



Culcairn Quarry

Environmental Monitoring Report

January 2024

Date Published: 15th January 2024



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 26 (EPL 26 – Boral Culcairn Quarry)

This report provides environmental monitoring data for Culcairn Quarry for the period March 2016 to present day. This report is reviewed monthly during the reporting period and updated if required.

Culcairn Quarry Information	
Premise Details	Boral – Culcairn Quarry
Address	Weeamera Road, Culcairn NSW 2660
Licensee	Boral Resources (Vic.) Pty Limited
EPL No	26
EPL Location	http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=31288&SYSUID=1&LICID=26

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

- Blasting
- Water Monitoring

Blasting

Blast monitoring is conducted as per condition L5 of EPL 26. The blasting monitoring results are summarised below.

Qualifications related to blasting:

L5.1 The overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure the above are not to be taken into account in determining whether or not the limit has been exceeded.

L5.2 The overpressure level from blasting operations at the premises must not exceed 120 dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure the above are not to be taken into account in determining whether or not the limit has been exceeded

L5.3 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure the above are not to be taken into account in determining whether or not the limit has been exceeded

L5.4 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure the above are not to be taken into account in determining whether or not the limit has been exceeded.

L5.5 Blasting at the premises is limited to 1 blast on each day on which blasting is permitted.

L5.6 Blasting operations at the premises may only take place between 10:00am-3:00pm Monday to Friday and not during periods of inversions. (Where compelling safety reasons exist, the Authority may permit a blast to occur outside the abovementioned hours. Prior written (or facsimile) notification of any such blast must be made to the Authority).

L5.7 A Blasting/Vibration Management Protocol must be prepared in relation to the development and

implemented. The protocol must include, but need not be limited to, the following matters:

- a) compliance standards;
- b) mitigation measures;
- c) remedial action;
- d) monitoring methods and program;
- e) monitoring program for flyrock distribution;
- f) measures to protect underground utilities (eg: rising mains, subsurface telecommunication and electrical cables) and livestock nearby;
- g) notification of procedures for neighbours prior to detonation of each blast;
- h) measures to ensure no damage by flyrock to people, property, livestock and powerlines.

L5.8 For the purpose of blast monitoring, the ground vibration or the overpressure must be measured at:

- a) the residential boundary; or
- b) 30 metres from residences in rural situations where the boundary is more than 30 metres from residences.

Results							
Monitor Location	BlastDate	Date Results Received	BlastTime	Ground Vibration Result (mm/s)	Ground Vibration Compliant	Overpressure Result dB(A)	Over-pressure Compliant
No blasts from 28/11/23 to 15/01/24							
A	27/11/23	28/11/23	13:08	0.31	Y	105.6	Y
A	3/10/23	3/10/23	11:22	0.43	Y	112.2	Y
A	10/7/23	10/7/23	15:00	0.65	Y	119.6	Y
A	8/5/23	8/5/23	14:38	0.69	Y	109	Y
A	1/3/23	1/3/23	12:12	0.26	Y	106.3	Y
A	18/1/23	18/1/23	12:14	1.03	Y	112.3	Y
A	28/9/22	28/9/22	14:35	0.1	Y	108.1	Y
A	5/9/22	5/9/22	12:52	0.54	Y	111.5	Y
A	13/7/22	13/7/22	12:58	0.56	Y	107.1	Y
A	30/3/22	30/3/22	12:00	1	Y	112	Y
A	23/3/22	23/3/22	11:45	0.5	Y	108.9	Y
A	15/12/21	15/12/21	13:15	0.21	Y	111.6	Y
A	17/11/21	17/11/21	12:28	0.52	Y	110.2	Y
A	1/11/21	1/11/21	11:57	0.86	Y	110.5	Y
A	25/8/21	25/8/21	13:8	0.31	Y	109.1	Y
A	7/7/21	7/7/21	12:15	0.44	Y	106.6	Y
A	20/1/21	20/1/21	12:19	1.0	Y	105.3	Y
A	7/10/20	7/10/20	12:23	0.10	Y	80.6	Y
A	15/7/20	15/7/20	12:05	0.77	Y	102.7	Y
A	13/5/20	13/5/20	12:18	0.876	Y	100.8	Y
A	14/4/20	14/4/20	15:17	1.496	Y	97.7	Y
A	4/3/20	4/3/20	12:31	NT	Y	NT	Y
A	13/11/19	13/11/19	12:02	NT	Y	NT	Y
A	2/07/19	2/07/19	12:31	1.41	Y	107	Y
A	6/03/19	6/03/19	12:56	NT	Y	NT	Y
A	13/11/18	13/11/18	13:07	NT	Y	NT	Y

A	26/9/18	26/9/18	12:43	NT	Y	NT	Y
A	20/8/18	20/8/18	13:48	NT	Y	NT	Y
A	18/6/18	18/6/18	13:00	0.773	Y	109.9	Y
A	6/4/18	6/4/2018	12:12	NT	Y	NT	Y
A	6/3/18	6/3/2018	11:00	NT	Y	NT	Y
A	23/08/17	23/8/2017	-	NT	Y	NT	Y
A	23/05/17	23/05/17	13:25	NT	Y	NT	Y
A	19/04/17	19/04/17	-	NT	Y	NT	Y
A	12/04/16	12/04/16	15:00	NT	Y	NT	Y
A	30/3/22	30/3/22	12:00	1	Y	112	Y

NT – NO TRIGGER

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	Comments

Surface Water Monitoring

Surface water monitoring is conducted as per condition L2.1 and M2 of EPL 26. The surface water monitoring results are summaries below.

Qualifications related to Surface Water Extracted from EPL:26

P1.1 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

<i>Water and land</i>			
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Water quality monitoring and discharge point	Water quality monitoring and discharge point	Discharge point for the dewatering of the quarry void. Discharge point located at 55H 0498890 (Easting) and 6046462 (Northing).

L2 Concentration Limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table.

L2.4 Water and/or Land Concentration Limits

Point 1

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	Visible				None visible
pH	pH				6.5 to 8.5
Total suspended solids	milligrams per litre				50

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Special Frequency 1 requires sampling to be undertaken such that the results of the water quality monitoring are reported to the landowner prior to discharging quarry void water at the licensed discharge point in the southwest paddock.

M2.3 Water and/ or Land Monitoring Requirements


Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Special Frequency 1	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 1	Grab sample

Water Monitoring Results – Point 1					
Discharge point for the dewatering of the quarry void					
Date sampled	Date received	pH (6.5-8.5)	TSS (50mg/l)	O&G (10mg/l)	Compliant (Y/N)
No water samples taken from 5/5/23 to 15/1/24					
4/5/23	30/5/2023	8.0	<5	None visible	Y
12/8/22	30/9/2022	8.5	<5	None visible	Y
10/6/22	20/6/2022	8.1	9.5	None visible	Y
10/3/22	25/3/2022	8.3	<5	None visible	Y
18/7/17	19/7/17	8.5	<5	None visible	Y

Water 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	Comments

Culcairn Quarry Monitoring Locations

 Water sample
Blast monitoring location

 location

