



Hall Quarry

Environmental Monitoring Report

Date Published: 14 September 2021



This monitoring report is to satisfy the requirements of Section 66 (6) of the Protection of the Environment and Operations Act 1997, to make available, within 14 days of obtaining any monitoring data that relates to pollution under an Environment Protection Licence.

The monitoring of pollutants provided in this report is undertaken as per the requirements of Environment Protection Licence 4082 (EPL 4082 – Boral Hall Quarry)

This report provides environmental monitoring data for Hall Quarry for the period November 2017 to Present day. This report is reviewed monthly during each reporting period and updated if required.

Hall Quarry Information	
Premise Details	Boral – Hall Quarry
Address	Kaveney Rd, Murrumbateman NSW 2582
Licensee	Boral Resources (Country) Pty Ltd
EPL No	4082
EPL Location	https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=183732&SYSUID=1&LICID=4082

Monitoring data in this report relates to the monitoring undertaken for the following environmental pollutants:

- Blasting
- Noise

Blasting

Blast monitoring is conducted as per condition L6.3 of EPL 4082. The blasting monitoring results are summarised below.

Monitoring Period: September 2021
 Licensee: Hall Quarry
 Licensee Address: Kaveney's Rd, Murrumbateman NSW 2582
 EPL No: 4082

Qualifications related to blasting:

The airblast overpressure level from blasting operations in or on the premises must not exceed:

- a) 115 dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; and
- b) 120 dB (Lin Peak) at any time.

The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed:

- a) 5mm/s for more than 5% of the total number of blasts carried out on the premises during each reporting period; and
- b) 10 mm/s at any time.

Airblast overpressure and ground vibration levels must be measured at the Manager's Cottage, "Silverwattle", Kaveney's Road for all blasts carried out in or on the premises.

Results

Location	Blast Date	Results Received	Blast Time	Ground Vibration Result (mm/s)**	GV Compliant	Overpressure Result dB(L)**	OP Compliant	Comments
Silverwattle	06/09/2021	09/09/2021	13:24	0.5	Yes	107.0	Yes	
Silverwattle	30/08/2021	31/08/2021	13:26	0.8	Yes	102.8	Yes	
Silverwattle	19/07/2021	21/07/2021	14:25	1.047	Yes	104.2	Yes	
Silverwattle	21/06/2021	21/6/2021	14:08	No trigger	Yes	No trigger	Yes	
Silverwattle	7/05/2021	7/5/2021	13:59	0.51 mm/s	Yes	110 dBL	Yes	
Silverwattle	22/02/2021	22/2/21	14:58	0.51 mm/s	Yes	98.8 dBL	Yes	
Silverwattle	14/12/2020	14/12/20	15:22	0.52 mm/s	Yes	No Tirgger	Yes	
Silverwattle	09/11/2020	09/11/20	13:06	No trigger	Yes	No Trigger	Yes	
Silverwattle	19/10/2020	19/10/20	12:52	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	29/07/2020	29/07/20	12:16	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	10/06/2020	10/06/20	14:03	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	19/05/2020	19/05/20	13:13	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	01/04/2020	01/04/20	14:40	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	11/03/2020	11/03/20	12:56	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	17/02/2020	17/02/20	13:00	0.684 mm/s	Yes	100 dBL	Yes	
Silverwattle	26/11/2019	26/11/19	15:02	No trigger	Yes	No trigger	Yes	
Silverwattle	27/9/2019	27/9/19	13:08	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	17/6/2019	17/6/19	14:23	0.51mm/s	Yes	103.5 dBL	Yes	
Silverwattle	6/5/2019	6/5/19	13:49	0.51mm/s	Yes	100 dBL	Yes	

Location	Blast Date	Results Received	Blast Time	Ground Vibration Result (mm/s)**	GV Compliant	Overpressure Result dB(L)**	OP Compliant	Comments
Silverwattle	29/4/2019	29/4/19	12:21	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	29/1/2019	29/1/19	13:05	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	18/1/2019	18/1/19	12:44	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	5/12/2018	5/12/18	13:13	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	27/11/2018	27/11/2018	13:13	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	30/10/2018	30/10/2018	13:21	0.51mm/s	Yes	105.5 dBL	Yes	
Silverwattle	22/10/2018	22/10/2018	11:45	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	24/9/2018	25/9/2018	13:33	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	27/7/2018	27/7/2018	13:21	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	5/6/2018	5/6/2018	13:29	0.38 mm/s	Yes	106.5 dBL	Yes	
Silverwattle	25/5/2018	25/5/2018	13:11	0.51mm/s	Yes	100 dBL	Yes	
Silverwattle	20/4/2018	27/4/18	13:00	0.51 mm/s	Yes	108 dBL	Yes	
Silverwattle	5/2/2018	12/2/18	11:13	0.51 mm/s	Yes	100 dBL	Yes	
Silverwattle	5/12/2017	12/12/2017	13:22	0.51 mm/s	Yes	100 dBL	Yes	

**Trigger levels set on the blast monitor for airblast were 100 dBL and ground vibration 0.51 mm/s.

Noise

Noise monitoring is conducted as per condition L2 of EPL 4082. The blasting monitoring results are summarised below.

Monitoring Period: May 2021
 Licensee: Hall Quarry
 Licensee Address: Kaveney's Rd, Murrumbateman NSW 2582
 EPL No: 4082

The monitoring and assessment results are presented in individual tables for each monitoring location.

The results of the attended noise measurements at location R1 for the April 2021 survey period are summarised in **Table 4** with relevant EPL limits, the calculated quarry noise contribution and prevailing meteorology conditions at the time of each measurement.

Table 4 Operator-Attended Noise Survey Results – Manager's Cottage (R1)							
Date	Time (hrs)	Descriptor (dBA re 20 µPa)			EPL Limit	Meteorology	Description and SPL, dBA
		L _{Amax}	L _{Aeq}	L _{A90}			
23/04/2021	06:39	77	60	48	36	WD: W	Traffic 45-77
(Morning Shoulder)						WS: 0.5m/s	Birds 45-51
						Rain: Nil	Quarry Crushing 45-56 (constant)
Quarry Site L _{Aeq} (15min) Contribution							46
22/04/2021	11:17	75	54	43	39	WD: SSW	Traffic 43-75
(Day)						WS: 2.7m/s	Wind in trees 41-46
						Rain: Nil	Quarry Mobile Plant <36 (only audible during breaks in traffic)
Quarry Site L _{Aeq} (15min) Contribution							<36
22/04/2021	18:50	66	41	27	37	WD: NW	Traffic 25-66
(Evening)						WS: 0.1m/s	Insects 25-36
						Rain: Nil	Aircraft 28-42
Quarry Site L _{Aeq} (15min) Contribution							Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							Site Not Operating

Note: Meteorology data obtained from direct measurement by the operator.

The results of the attended noise measurements at location R2 for the April 2021 survey period are summarised in **Table 5** with relevant EPL limits, the calculated quarry noise contribution and prevailing meteorology conditions at the time of each measurement.

Table 5 Operator-Attended Noise Survey Results – Silverwattle (R2)							
Date	Time (hrs)	Descriptor (dBA re 20 µPa)			EPL Limit	Meteorology	Description and SPL, dBA
		L _{Amax}	L _{Aeq}	L _{A90}			
23/04/2021 (Morning Shoulder)	06:20	60	41	28	36	WD: W WS: 0.1m/s Rain: Nil	Birds 28-51 Traffic 28-60 Agriculture 36-42 Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							<35
22/04/2021 (Day)	11:55	68	52	43	39	WD: SSW WS: 2.5m/s Rain: Nil	Traffic 37-68 Wind in trees 37-56 Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							<35
22/04/2021 (Evening)	19:09	62	41	19	37	WD: NW WS: 0.1m/s Rain: Nil	Insects <26 Traffic 20-62 Aircraft 26-46 Dog bark 26-38 Livestock 28-38 Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							Site Not Operating

Note: Meteorology data obtained from direct measurement by the operator.

The results of the attended noise measurements at location R3 for the April 2021 survey period are summarised in **Table 6** with relevant EPL limits, the calculated quarry noise contribution and prevailing meteorology conditions at the time of each measurement.

Table 6 Operator-Attended Noise Survey Results – Barton Highway (R3)							
Date	Time (hrs)	Descriptor (dBA re 20 μ Pa)			EPL Limit	Meteorology	Description and SPL, dBA
		L _{Amax}	L _{Aeq}	L _{A90}			
23/04/2021 (Morning Shoulder)	06:00	86	72	56	36	WD: W WS: 0.1m/s Rain: Nil	Traffic 48-86 Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							<35
22/04/2021 (Day)	12:21	84	68	49	39	WD: SSW WS: 2.5m/s Rain: Nil	Traffic 43-84 Insects <43 Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							<35
22/04/2021 (Evening)	18:31	83	70	54	37	WD: NW WS: 0.1m/s Rain: Nil	Traffic 45-83 Quarry Inaudible
Quarry Site L _{Aeq} (15min) Contribution							Site Not Operating

Note: Meteorology data obtained from direct measurement by the operator.

Monitoring Period: May 2020
 Licensee: Hall Quarry
 Licensee Address: Kaveney's Rd, Murrumbateman NSW 2582
 EPL No: 4082

The monitoring and assessment results are presented in individual tables for each monitoring location.

The results of the 15 minute attended noise measurements for Tuesday 21 April 2020 and Wednesday 22 April 2020 for R1 are summarised in **Table 4**.

Table 4 Operator-Attended Noise Survey Results – Manager's Cottage (R1)							
Date	Time (hrs)	Primary Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA	
		L _{Amax}	L _{Aeq}	L _{A90}			
22/04/2020	06:23 (Morning Shoulder)	79	60	40	WS: <0.5m/s WD: W Rain: Nil	Local Traffic 40-79	
						Highway Traffic <35-40	
						Birds 38-51	
						Site Vehicles/Loading <30-40	
		Quarry Site L _{Aeq} (15min) Contribution					<36
22/04/2020	08:17 (Day)	76	60	40	WS: 1.0m/s WD: NW Rain: Nil	Local Traffic 40-76	
						Highway Traffic <32-40	
						Birds 37-63	
						Site Vehicles/Loading 32-38	
						Site Impacts 38-40	
						Site Hum <32-34	
		Quarry Site L _{Aeq} (15min) Contribution					37
21/04/2020	19:57 (Evening)	77	52	22	WS: <0.1m/s WD: W Rain: Nil	Local Traffic 30-77	
						Highway traffic 20-43	
						Site Not Operating	
		Quarry Site L _{Aeq} (15min) Contribution					

The results of the 15 minute attended noise measurements for Tuesday 21 April 2020 and Wednesday 22 April 2020 for R2 are summarised in **Table 5**.

Table 5 Operator-Attended Noise Survey Results – Silverwattle (R2)						
Date	Time (hrs)	Primary Noise Descriptor (dBA)			Meteorology	Description and SPL, dBA
		re 20 µPa				
		L _{Amax}	L _{Aeq}	L _{A90}		
22/04/2020	06:43 (Morning Shoulder)	78	57	37	WS: <0.5m/s	Birds 34-63
					WD: W	Traffic 35-78
					Rain: Nil	Residential Noise 38-40
						Site Vehicles/Loading 30-38
Quarry Site L _{Aeq} (15min) Contribution						Site Hum 30-33
Quarry Site L _{Aeq} (15min) Contribution						34
22/04/2020	08:37 (Day)	79	55	38	WS: 1.0m/s	Birds 35-57
					WD: W	Traffic 40-79
					Rain: Nil	Site Vehicles/Loading 35-38
						Site Impacts 35-40
Quarry Site L _{Aeq} (15min) Contribution						Site Hum <33
Quarry Site L _{Aeq} (15min) Contribution						35
21/04/2020	20:27 (Evening)	73	50	14	WS: <0.1m/s	Insects 20-33
					WD: W	Birds 20-28
					Rain: Nil	Traffic 20-73
Quarry Site L _{Aeq} (15min) Contribution						Site Not Operating

The results of the 15 minute attended noise measurements for Tuesday 21 April 2020 and Wednesday 22 April 2020 for R3 are summarised in **Table 6**.

Table 6 Operator-Attended Noise Survey Results – Barton Highway (R3)						
Date	Time (hrs)	Primary Noise Descriptor (dBA re 20 µPa)			Meteorology	Description and SPL, dBA
		LA _{max}	LA _{eq}	LA ₉₀		
22/04/2020	06:00 (Morning Shoulder)	81	66	47	WS: <0.1m/s WD: W Rain: Nil	Traffic 41-81 Site Not Audible
Quarry Site LA _{eq} (15min) Contribution						<36
22/04/2020	07:57 (Day)	80	66	43	WS: <0.1m/s WD: W Rain: Nil	Traffic 37-80 Birds 35-42 Site Not Audible
Quarry Site LA _{eq} (15min) Contribution						<39
21/04/2020	19:37 (Evening)	81	62	35	WS: 0.5m/s WD: W Rain: Nil	Traffic 25-81 Insects <25
Quarry Site LA _{eq} (15min) Contribution						Site Not Operating

Hall Quarry Monitoring Locations.

Blast Monitoring Location

