# Noise Monitoring Assessment

Austen Quarry, Hartley, NSW April 2021



# Document Information

# **Noise Monitoring Assessment**

# Austen Quarry, Hartley, NSW

# April 2021

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

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Document ID	Status	Date	Prepared By	Signed	Reviewed By	Signed
MAC170523RP9	Final	27 April 2021	Robin Heaton	Robin Heaton	Oliver Muller	QQ.

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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;
- 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 Wednesday 31 March 2021 and Thursday 01 April 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.





#### 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 Criteri	ia				
Receiver	Day	Evening	Morning Shoulder	Morning Shoulder	
Receiver	dB LAeq(15min)	dB LAeq(15min)	dB LAeq(15min)	dB LAmax	
All privately owned	35	35	35	52	
residences	33	33	33	52	





#### 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 Wednesday 31 March 2021 and Thursday 1 April 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 ±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, undertaken at Location B - 781 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 Wednesday 31 March 2021 to Friday 9 April 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 ±0.5dBA.

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 the morning shoulder period, the primary crusher was not operational as it was down for scheduled plant maintenance. 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 Thursday 1 April 2021 to capture the onsite operations at the nominated monitoring locations.

It is also noted during the evening period, secondary crushing ceased at 9:10pm ensuring the evening noise survey was completed prior to the end of crushing. **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						
D-+-	Primary (	Crusher	Secondary Crusher			
Date	Commenced Crushing	Ceased Crushing	Commenced Crushing	Ceased Crushing		
31/03/2021	06:50	17:40	06:50	21:06		
01/04/2021	Not Oper	rational	06:55	12:35		



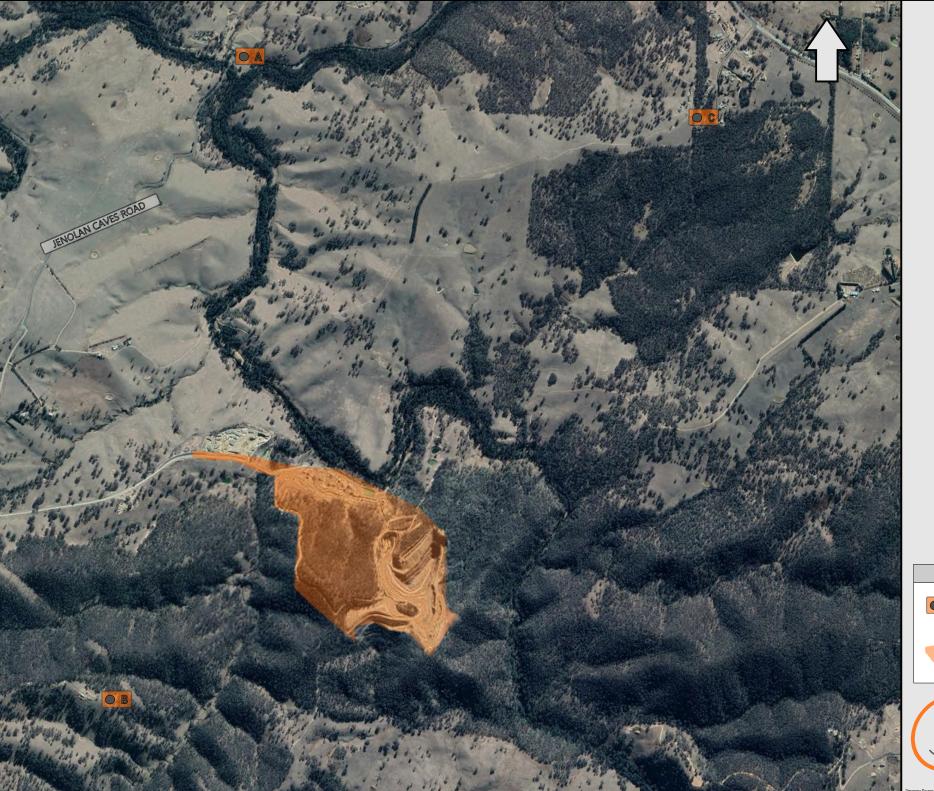


FIGURE 1 LOCALITY PLAN REF: MAC170523



KEY



MONITORING LOCATION



SITE LOCATION





#### 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 Wednesday 31 March 2021 and Thursday 1 April 2021. **Table 3** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

5.	Time	D : 1	Descript	or (dBA re 2	20 μPa)	Meteorology	Description and SPL,	
Date	(hrs)	Period	LAmax	LAeq	LA90		dBA	
							Traffic 42-78	
						WD: SW	Birds 43-58	
31/03/2021	10:09	Day	78	58	43	WS: 0.1m/s	Creek Flowing 40-43	
			Rain: Nil	Insects 35-40				
							Quarry Inaudible	
Austen Quarry	Contributi	on <sup>1</sup>				<33dB LAe	eq(15min)	
	20:36	0:36 Evening	82	57	44	WD: NE	Traffic 46-80	
31/03/2021						WS: 0.1m/s Rain: Nil	Creek Flowing 40-45	
31/03/2021							Insects 35-40	
							Quarry Inaudible	
Austen Quarry	Contributi	on <sup>1</sup>				<34dB LAeq(15min)		
						WD: N	Traffic 44-83	
01/04/2021	06:22	Shoulder	83	64	43	WS: 0.1m/s	Insects 40-43	
01/04/2021	00.22	Shoulder	03	04	43	Rain: Nil	Creek Flowing 41-44	
						Maill. INII	Quarry Inaudible	
Austen Quarry Contribution <sup>1</sup>					<33dB LAeq(15min)			
Austern Quarry Contribution				_	<33dB LAmax			

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 Wednesday 31 March 2021 and Thursday 1 April 2021. **Table 4** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

	Time		Descriptor (dBA re 20 µPa)			Description and SPL,		
Date	(hrs)	Period	LAmax	LAeq	LA90	Meteorology	dBA	
							Insects 32-38	
						WD: SW	Birds 34-46	
31/03/2021	10:36	Day	64	42	38	WS: 0.1m/s	Livestock 34-48	
						Rain: Nil	Distant Traffic 30-64	
							Quarry Inaudible	
Austen Quarry	Contributi	on <sup>1</sup>				<28dB LAeq(15min)		
						WD: NE	Distant Traffic 32-49	
31/03/2021	21:03	Evening	49	32	24	WS: 0.1m/s	Insects 24-34	
						Rain: Nil	Quarry Inaudible	
Austen Quarry	Contributi	on <sup>1</sup>				<20dB LAeq(15min)		
						\\/D. \\	Birds 34-61	
04/04/0004	00.50	Shoulder	61	41	0.1	WD: N	Distant Traffic 34-40	
01/04/2021	06:50	Shoulder	01	41	31	WS: 0.1m/s	Quarry Operations	
						Rain: Nil	(just perceptible) 30-33	
					<31dB LAeq(15min)			
Austen Quarry Contribution -					<33dB LAmax			

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 Wednesday 31 March 2021 and Thursday 1 April 2021. **Table 5** presents the monitored noise level contributions and observed meteorological conditions for each measurement.

<b>5</b> .	Time	Period	Descripto	or (dBA re :	20 μPa)	Matagralage	Description and SPL	
Date	(hrs)	Perioa	LAmax	LAeq	LA90	Meteorology	dBA	
						WD: SW	Birds 41-60	
04/00/0004	00.40	D	00	4.4	22	-	Dog Bark 38-41	
31/03/2021	09:46	Day	60	41	33	WS: 0.1m/s	Traffic 36-49	
						Rain: Nil	Quarry Inaudible	
Austen Quarry	Contributi	on <sup>1</sup>				<23dB LAe	q(15min)	
						WD: W	Traffic 32-58	
31/03/2021	20:13	Evening	58	42	35	WS: 0.1m/s	Insects 30-35	
						Rain: Nil	Quarry Inaudible	
Austen Quarry	Contributi	on <sup>1</sup>				<25dB LAeq(15min)		
						\\/\D.\\/	Birds 48-56	
04/04/0004	00.00	Ch l - l -	0.4	40	40	WD: W	Traffic 36-64	
01/04/2021	01/04/2021 06:00 Shoulder 64 48 40	40	WS: 0.1m/s	Aircraft 40-48				
						Rain: Nil	Quarry Inaudible	
A					<30dB LAeq(15min)			
Austen Quarry Contribution -				_	<30dB LAmax			

Note 1: Estimated quarry noise contribution.



#### 4.4 Unattended Noise Monitoring Results

Unattended noise monitoring was conducted at Location B from Wednesday 31 March 2021 to Friday 9 April 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 B								
Date	Time	Attended de	Attended descriptors (dBA re 20 μPa)			Un-attended descriptors (dBA re 20 μPa)		
Date	(hrs)	dB LAmax	dB LAeq	dB LA90	dB LAmax	dB LAeq	dB LA90	
31/03/2021	11:00	64	42	38	85	58	30	
31/03/2021	21:00	49	32	24	50	64	26	
01/04/2021	06:45	61	41	31	54	42	32	

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 B. 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 Wednesday 31 March 2021 to Friday 9 April 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 B						
	Unattended descriptors (dBA re 20 µPa)					
Date		dB LAeq				
	Day	Evening	Night			
Wednesday, 31 March 2021	N/A	34	33			
Thursday, 1 April 2021	43	36	27			
Friday, 2 April 2021	47	42	34			
Saturday, 3 April 2021	38	43	41			
Sunday, 4 April 2021	58	44	35			
Monday, 5 April 2021	40	43	31			
Tuesday, 6 April 2021	42	30	33			
Wednesday, 7 April 2021	47	44	35			
Thursday, 8 April 2021	43	43	44			
Friday, 9 April 2021	49	N/A <sup>1</sup>	N/A <sup>1</sup>			



# 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 LA <sub>eq(15min)</sub> Noise Compliance Assessment						
Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant			
Receiver No.	dB LAeq(15min)	dB LAeq(15min)	Compliant			
А	<33	35	✓			
В	<28	35	$\checkmark$			
С	<23	35	$\checkmark$			

Table 9 Evening LA <sub>eq(15min)</sub> Noise Compliance Assessment						
Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Otit			
Receiver No.	dB LAeq(15min)	dB LAeq(15min)	Compliant			
А	<34	35	✓			
В	<20	35	$\checkmark$			
С	<25	35	✓			

Table 10 Morning Shoulder LA <sub>eq(15min)</sub> Noise Compliance Assessment						
Receiver No.	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant			
Receiver No.	dB LAeq(15min)	dB LAeq(15min)	Compliant			
А	<33	35	✓			
В	31	35	$\checkmark$			
C	<30	35	✓			

Table 11 Morning Shoulder LAmax Noise Compliance Assessment					
Danait an Na	Quarry Noise Contribution	Quarrying Noise Criteria	Compliant		
Receiver No.	dB LAmax	dB LAmax	Compliant		
А	<33	52	✓		
В	<33	52	✓		
С	<30	52	✓		





#### 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 March 2021 survey. Other extraneous noise sources audible during the three attended surveys included birds, 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 was audible at this monitoring location during the morning shoulder periods. Quarry sources included trucks engine hum from the pit area. Notwithstanding, emissions from the quarry remained below applicable noise criteria for all measurements. Extraneous noise sources dominated the noise environment which included birds, distant traffic hum and insect noise. The quarry was inaudible during the day and evening monitoring periods.

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 March 2021. Highway traffic, local birds and dogs barking 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.





#### 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 Wednesday 31 March 2021 and Thursday 1 April 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.





# Appendix A – Glossary of Terms



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

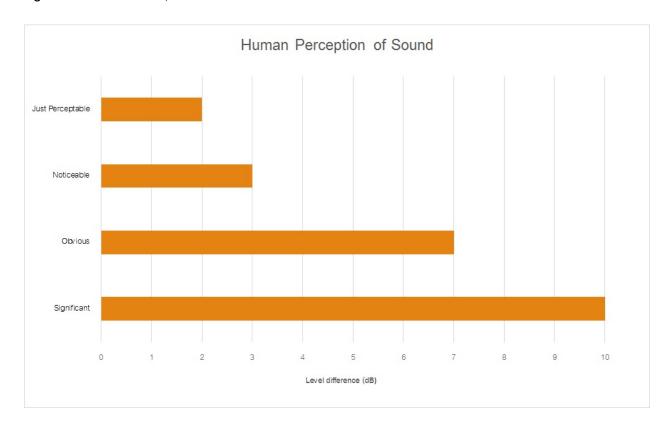
Term	Description		
1/3 Octave	Single octave bands divided into three parts		
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice		
	the lower frequency limit.		
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background 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 :		
	= 10.log10 (W/Wo)		
	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.

able 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 – Operational Logs





# **DAILY PRODUCTION LOG & CHECKLIST - PRIMARY**

Date: 1 . 4 . 21	Operator: Kingaley
0.	

Weather Conditions; +inc Quarry Bench ID. 130

Shift Start Time	6.00	Shift Finish Time	3.30
Crusher Start Time	6.55	End of day Crusher stopped	12.25

**Belt Weightometer Reading - Daily** 

Conveyor 1 Start	Conveyor 1 Finish	<b>Total Tonnes Crushed</b>
The state of the s		· · · · · · · · · · · · · · · · · · ·
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	24	KK3 Loads to Boot	
KK2 Loads to Boot	24	Contractor Loads to Boot	

Stoppages due to Trucks	Stoppages due to Jaw

Plant Stopped	Plant Started	Downtime (Hrs/Min)	Reason
p.100	6.55	55~	tool box: Main breaker tripped x2 - CVB L/T - CV3 G/fault
7.40	7.50	10 m	dean sensor on CVZ \$4/b
9.25	10.15	50m	amoko; hose CV5 h/b.
12.25			and crushing i tool box

Pre start checks;

Generator hours 298 446 Generator oil level.

Plant Visual ....

#### COMMENTS

\* Plant started + 6:55 \* \$ 6:55 + Durge Pile

Owner: Quarry Manager	HY-TEC CONCRETE & QUARRIES	Form: HTQY-P-SFT-034
Forms & Templates Revision: 3	Status: Approved	Issue Date: 14 Feb 2012



# **DAILY PRODUCTION LOG & CHECKLIST - PRIMARY**

Date: 31 - 3 - 21	Operator: Kings
D :	Quarry Bench ID. 730

Shift Start Time	6.00	Shift Finish Time	5 00	
Crusher Start Time	6.50	End of day Crusher stopped	4.40	

**Belt Weightometer Reading - Daily** 

Conveyor 1 Start	Conveyor 1 Finish	<b>Total Tonnes Crushed</b>
Conveyor 6 Scalps Start	Conveyor 6 Scalps Finish	Total Tonnes Stockpiled

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

Cartage of Naw Feed from Face to Boot - Natifiber of Todds			
KK1 Loads to Boot	34	KK3 Loads to Boot	
KK2 Loads to Boot	35	Contractor Loads to Boot	

Stoppages due to Trucks	Stoppages due to Jaw

6.00 650 50 tool box EVILT, CV7 47. 9.25 10.55 1430 pmoko set up new bench etc 12.45 2.05 1420 blast = smoko = Det up new bench = N		Plant Downtime d Started (Hrs/Min)		Plant Stopped
10 10 10 10 10 10 10 10 10 10 10 10 10 1		650 50_	6	6.00
		10.55 14.30~	10	9.25
	Move 8	2.05 1W20_	2.0	12.45
4.40 end crushing				4.40

_		
Pre	start	checks;

Generator hours. 24 83 6	1.2
Generator hours.	Generator oil level

Plant Visual .....

#### **COMMENTS**

\* 6.46 = plant running \* 6.50 = scalps

Owner: Quarry Manager	HY-TEC CONCRETE & QUARRIES	Form: HTQY-P-SFT-034
Forms & Templates Revision: 3	Status: Approved	Issue Date: 14 Feb 2012

Owner: Quarry ManagerHY-TEC CONCRETE & QUARRIESForm: HTQY-P-SFT-035Forms & TemplatesRevision: 3Status: ApprovedIssue Date: 14.02.12

**DAILY PRODUCTION LOG & CHECKLIST - SECONDARY** 

Date: 31.3.21 Operator: Stevat -

Weather Conditions; Fine Lool

Shift Start Time	600	Shift Finish Time	(OPI)
Crusher Start Time		End of day Crusher stopped	90h

Weightometer Reading; Start: 4198952 Finish: 4203496

Plant Stopped	Plant Started	Downtime (Hrs/Min)	Reason
	650		preestot checker tracky metal Dotator VP
715	745	20	conica trip
123	127	41	Metal alarm BOLT ON Belt
227	226	541	Matal alam STEEL ON BIT
244	245	1	Ad 458 +550
246	252	6	medalalarm
152	258	6	Metal alarm
320	348	28	GREAGE Seperator
520	521	(	AL 450 + 550
			OUT OF STONE ON NO 1 113

## **PRODUCTION SUMMARY**

366

Belts	Size	Description	Total	Gate open	Comments
CV 8	20 mm	Concrete Aggregate	1744		
CV 20	Course Sand 4-0mm	Manufactured Sand	1119		
CV19*	10-7mm Blend*	Concrete Blend	1545		
CV19	7mm	Concrete Aggregate			
CV17	10mm	Concrete Aggregate			
CV15	14mm	Concrete Aggregate	204		
CV5	Ballast/40mm	Non Spec Aggregate			

1978

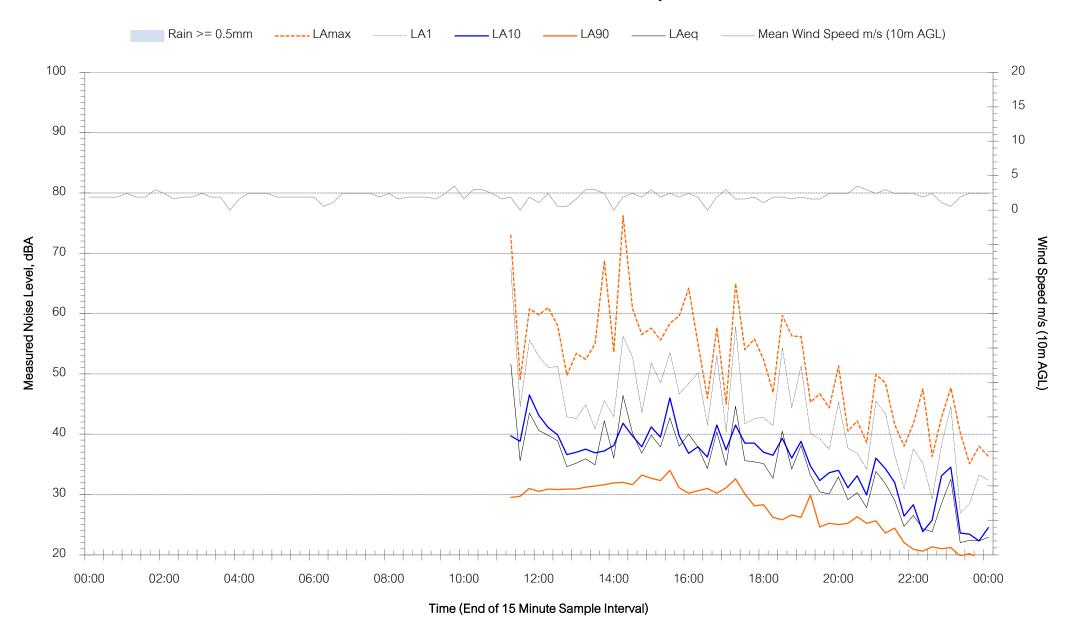
**COMMENTS** 

eve troting oft product at toil hubbin on structure
PRI weight maker Not always works

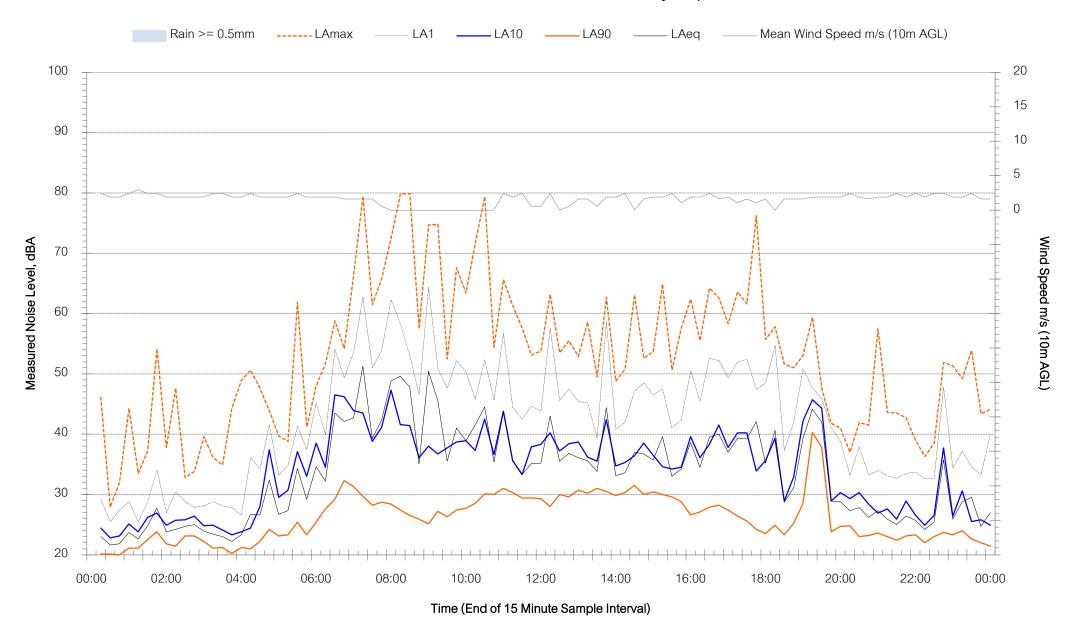
# Appendix C – Noise Monitoring Charts



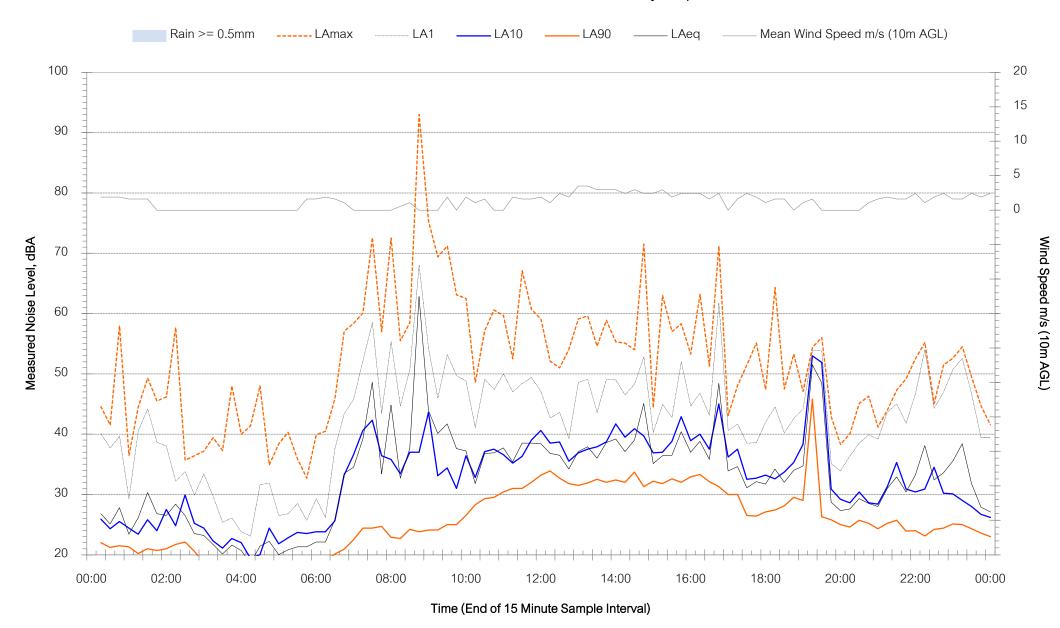
## 781 Jenolan Caves Road, Good Forest - Wednesday 31 March 2021



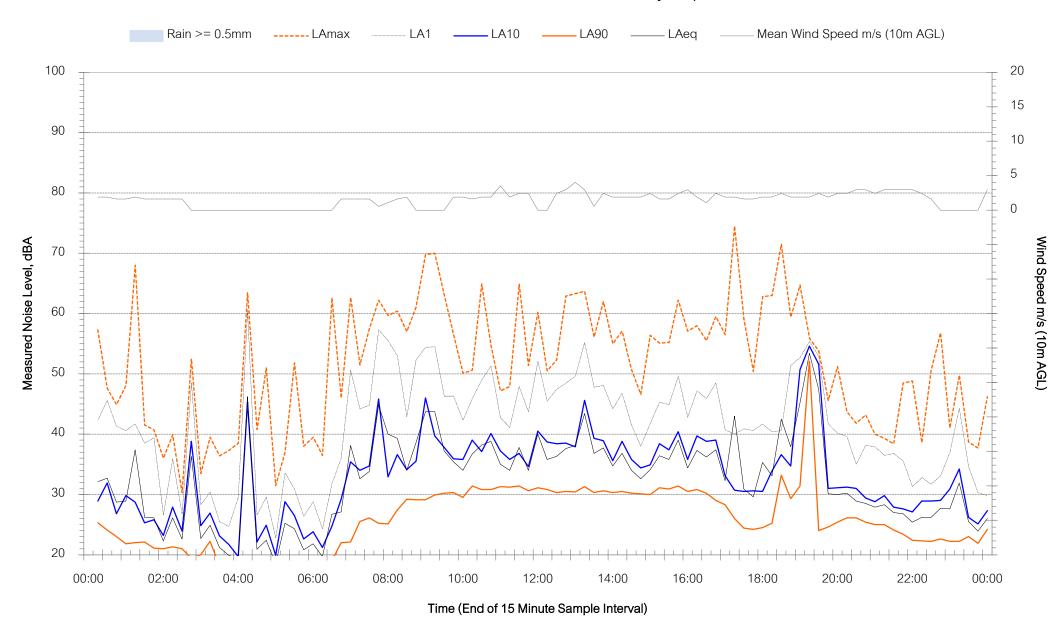
## 781 Jenolan Caves Road, Good Forest - Thursday 1 April 2021



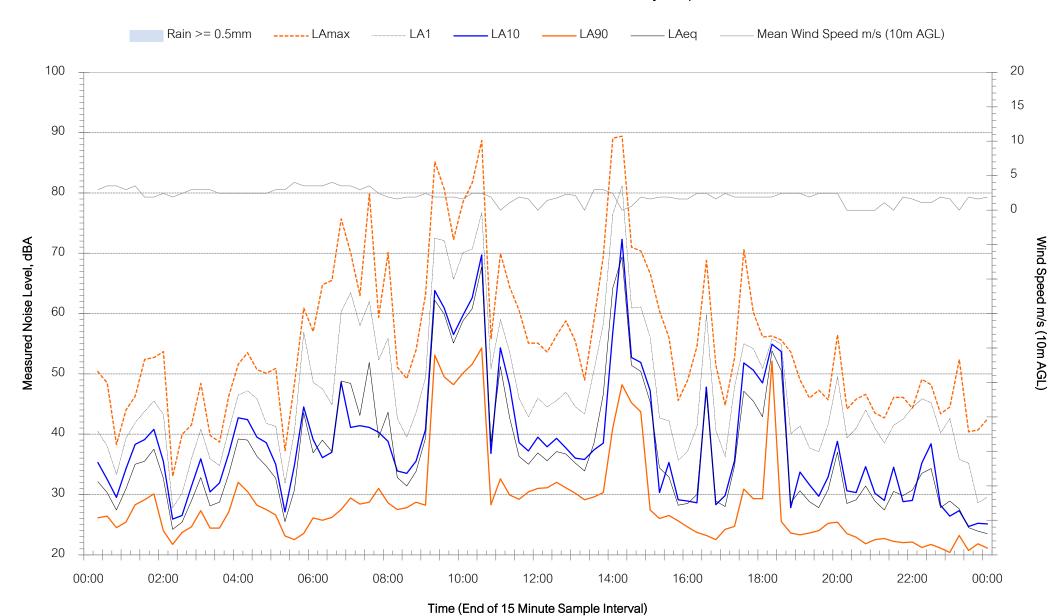
## 781 Jenolan Caves Road, Good Forest - Friday 2 April 2021



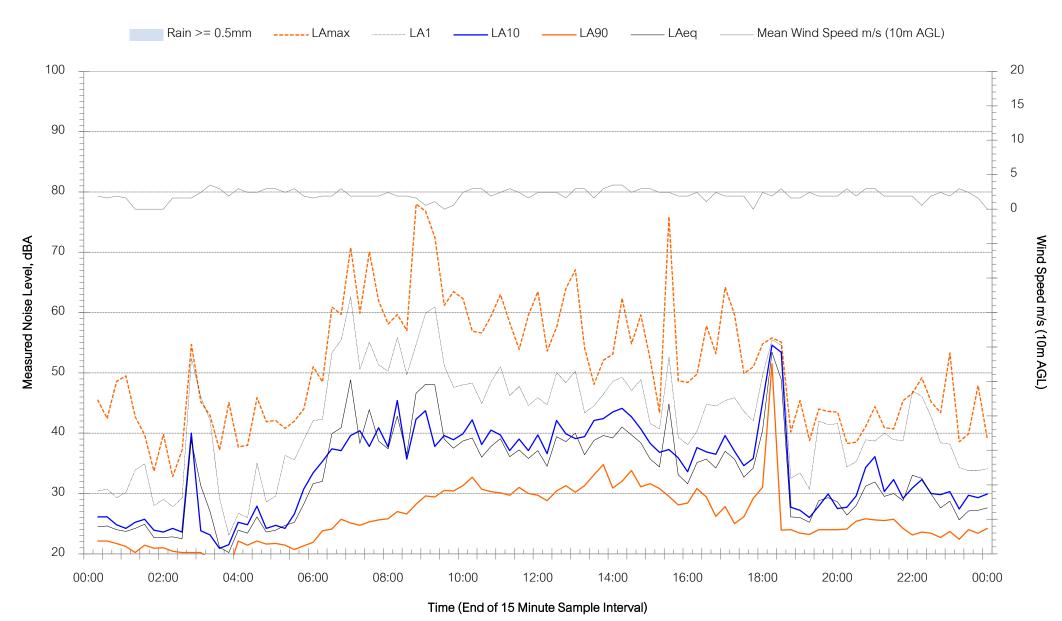
## 781 Jenolan Caves Road, Good Forest - Saturday 3 April 2021



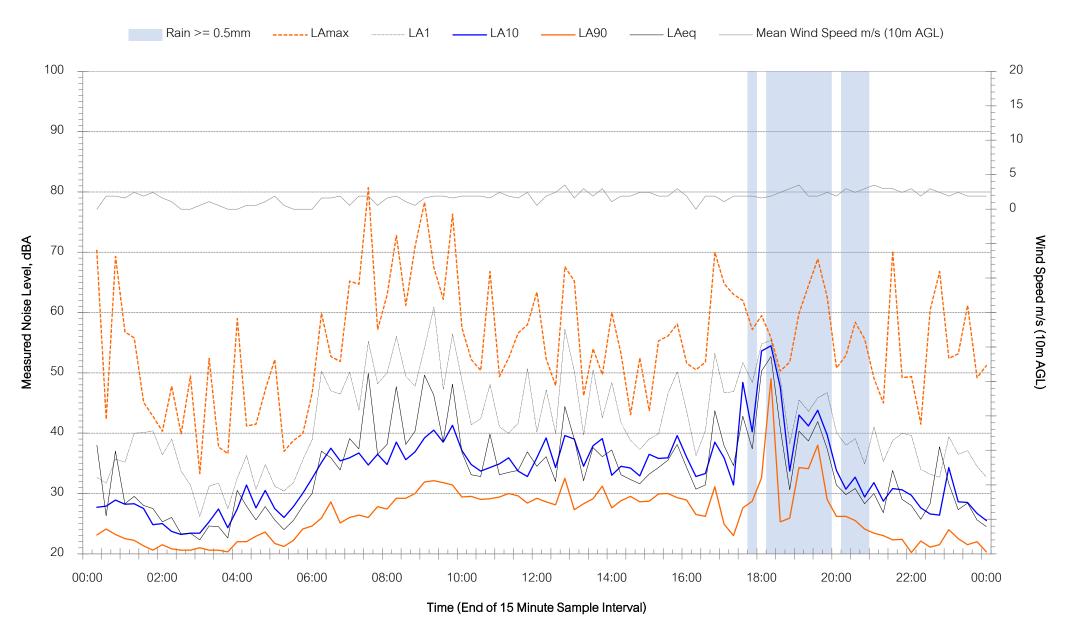
## 781 Jenolan Caves Road, Good Forest - Sunday 4 April 2021



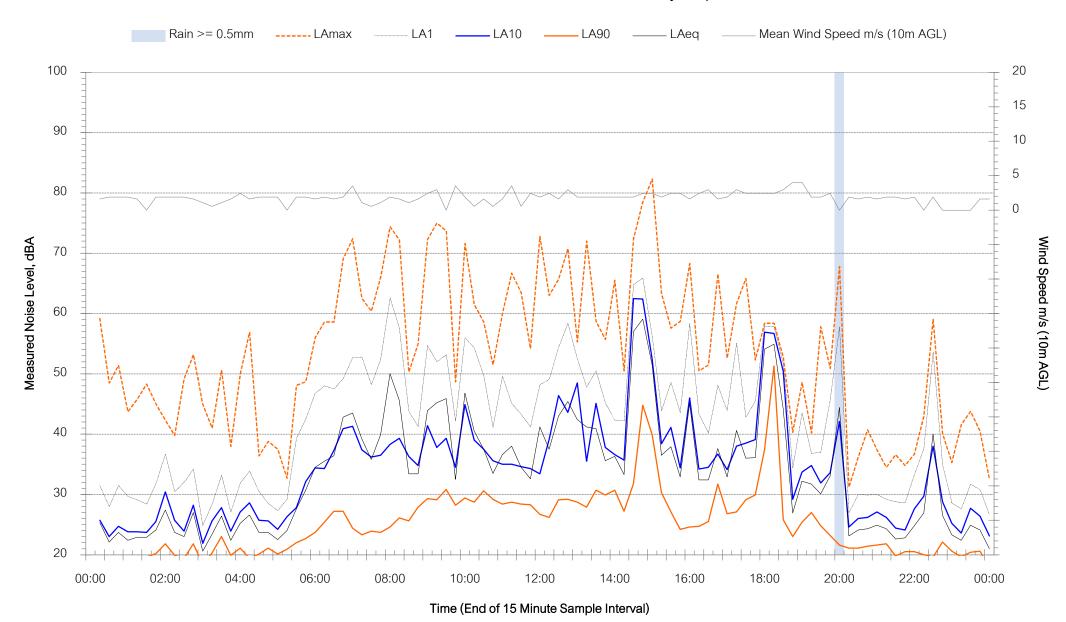
## 781 Jenolan Caves Road, Good Forest - Monday 5 April 2021



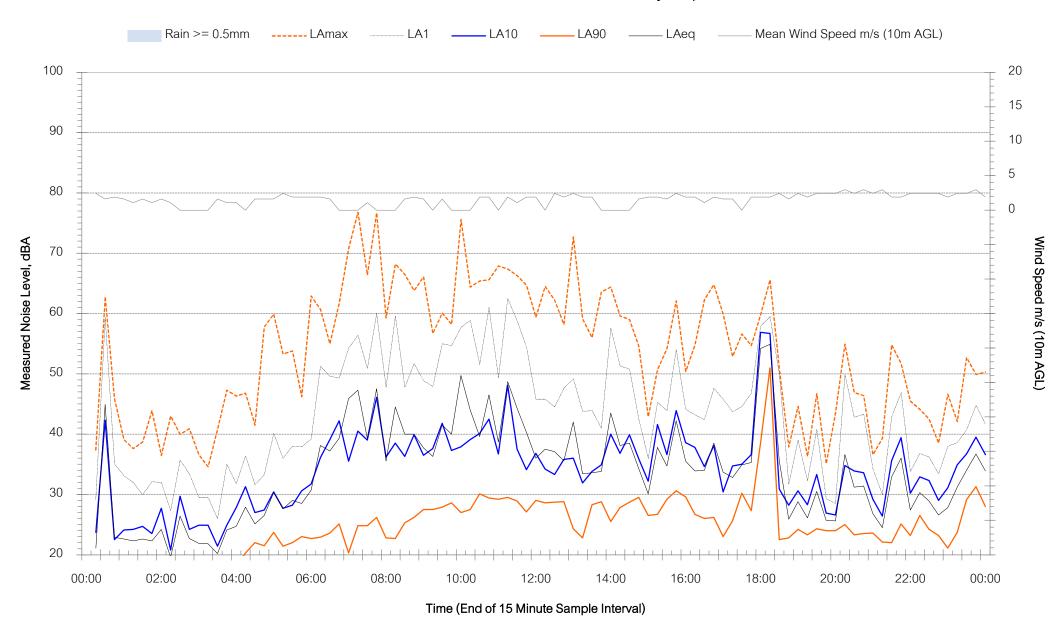
## 781 Jenolan Caves Road, Good Forest - Tuesday 6 April 2021



## 781 Jenolan Caves Road, Good Forest - Wednesday 7 April 2021

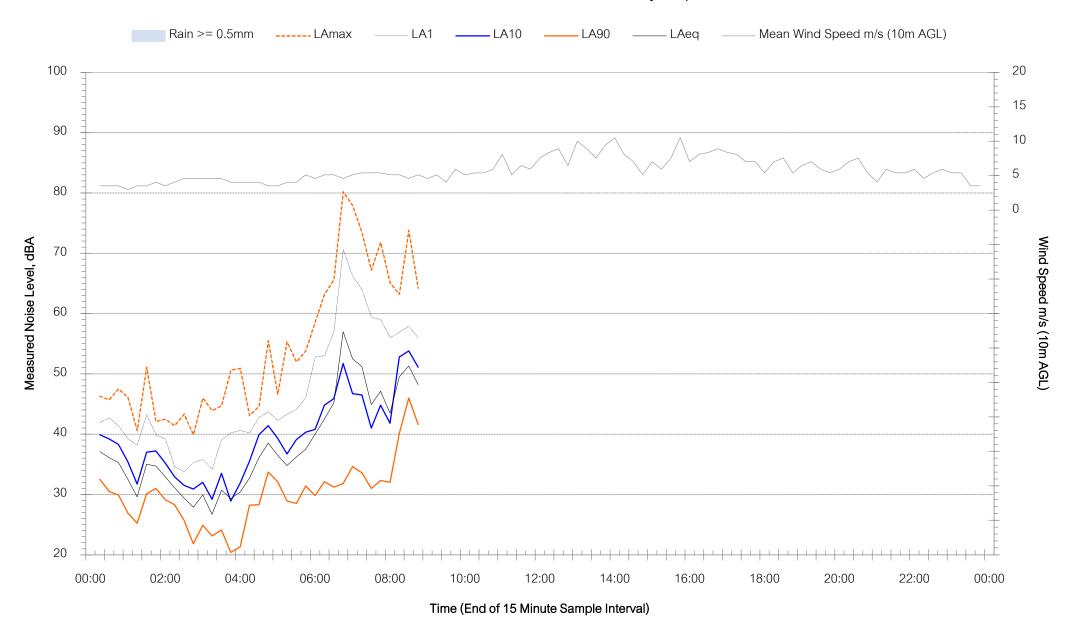


## 781 Jenolan Caves Road, Good Forest - Thursday 8 April 2021





# 781 Jenolan Caves Road, Good Forest - Friday 9 April 2021





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