

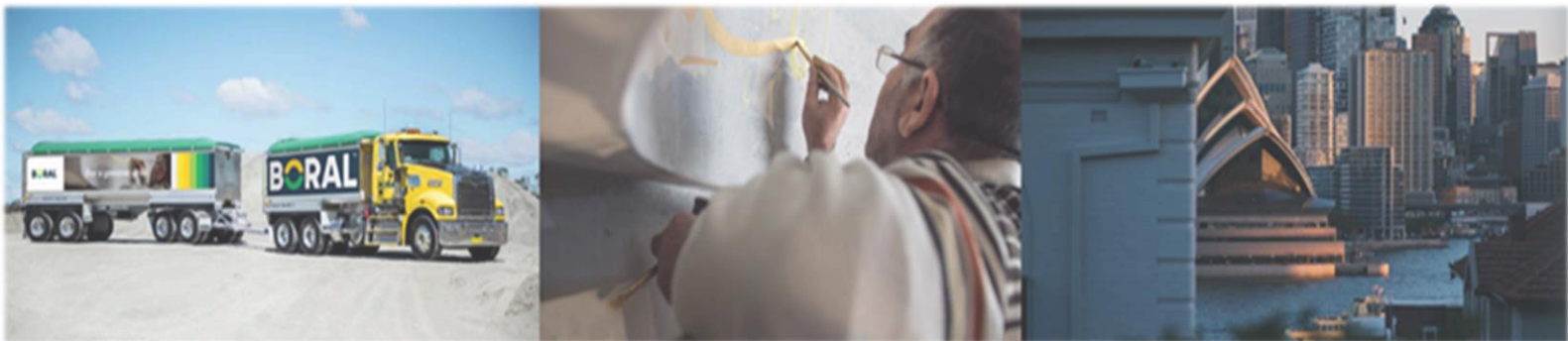


Environmental Monitoring Report

Dunmore Quarry

June 2023

Date Published: July 2023



Dunmore Quarry Environmental Monitoring Report

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 request, 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 77 (EPL 77 – Boral Dunmore Quarry)

This report provides environmental monitoring data for Dunmore Quarry for the period June 2019 to June 2023.

Dunmore Quarry Information	
Premise Details	Boral – Dunmore Quarry
Address	Princes Highway, Dunmore NSW, 2529
Licensee	Boral Resources (NSW) PTY LTD
EPL N ^o	77
EPL Location	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=77&id=77&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued

Monitoring data in this report relates to the monitoring undertaken in the reporting period for Blasting.

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Blasting

Blast monitoring is conducted as per condition L4 of EPL 77. The blasting monitoring results for the reporting period is summarised below.

Sample Period:	June 2023
Licensee:	Dunmore Quarry
Licensee Address:	Princes Hwy, Dunmore NSW 2529
EPL No:	77

Qualifications related to noise:

- * The overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time
- * The overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) for more than 5% of the total number of blasts over each reporting period
- * Ground vibration peak particle vector from the blasting operations at the premises must not exceed 10mm/sec at any time
- * Ground vibration peak particle vector from the blasting operations at the premises must not exceed 5mm/sec for more than 5% of the total number of blasts over each reporting period
- * Blast monitoring overpressure and ground vibration is currently measured at the Benny Property. Prior to the 20th of February 2018 blast monitoring had been undertaken at the MacParland Residence.
- * **A reading denoted as “No Trigger” means that the recorded value was below the measuring sensitivity of the instrument and therefore deemed compliant with limits.**

Monitoring Location	Blast Date	Results Received	Time	Ground Vibration (mm/s)	Overpressure (dB)	Compliant	Comments
Benny Residence	9-June-23	3-July-23	1437	0.38	113.2	Y	Instrument set to a sensitivity of 88.0dbL for Overpressure and 0mm/s for Vibration
Benny Residence	16-June-23	3-July-23	1421	0.08	97.1	Y	Instrument set to a sensitivity of 88.0dbL for Overpressure and 0mm/s for Vibration
Benny Residence	16-June-23	3-July-23	1437	0.45	99.0	Y	Instrument set to a sensitivity of 88.0dbL for Overpressure and 0mm/s for Vibration
Benny Residence	23-June-23	3-July-23	1257	1.27	117.8	Y	Over 20 blasts have been undertaken in the reporting period, hence the airblast overpressure is deemed to be compliant to 95 th percentile limits.

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Historical Data

Monitoring Location	Blast Date	Results Received	Time	Ground Vibration (mm/s)	Overpressure (dBL)	Compliant	Comments
Benny Residence	05-May-23	6-June-23	1307	0.07	101.5	Y	
Benny Residence	12-May-23	6-June-23	1235	0.44	98.6	Y	
Benny Residence	19-May-23	6-June-23	1559	0.31	98.4	Y	
Benny Residence	24-May-23	6-June-23	1319	0.07	97.3	Y	
Benny Residence	26-May-23	6-June-23	1320	1.05	111.1	Y	
Benny Residence	31-May-23	6-June-23	1242	0.57	113.6	Y	
Benny Residence	28-Apr-2023	3-May-23	1300	0.09	103.0	Y	
Benny Residence	14-Apr-2023	3-May-23	1426	0.62	106.8	Y	
Benny Residence	20-Mar-2023	3-Apr-23	1323	0.63	110.6	Y	
Benny Residence	9-Mar-2023	3-Apr-23	1501	1.16	104.8	Y	
Benny Residence	20-Feb-2023	1-Mar-23	1525	1.06	108.0	Y	
Benny Residence	25-Jan-2023	14-Feb-23	0845	0.45	108.5	Y	
Benny Residence	11-Jan-2023	14-Feb-23	1107	0.45	109.6	Y	
Benny Residence	30-Nov-2022	12-Dec-22	1351	No Trigger	No Trigger	Y	
Benny Residence	14-Nov-2022	12-Dec-22	1515	4.82	No Trigger	Y	
Benny Residence	19-Oct-2022	11-Nov-22	1410	No Trigger	No Trigger	Y	
Benny Residence	10-Oct-2022	14-Oct-22	1626	No Trigger	No Trigger	Y	
Benny Residence	19-Sep-2022	14-Oct-22	1453	No Trigger	No Trigger	Y	
Benny Residence	31-Aug-2022	14-Oct-22	1600	No Trigger	No Trigger	Y	
Benny Residence	17-Aug-2022	14-Oct-22	1552	No Trigger	No Trigger	Y	
Benny Residence	1-Aug-2022	14-Oct-22	1512	No Trigger	No Trigger	Y	
Benny Residence	20-Jul-2022	30-Aug-22	1511	0.508	98.8	Y	
Benny Residence	29-Jun-2022	13-Jul-2022	1255	No Trigger	No Trigger	Y	
Benny Residence	22-Jun-2022	13-Jul-2022	1252	No Trigger	No Trigger	Y	
Benny Residence	20-May-2022	13-Jul-2022	1217	No Trigger	No Trigger	Y	
Benny Residence	16-May-2022	13-Jul-2022	1520	No Trigger	No Trigger	Y	
Benny Residence	4-May-2022	13-Jul-2022	1437	No Trigger	No Trigger	Y	
Benny Residence	31-Mar2022	13-Jul-2022	1305	No Trigger	No Trigger	Y	
Benny Residence	21-Feb-22	15-Mar-22	11:06	No Trigger	No Trigger	Y	
Benny Residence	22-Dec-22	22-Dec-22	13:16	No Trigger	No Trigger	Y	
Benny Residence	01-Dec-21	01-Dec-21	14:41	No Trigger	No Trigger	Y	
Benny Residence	17-Nov-21	17-Nov-21	14:09	No Trigger	No Trigger	Y	
Benny Residence	22-Oct-21	22-Oct-21	12:11	No Trigger	No Trigger	Y	
Benny Residence	20-Sept-21	20-Sept-21	12:03	No Trigger	No Trigger	Y	
Benny Residence	01-Sept-21	01-Sept-21	13:29	No Trigger	No Trigger	Y	
Benny Residence	09-Aug-21	09-Aug-21	13:04	No Trigger	No Trigger	Y	
Benny Residence	03-Jun-21	03-Jun-21	15:05	0.60	101.9	Y	
Benny Residence	09-Jun-21	09-Jun-21	15:01	0.80	99.5	Y	
Benny Residence	10-May-21	10-May-21	13:49	No Trigger	No Trigger	Y	
Benny Residence	19-May-21	19-May-21	12:43	No Trigger	No Trigger	Y	
Benny Residence	14-Apr-21	14-Apr-21	13:49	No Trigger	No Trigger	Y	
Benny Residence	21-Apr-21	21-Apr-21	12:46	0.70	95.9	Y	
Benny Residence	10-Mar-21	10-Mar-21	14:29	1.30	109.9	Y	
Benny Residence	29-Mar-21	29-Mar-21	15:07	1.10	101.0	Y	
Benny Residence	03-Feb-21	03-Feb-21	3:09	0.80	102.8	Y	
Benny Residence	10-Feb-21	10-Feb-21	13:50	0.80	102.8	Y	
Benny Residence	17-Feb-21	17-Feb-21	13:10	0.70	100.0	Y	
Benny Residence	24-Feb-21	24-Feb-21	9:52	No Trigger	No Trigger	Y	
Benny Residence	29-Jan-21	29-Jan-21	12:59	No Trigger	No Trigger	Y	
Benny Residence	20-Jan-21	20-Jan-21	12:48	No Trigger	No Trigger	Y	
Benny Residence	13-Jan-21	13-Jan-21	12:59	0.50	102.8	Y	
Benny Residence	09-Dec-20	09-Dec-20	14:32	0.70	98.8	Y	

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Monitoring Location	Blast Date	Results Received	Time	Ground Vibration (mm/s)	Overpressure (dBL)	Compliant	Comments
Benny Residence	25-Nov-20	25-Nov-20	12:45	No Trigger	106.7	Y	
Benny Residence	18-Nov-20	18-Nov-20	14:48	0.80	106.5	Y	
Benny Residence	04-Nov-20	04-Nov-20	12:23	No Trigger	101.0	Y	
Benny Residence	28-Oct-20	28-Oct-20	14:40	0.50	103.5	Y	
Benny Residence	21-Oct-20	21-Oct-20	14:59	3.60	103.0	Y	
Benny Residence	14-Oct-20	14-Oct-20	12:10	2.00	109.3	Y	
Benny Residence	28-Sep-20	28-Sep-20	14:32	1.00	101.0	Y	
Benny Residence	23-Sep-20	23-Sep-20	12:33	0.50	100.0	Y	
Benny Residence	16-Sep-20	16-Sep-20	12:15	0.60	105.5	Y	
Benny Residence	09-Sep-20	09-Sep-20	14:26	0.90	101.9	Y	
Benny Residence	02-Sep-20	02-Sep-20	12:09	0.30	103.8	Y	
Benny Residence	31-Aug-20	31-Aug-20	12:12	1.80	No Trigger	Y	
Benny Residence	26-Aug-20	26-Aug-20	14:28	No Trigger	No Trigger	Y	
Benny Residence	12-Aug-20	12-Aug-20	13:12	0.10	101.2	Y	
Benny Residence	05-Aug-20	05-Aug-20	14:43	3.10	100.8	Y	
Benny Residence	24/07/2020	24/07/2020	12:24	2.20	106.4	Y	
Benny Residence	20/07/2020	20/07/2020	15:03	0.60	102.8	Y	
Benny Residence	13/07/2020	13/07/2020	13:12	2.20	102.3	Y	
Benny Residence	8/07/2020	8/07/2020	13:08	1.45	101	Y	
Benny Residence	1/07/2020	1/07/2020	13:11	No Trigger	102.3	Y	
Benny Residence	24/06/20	24/06/2020	13:29	No Trigger	No Trigger	Y	
Benny Residence	15/06/2020	15/06/2020	14:26	5.83	106.6	Y	The seed wave from the site law was inputted into a regression analysis via a Monte Carlo model on SHOTPlus™, used the B value (attenuation) and P-wave established from the site law and calibrated the K value to predict the modelled reading of 5.83 mm/s with a standard deviation of 0.52mm/s. It is expected that over 20 blasts will be undertaken in the reporting period, hence the ground vibration measurement is deemed to be compliant to 95th percentile limits
Benny Residence	27-May-20	27-May-20	13:49	3.50	104.8	Y	
Benny Residence	08-Apr-20	08-Apr-20	16:02	1.55	116.3	Y	It is expected that over 20 blasts will be undertaken in the reporting period, hence the airblast overpressure is deemed to be

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Monitoring Location	Blast Date	Results Received	Time	Ground Vibration (mm/s)	Overpressure (dBL)	Compliant	Comments
							compliant to 95 th percentile limits
Benny Residence	18-Mar-20	18-Mar-20	12:40	2.55	94.2	Y	
Benny Residence	09-Mar-20	09-Mar-20	13:45	1.71	111.4	Y	
Benny Residence	26/02/2020	26/02/2020	12:23	2.15	104.9	Y	
Benny Residence	19/02/2020	19/02/2020	12:55	1.64	97.7	Y	
Benny Residence	5/02/2020	5/02/2020	13:21	4.25	98.2	Y	The seed wave from the site law was inputted into a regression analysis via a Monte Carlo model on SHOTPlus™, used the B value (attenuation) and P-wave established from the site law and calibrated the K value to predict the modelled reading of 4.25 mm/s with a standard deviation of 0.52mm/s.
Benny Residence	15/01/2020	15/01/2020	12:22	0.89	102.5	Y	
Benny Residence	11/12/2019	11/12/2019	12:15	2.70	100.0	Y	
Benny Residence	04/12/2019	04/12/2019	12:35	3.40	108.0	Y	
Benny Residence	21/11/2019	16/10/2019	9:22	3.52	107.7	Y	
Benny Residence	6/11/2019	2/10/2019	12:17	2.93	102.4	Y	
Benny Residence	30/10/2019	30/10/2019	10:55	0.82	110.2	Y	
Benny Residence	28/10/2019	28/10/2019	12:18	1.97	101.7	Y	
Benny Residence	16/10/2019	16/10/2019	12:59	3.73	98.2	Y	
Benny Residence	2/10/2019	2/10/2019	15:25	1.54	106.8	Y	
Benny Residence	25/09/2019	25/09/2019	13:33	2.83	100.2	Y	
Benny Residence	04/09/2019	04/09/2019	12:35	1.27	100.8	Y	
Benny Residence	06-Aug-19	06-Aug-19	14:20	2.26	101.1	Y	
Benny Residence	23-Jul-19	23-Jul-19	12:14	1.85	97.2	Y	
Benny Residence	17-Jul-19	17-Jul-19	12:17	3.19	99.5	Y	
Benny Residence	10-Jul-19	10-Jul-19	14:58	4.95	98.5	Y	

Further Historical monitoring data relating to blasting can be found in the associated Annual Reviews for each year. Location of the Dunmore Quarry Annual Reviews can be found at <https://www.boral.com.au/locations/boral-dunmore-operations>

Blast Monitoring Results - Corrections Log

Details of corrections made to published data due to incorrect or misleading data^{3.7.7}

Date of data (sample date)	Old published data	Correct updated data	Reason for Update/Correction	Update Person	Date corrected data published
16/02/2020	5.37mm/s	Result correct. Comment added	Comments section updated to inform the regression analysis of the measured value at the Benny Residence. The Benny monitor is located 140m away from the residence. The seed wave from the site law was inputted into a regression analysis via a Monte Carlo model on SHOTPlus™, used the B value (attenuation) and P-wave established from the site law and calibrated the K	BW	28/08/2020

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			value to predict the modelled reading of 4.25 mm/s with a standard deviation of 0.52mm/s.		
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Dunmore Quarry Monitoring Locations.



LEGEND

- Site Boundary
- Water Discharge Monitoring Point
- Deposited Dust Monitoring Point
- Weather Analysis Monitoring Point
- Blast Monitoring Point
- High Volume Air Sampling Point