



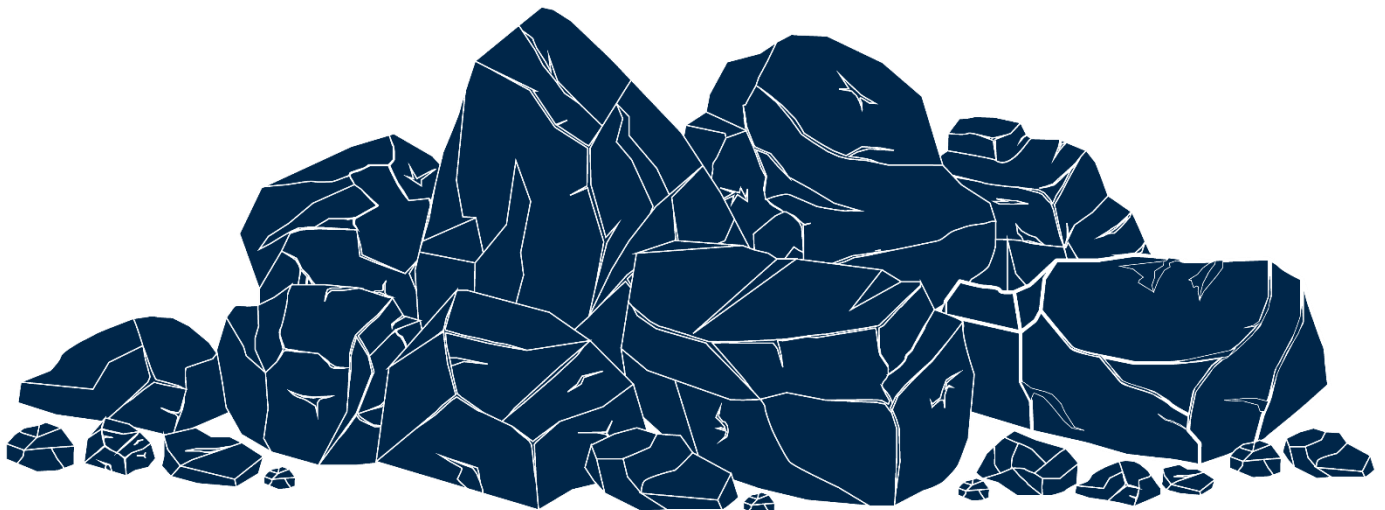
Karuah Hard Rock Quarry
ABN: 15 093 914 937
Hunter Quarries Pty Ltd
Andersite Road, Karuah NSW 2324

W: www.hunterquarries.com.au
E: admin@hunterquarries.com.au
T: 02 4050 0304
P: PO Box 3284, Thornton NSW 2322

Karuah Hard Rock Quarry

Environmental Monitoring Report

July 2026



Contents

Contents	2
1.0 Introduction.....	3
2.0 Air Quality Monitoring.....	4
3.0 Blast Monitoring	6
4.0 Noise Monitoring	6
5.0 Surface Water Monitoring	7
6.0 Weather Station Monitoring	8
7.0 Production Data	9
8.0 Reporting.....	9
8.1 Reportable Environmental Incidents	9
8.2 Reportable Non-Compliances	9
8.3 Community Complaints.....	9
Appendix 1 – EPL 11569 Monitoring Locations.....	10

1.0 Introduction

This report has been completed to meet the requirements of Section 66(6) of the NSW *Protection of the Environment Operations Act 1997* and the NSW Environmental Protection Authority's (EPA) Requirements for Publishing Pollution Monitoring Data (EPA, 2013). This report summarises the required monitoring data under Environmental Protection Licence 11569 (the EPL) and Development Consent for the Karuah Hard Rock Quarry (the Quarry) as summarised by **Table 1** and **Table 2** respectively.

Table 1 **Summary of Environment Protection Licence, EPL 11569**

EPL Number:	EPL 11569
Licensee's Name:	Hunter Quarries Pty Ltd
Licensee's Address:	Karuah Hard Rock Quarry PO Box 3284, Thornton NSW 2322 Corner of Andesite Road and The Branch Lane, Karuah NSW 2324.
Link to Full Licence on the EPA website:	EPL 11569

Table 2 **Summary of Project Approval, DA 265-10-2004**

Project Approval:	DA 265-10-2004
Applicant:	Hunter Quarries Pty Ltd
Consent Authority:	Minister for Infrastructure, Planning and Natural Resources
Link to Full Project Approval on the NSW Planning website:	Development Consent DA 265-10-2004

A summary of the environmental monitoring data for the July 2026 Reporting Period (the Reporting Period) is covered in this report. Tables throughout this report provide key monitoring information from the EPL and the Consent, including:

- location of monitoring;
- pollutant;
- unit of measurement; and
- monitoring frequency required.

Monitoring locations are illustrated by the site plan provided by **Appendix 1**.

2.0 Air Quality Monitoring

Dust emissions generated by the Quarry operation must not cause additional exceedances of ambient air quality criterion outlined in Schedule 3, Condition 13 of the Consent and summarised by **Table 3**, **Table 4** and **Table 5**.

Deposited dust monitoring is undertaken at the locations listed in **Table 6**, in accordance with the Approved Methods of Sampling and Analysis of Air Pollutants in NSW (EPA, 2022).

Table 3 Long-term Assessment Criteria for Deposited Dust (DA 265-10-2004).

Pollutant	Averaging Period	Maximum Increase in Deposited Dust Level ¹	Maximum Total Deposited Dust Level ¹
Deposited Dust	Annual	2 g/m ² /month	4 g/m ² /month

¹ Deposited dust is assessed as insoluble solids as defined by AS 3580.10.1-2003.

Table 4 Long-term Assessment Criteria for Particulate Matter (DA 265-10-2004).

Pollutant	Averaging Period	Criterion
Total Suspended Particulates	Annual	90 µg/m ³
Particulate Matter < 10 µm (PM10)	Annual	30 µg/m ³

Table 5 Short-term Assessment Criteria for Particulate Matter (DA 265-10-2004).

Pollutant	Averaging Period	Criterion
Particulate Matter < 10 µm (PM10)	24-hour	50 µg/m ³

Table 6 Air Quality Monitoring Locations (EPL 11569).

Site Monitoring Point ID	EPL Monitoring Point ID	Location	Address
DDG 1	6	South-West of Karuah Hard Rock Quarry	54 Mill Hill Close, Karuah NSW 2324
DDG 2	7	South-West of Karuah Hard Rock Quarry	64 Mill Hill Close, Karuah NSW 2324
DDG 3	8	South-West of Karuah Hard Rock Quarry	Lot 251 DP1092111, Karuah NSW 2324
DDG 4	9	East of Karuah Hard Rock Quarry	21 Halloran Road, North Arm Cove NSW 2324

Deposited dust results for the 12-months prior-to and including July 2026 are summarised by **Table 7**.

Table 7 *Deposited dust monitoring results.*

Reporting Period	Start Date	End Date	Days	DDG 1 EPL ID 6	DDG 2 EPL ID 7	DDG 3 EPL ID 8	DDG 4 EPL ID 9
Aug-25	01/08/2025	01/09/2025	31	0.9	2.3	0.5	0.8
Sep-25	01/09/2025	01/10/2025	30	1.7	1.3	1.0	0.7
Oct-25	01/10/2025	31/10/2025	30	1.1	1.7	1.7	1.2
Nov-25	31/10/2025	02/12/2025	32	1.0	2.5	2.1	1.1
Dec-25	02/12/2025	02/01/2026	31	1.8	1.6	1.3	1.5
Jan-26	02/01/2026	30/01/2026	28	1.1	1.2	0.9	0.5
Feb-26	30/01/2026	27/02/2026	28	0.8	1.2	1.1	1.4
Mar-26	27/02/2026	31/03/2026	32	1.2	7.7 ¹	0.8	4.6 ¹
Apr-26	31/03/2026	01/05/2026	31	1.9	9.2 ²	0.8	3.7
May-26	01/05/2026	01/06/2026	31	0.3	0.4	0.3	0.2
Jun-26	01/06/2026	01/07/2026	30	1.1	1.3	0.7	0.6
Jul-26	07/07/2026	31/07/2026	30	0.8	1.2	0.5	1.1
Progressive Annual Average				1.2	2.6	1.0	1.5

Monitoring results for the Reporting Period at the four DDG monitoring sites are within the long-term annual deposited dust limit of 4 g/m²/month.

Notes:

1. Recorded exceedances at DDG 2 and DDG 4 in March 2026 which was reported to the NSW Department of Planning, Housing and Infrastructure (NSW Planning) and the NSW EPA in accordance with relevant conditions of the Consent and EPL. The exceedances are considered unlikely to be directly attributable to quarry operations given strong easterly winds during the monitoring period placed DDG 4 upwind of the site, whilst the result at DDG 2 was not repeated at the two neighbouring monitoring locations indicating a localised dust source.
2. Recorded exceedances at DDG 2 in April 2026 which was reported to NSW Planning and the NSW EPA in accordance with relevant conditions of the Consent and EPL. The result at DDG 2 was not repeated at the two neighbouring monitoring locations indicating a localised dust source.

3.0 Blast Monitoring

Blast monitoring is undertaken for all blasts at the Quarry at the nearest residential location to ensure that air blast overpressure and ground vibration remain within the compliance limits, as summarised by **Table 8**; with the monitoring results summarised by **Table 9**.

There was one blast undertaken during the Reporting Period, which was observed to be within compliance limits.

Table 8 *Blasting Airblast Overpressure and Ground Vibration Criteria (DA 265-10-2004 & EPL 11569).*

Location	Airblast Overpressure (dB(L))	Ground Vibration (mm/s)	Allowable Exceedance
Private Residence B	120	10	0%
	115	5	5% over 12-month reporting period.

Table 9 *Blasting Monitoring Results.*

Date	Time	Location	Airblast Overpressure (dB(L))	Ground Vibration (mm/s)
23/07/2026	1:36 PM	South East Corner	113.6	1.8

Notes: *Nil Trigger events occur when both recorded overpressure is <112 dBL and recorded ground vibration is <0.5 mm/s.

4.0 Noise Monitoring

Noise monitoring is undertaken in accordance with the EPL and NSW Planning approved Environmental Management Strategy & Monitoring Program (EMS&MP), which requires attended and unattended noise monitoring to be conducted on a 6-monthly basis.

There was no noise monitoring undertaken during the Reporting Period.

5.0 Surface Water Monitoring

Water monitoring is undertaken in accordance with the EPL and NSW Planning approved Site Water Management Plan, with daily monitoring of surface water being discharged from the Quarry via the licenced discharge point in accordance with Condition L2 and M2 of the EPL.

Two compliant discharge events occurred across eight-days during the Reporting Period, as summarised by **Table 10**.

Table 10 *Discharge Water Monitoring Results.*

Date	Oil and Grease	pH	Total Suspended Solids, TSS (mg/L)	Nitrogen (total) (mg/L)	Phosphorus (total) (mg/L)	Discharge Type
LDP1 – Sediment Dam 2						
13/07/2026	NV	7.4	19	0.2	<0.05	Controlled
14/07/2026	NV	7.4	24	<0.1	<0.05	Controlled
15/07/2026	NV	7.4	32	0.3	<0.05	Controlled
16/07/2026	NV	7.4	24	0.3	<0.05	Controlled
17/07/2026	NV	6.8	27	0.3	<0.05	Controlled
20/07/2026	NV	7.6	23	0.2	<0.05	Controlled
21/07/2026	NV	7.3	26	0.2	<0.05	Controlled
22/07/2026	NV	7.5	26	0.4	<0.05	Controlled
Sediment Basin 4						
-	-	-	-	-	-	-

6.0 Weather Station Monitoring

The Quarry operates and maintains a permanent meteorological monitoring station to record weather parameters including temperature, wind speed and direction, solar radiation and rainfall. **Figure 1** below outlines the weather records for the Reporting Period.

It should be noted that the rain gauge malfunctioned during the Reporting Period due to corrosion of internal sensor probes, with repairs being completed on 23 July 2026. This event was reported to NSW Planning and the NSW EPA in accordance with relevant conditions of the Consent and EPL.

Monthly Weather Summary



Site: Karuah Quarry Complex
Month: July 2026

Date	Day	Temperature @ 2m			Temperature @ 10m			Wind Speed			Solar Radiation		Rain ²
		Max ¹	Min ²	Ave ¹	Max ¹	Min ²	Ave ¹	Max Gust ¹	Ave Speed ¹	Dir Ave ¹	Max ¹	Ave ¹	
		°C	°C	°C	°C	°C	°C	km/h	km/h	deg	W/m ²	W/m ²	
1	Wed	19.3	10.3	13.8	18.7	11.2	14.5	7.2	1.7	222.9	384.1	56.6	0
2	Thu	23.1	11.8	17.5	23	12.5	17.9	11.1	3.2	216.4	456.7	92	0
3	Fri	23.7	7.9	14.6	23.1	8.9	15.6	19.5	3.2	234.2	489.2	95.4	0.4
4	Sat	19.9	4.1	12.9	19.2	5.3	13.8	24.6	7.3	242.7	520.8	82.1	0
5	Sun	18.3	4.8	9.8	17.2	5.2	10.1	12.5	2.9	232	405.8	93.6	0
6	Mon	16.5	8.8	11.6	15.6	8.8	11.8	14.9	3.9	206.2	485	51.4	6.6
7	Tue	16.1	11.3	13	15.9	11.6	13.3	23.4	4.4	166.1	571.6	65.3	6.5
8	Wed	16.2	10.3	12.6	16.1	10.6	12.7	14.6	3.3	203.1	590.8	50.4	4.1
9	Thu	18.1	11.6	13.2	17.2	11.5	13.1	12.4	3.2	194.1	525.8	67	9.7
10	Fri	17.7	6.4	10.9	16.9	6.4	10.9	13.2	2.7	202.2	490.8	80.6	2.9
11	Sat	16.9	7.2	10.8	16.1	7.3	10.8	8.5	1.9	251	484.9	71.6	0.0
12	Sun	17.2	6.8	10.5	17.2	7.5	11.3	9.3	2.4	227.7	468.3	72.1	0.1
13	Mon	18.3	3.7	11.2	17.6	5.5	12.3	24.9	6.7	232.6	461.6	94.7	0.1
14	Tue	18.6	6.2	12.5	17.9	8.5	13.3	18.1	6.3	244.4	415	100	0.0
15	Wed	18.1	6.4	11.8	17.7	8.5	13.1	18	5	247.3	420	96	1.3
16	Thu	16.4	9.7	11.7	15.7	9.7	11.7	19.6	4.6	196.2	602.5	69.2	15.0
17	Fri	14.1	11.1	12.6	13.9	10.9	12.5	12.9	2.9	234.5	323.3	39.2	4.8
18	Sat	19.1	9.7	12.8	18.2	10.3	12.8	18.5	2.8	206.3	584.2	71.2	2.1
19	Sun	18.6	11.1	13.9	17.5	12.1	14.7	22.1	5.2	106.6	633.3	72.3	5.9
20	Mon	18.8	11.9	14.2	17.7	12.1	14.2	13.7	2.4	168.4	644.9	62.8	0.1
21	Tue	19	5.5	11.1	18.2	6.2	11.6	10.1	1.8	183.3	604.9	72.1	0.0
22	Wed	20.4	6.4	12.4	20	7.5	13	9.5	2.3	222.6	471.6	105.8	0.0
23	Thu	21.4	5.7	11.6	20.8	7.1	12.2	19.6	2.9	216.7	439.9	106.8	0.1
24	Fri	20.8	3.7	12.8	20.1	5.1	13.5	20.7	5.6	267.4	550	104.5	1.2
25	Sat	16.4	1.1	7.1	15.4	2.2	8	17	3.2	225.2	455	112.5	0
26	Sun	18.3	3	8.7	17.1	4	9.4	15.7	2.9	226	437.5	108.3	0
27	Mon	18.7	5	10.3	17.8	6.2	10.6	12.4	2.5	214.5	440	107.2	0
28	Tue	19.1	5.2	11.3	17.9	6.1	11.9	13.4	2.4	196.1	599.1	96.1	0.2
29	Wed	21.4	4.2	11	20.7	5.4	11.7	11.5	2.2	244.6	555.8	110.6	0
30	Thu	20.3	1.4	10.4	19.4	2.6	11.9	26.2	4.9	245.6	485	108.2	0
31	Fri	16.9	4.2	9.1	15.6	5.3	9.3	16	3	202.1	489.9	102.8	0
Ave or Total		18.6	7.0	11.9	17.9	7.8	12.4	15.8	3.5	215.5	499.6	84.5	61.1
High		23.7	11.9	17.5	23.1	12.5	17.9	26.2	7.3		644.9	112.5	15.0
Low		14.1	1.1	7.1	13.9	2.2	8.0	7.2	1.7		323.3	39.2	
Notes: 1. Values are for the 24 hour period from 9am to 9am next day.												No. rain days >1mm:	11
2. Values are for the 24 hours to 9am.													
3. Rain gauge was inoperative from 6-23 July 2026. Rainfall for this period has been averaged from nearby weather stations (Williamtown, Patterson, Crawford River)													

Figure 1 Weather Records Summary.

7.0 Production Data

Monthly monitoring of sales and truck movements are summarised by **Table 11**.

Table 11 *Quarry Production Data.*

Month	Truck Movements	Quarry Product Sales (t)
Jan-26	489	15,646
Feb-26	863	27,693
Mar-26	661	22,370
Apr-26	980	31,015
May-26	657	22,122
June-26	1,162	39,311
July-26	750	24,622
Progressive Annual Total	5,562	182,779

8.0 Reporting

8.1 Reportable Environmental Incidents

During the Reporting Period, no reportable environmental incidents occurred at the Quarry.

8.2 Reportable Non-Compliances

During the Reporting Period, one reportable non-compliance was identified at the Quarry, including:

- A failure to monitor event associated with the site's automatic rain gauge, which malfunctioned due to corrosion of internal sensor probes during the Reporting Period. A manual rain gauge was subsequently installed and used to record daily rainfall until the automatic rain gauge was repaired on 23 July 2026.

This event was reported to NSW Planning and the NSW EPA in accordance with the relevant conditions of the Consent and EPL.

8.3 Community Complaints

During the Reporting Period, no community complaints were reported to the Quarry.

Appendix 1 – EPL 11569 Monitoring Locations

