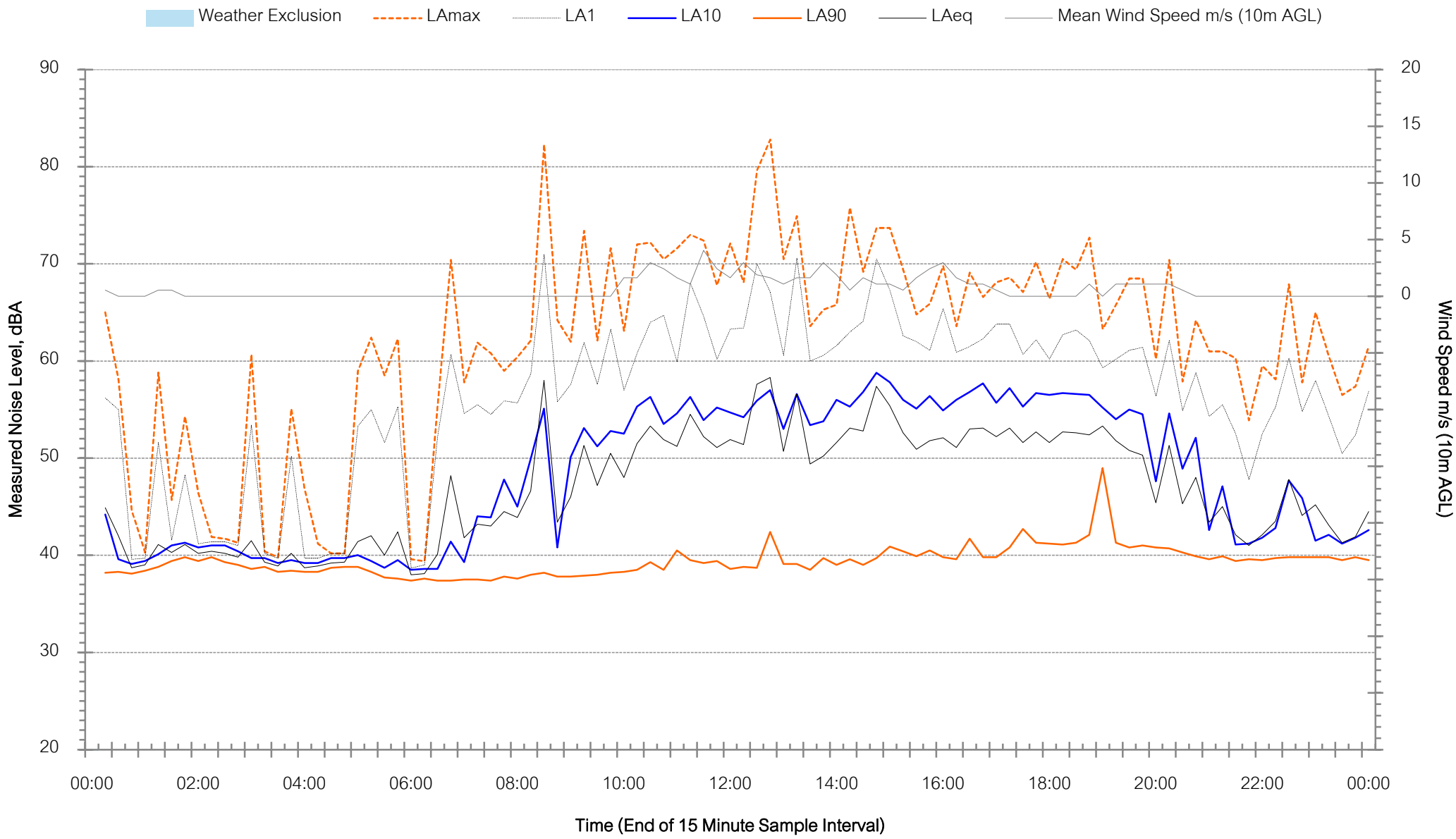
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Saturday 13 April 2024



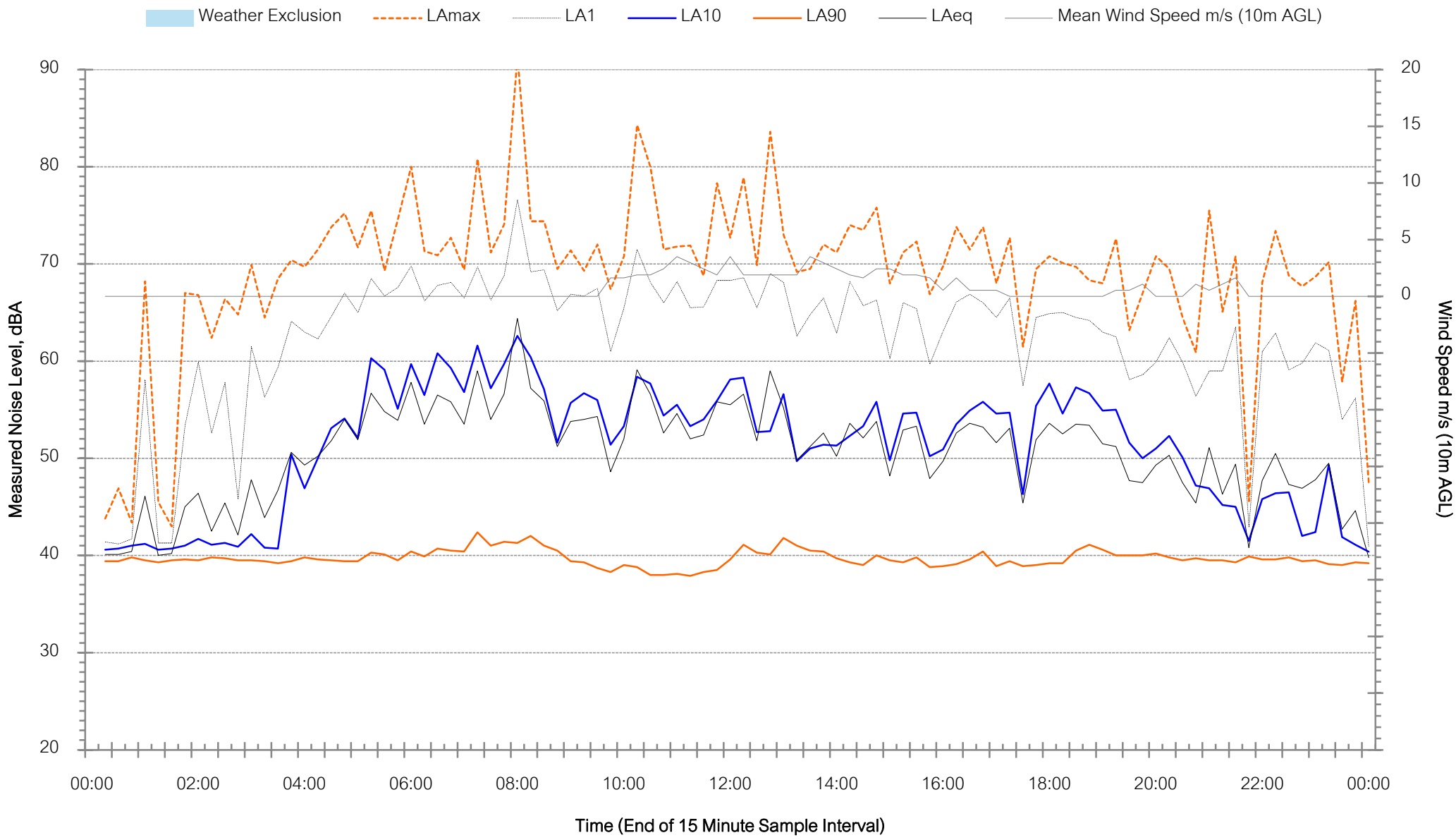
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Sunday 14 April 2024



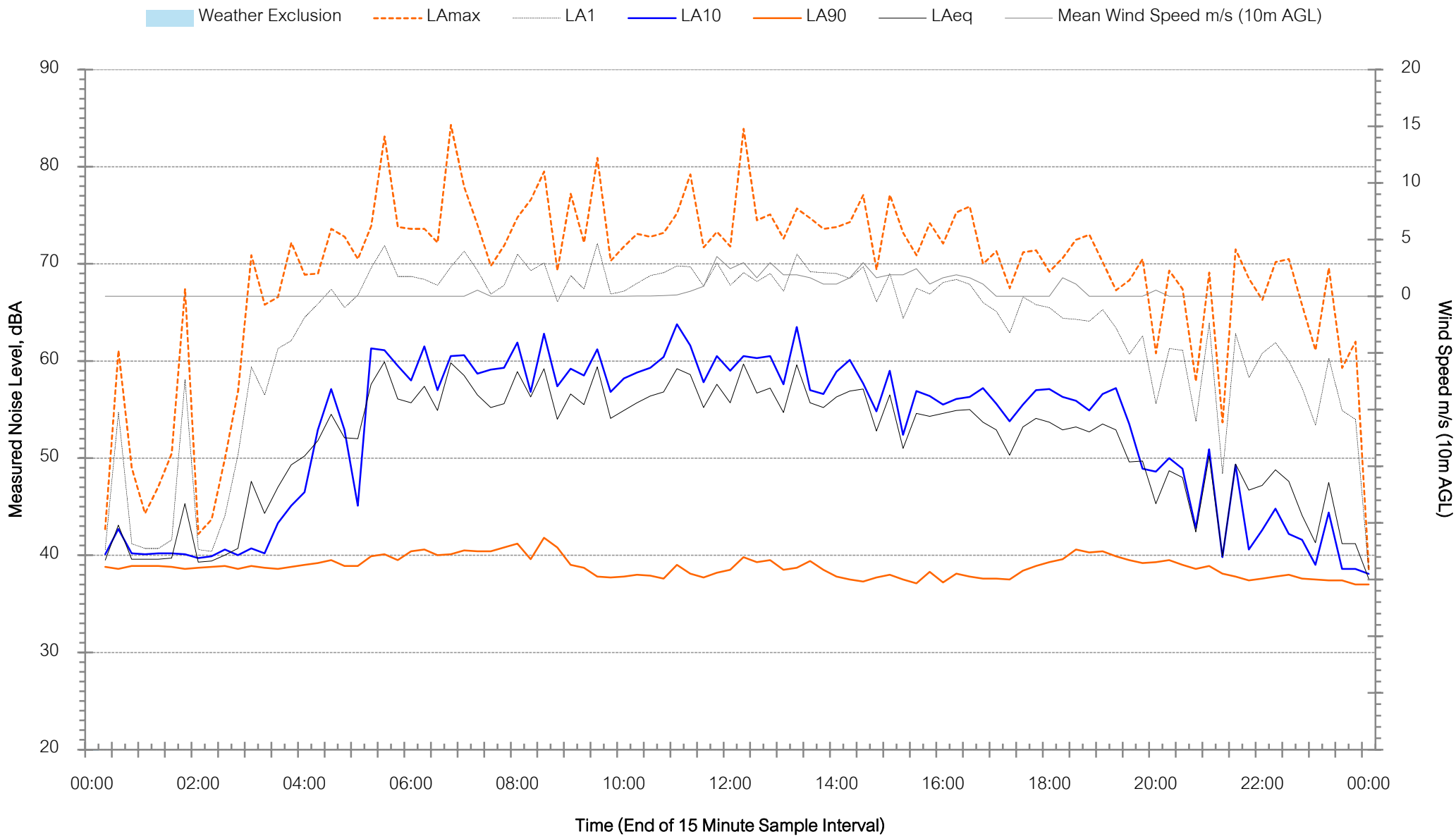
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Monday 15 April 2024



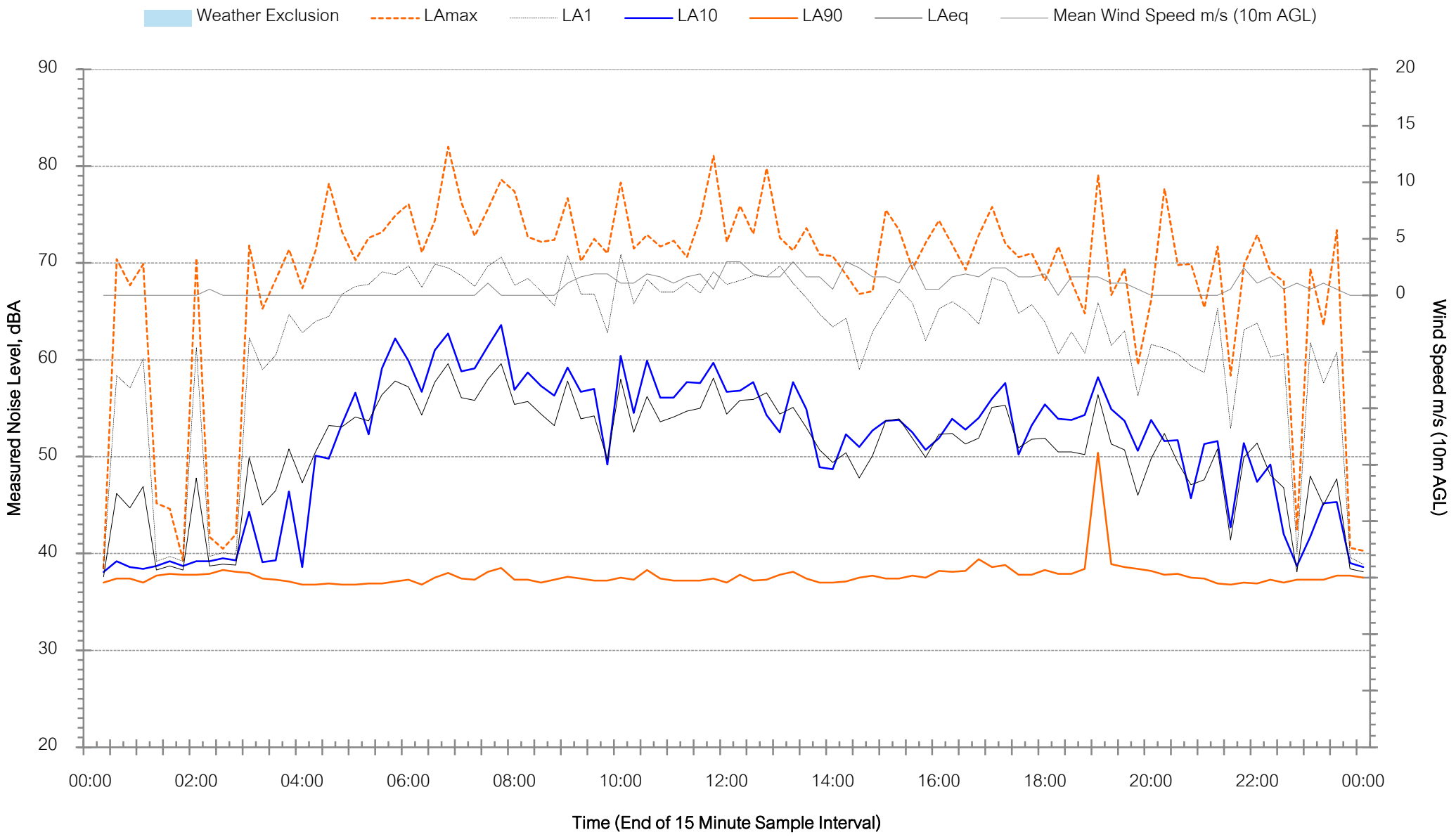
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Tuesday 16 April 2024



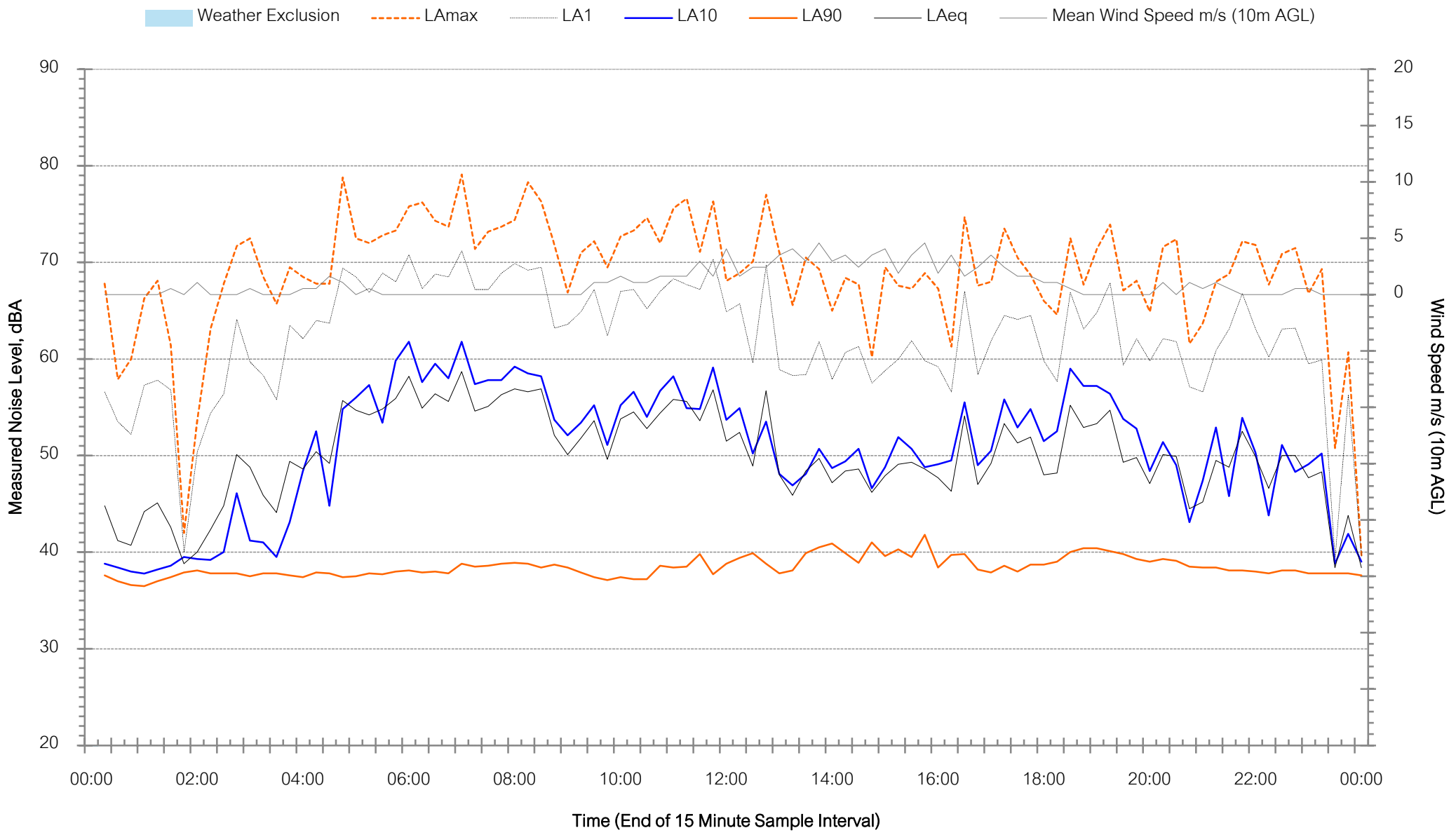
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Wednesday 17 April 2024



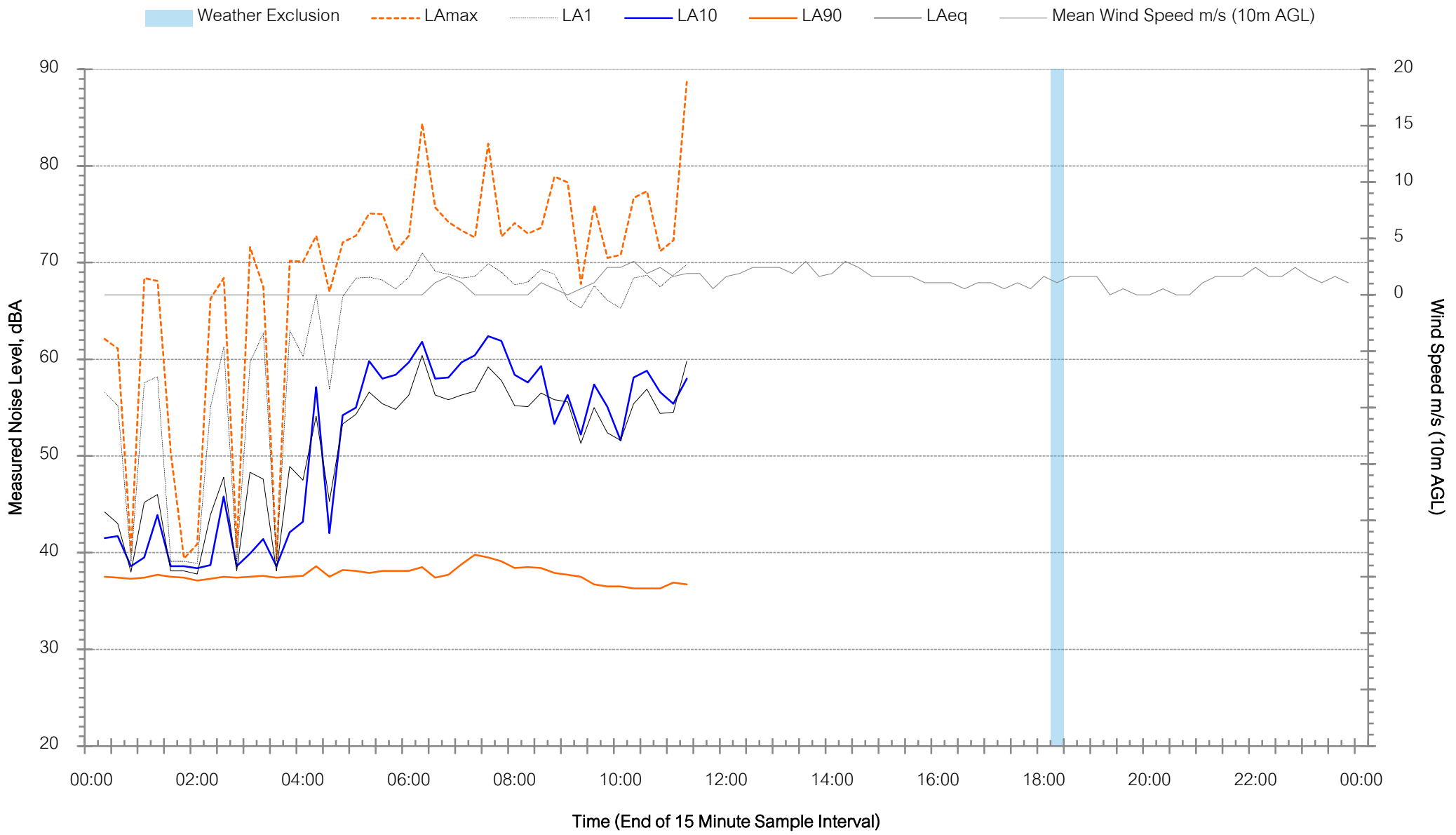
# Background Noise Levels

## Jenolan Caves Rd, Hartley - Thursday 18 April 2024



# Background Noise Levels

## Jenolan Caves Rd, Hartley - Friday 19 April 2024



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