



Karuah Hard Rock Quarry  
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## Karuah Hard Rock Quarry

### Environmental Monitoring Report

November 2025



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## 1.0 Introduction

This report has been completed to meet the requirements of Section 66(6) of the *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:	<a href="#">EPL 11569</a>

**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:	<a href="#">Development Consent DA 265-10-2004</a>

A summary of the environmental monitoring data for the November 2025 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 <sup>1</sup>	Maximum Total Deposited Dust Level <sup>1</sup>
Deposited Dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month

<sup>1</sup> 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 <sup>3</sup>
Particulate Matter < 10 µm (PM10)	Annual	30 µg/m <sup>3</sup>

**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 <sup>3</sup>

**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 November 2025 are summarised by **Table 7**.

**Table 7 Deposited dust monitoring results.**

Reporting Period	Start Date	End Date	Days	DDG 1 (EPL ID 2) EPL ID 6	DDG 2 (EPL ID 3) EPL ID 7	DDG 3 (EPL ID 4) EPL ID 8	DDG 4 (EPL ID 5) EPL ID 9
Dec-24	29/11/2024	30/12/2024	29	(0.6)	(1.4)	(1.3)	(3.1)
Jan-25	30/12/2024	31/01/2025	32	(3.8)	(1.7)	(1.9)	(1.3)
Feb-25	31/01/2025	03/03/2025	31	(1.2)	(0.9)	(1.1)	(1.2)
Mar-25	03/03/2025	03/04/2025	31	(0.7)	(1.0)	(1.4)	
	04/03/2025	03/04/2025	30				(1.1)
Apr-25	03/04/2025	05/05/2025	32	1.2	3.2	0.4	(1.0)
May-25	05/05/2025	03/06/2025	29	2.0	3.9	0.2	(0.3)
Jun-25	03/06/2025	01/07/2025	28	2.9	1.0	0.6	0.4
Jul-25	01/07/2025	01/08/2025	31	10.1*	0.5	0.4	0.2
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	1/10/2025	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
<b>Progressive Annual Average</b>				<b>2.3</b>	<b>1.8</b>	<b>1.1</b>	<b>1.0</b>

Monitoring results for the Reporting Period at the four DDG monitoring sites are within the long-term annual deposited dust limit of 4 g/m<sup>2</sup>/month.

**\*Note:** *Recorded anomalous exceedance which was subsequently reported to the NSW Department of Planning, Housing & Infrastructure (NSW Planning), the NSW EPA and surrounding landholders in accordance with the relevant conditions of the Consent and EPL.*

## 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 were no blasts undertaken within the Reporting Period.

**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)
-	-	-	-	-

\*Not triggered = n/t

Ground Vibration < 0.5 mm/s

Overpressure < 108 dB(L)

## 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.

No noise monitoring was 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.

No discharge events occurred 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
<b>LDP1 – Sediment Dam 2</b>						
-	-	-	-	-	-	-
<b>Sediment Basin 4</b>						
-	-	-	-	-	-	-

## 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.

Monthly Weather Summary														
Site: Karuah Quarry Complex		Month: November 2025												
Date	Day	Temperature @ 2m			Temperature @ 10m			Winds			Solar Radiation		Rain <sup>2</sup> mm	
		Max <sup>1</sup> °C	Min <sup>2</sup> °C	Ave <sup>1</sup> °C	Max <sup>1</sup> °C	Min <sup>2</sup> °C	Ave <sup>1</sup> °C	Max Gust <sup>1</sup> km/h	Ave Speed <sup>1</sup> km/h	Dir Ave <sup>1</sup> deg	Max <sup>1</sup> W/m <sup>2</sup>	Ave <sup>1</sup> W/m <sup>2</sup>		
1	Sat	26.5	18.0	21.7	24.1	18.1	21.1	30.8	22.1	124	1156.6	236.5	0.8	
2	Sun	27.6	16.1	20.6	25.6	16.8	20.4	20.1	14.0	160	1136.7	147.9	1.0	
3	Mon	25.6	15.3	20.2	23.9	15.9	19.9	21.3	14.7	173	1178.2	146.0	0.2	
4	Tue	34.9	15.2	25.3	32.8	15.3	24.9	41.4	24.4	173	948.2	229.4	1.4	
5	Wed	27.0	7.2	17.6	25.5	8.1	17.7	49.7	30.3	199	1032.6	286.5	0.0	
6	Thu	28.1	9.8	18.7	26.9	10.5	18.4	40.2	26.3	191	939.2	298.1	0.0	
7	Fri	26.3	17.1	21.3	24.2	17.7	20.5	34.3	24.5	155	1101.7	271.2	0.0	
8	Sat	31.9	17.1	23.0	30.0	17.8	22.6	28.4	16.0	158	1045.8	199.3	0.0	
9	Sun	33.4	16.9	24.2	32.4	17.6	24.3	48.5	22.8	186	930.7	164.5	0.0	
10	Mon	25.9	11.9	18.6	23.1	12.3	17.8	41.4	27.0	161	1000.7	292.8	0.0	
11	Tue	25.0	11.3	18.5	22.1	12.3	18.0	30.8	21.1	173	1119.2	234.4	0.0	
12	Wed	30.4	11.8	21.2	29.1	12.6	20.7	50.9	28.4	174	972.5	284.5	0.0	
13	Thu	24.2	7.6	16.0	20.6	8.6	15.4	29.6	20.9	141	965.8	295.8	0.0	
14	Fri	30.4	15.3	21.5	27.9	16.5	21.4	30.8	18.3	209	974.9	271.7	0.0	
15	Sat	26.2	14.6	19.7	23.4	15.1	19.1	30.8	20.1	167	1003.2	215.1	0.0	
16	Sun	31.8	19.0	23.1	29.0	19.2	22.6	31.9	20.2	209	909.2	202.5	5.0	
17	Mon	33.8	12.1	23.0	32.4	13.5	23.8	46.1	25.1	225	1091.7	283.6	0.0	
18	Tue	28.6	9.7	18.1	26.5	10.9	18.0	39.0	24.4	209	1275.8	247.7	0.0	
19	Wed	29.1	11.9	20.1	25.7	12.8	19.6	30.8	21.9	185	952.5	308.8	0.0	
20	Thu	33.0	16.3	24.2	30.4	17.6	23.6	30.8	19.0	192	939.2	299.7	0.0	
21	Fri	31.7	18.9	22.8	28.5	18.9	22.0	36.7	18.2	127	1039.2	228.6	1.0	
22	Sat	23.3	17.6	19.9	21.6	17.9	19.6	23.7	14.6	128	907.4	96.3	0.6	
23	Sun	28.6	19.5	22.2	25.6	19.6	21.5	26.0	16.8	148	1141.6	184.1	5.4	
24	Mon	33.4	18.7	23.6	31.5	18.9	23.2	35.5	21.8	161	1052.5	236.2	0.2	
25	Tue	27.1	17.1	21.5	24.0	17.3	20.6	33.1	21.5	147	1210.8	257.4	0.0	
26	Wed	34.5	18.6	25.8	32.3	20.0	25.8	47.3	25.4	194	1148.3	183.7	0.0	
27	Thu	38.5	17.2	25.2	37.0	18.0	25.5	40.2	27.2	226	1070.8	211.2	0.0	
28	Fri	36.0	15.1	24.7	34.8	15.8	24.3	49.7	26.9	179	976.7	306.9	0.0	
29	Sat	30.8	20.2	25.1	28.6	20.7	24.4	28.4	21.9	160	969.1	280.0	0.0	
30	Sun	34.0	16.0	24.6	32.9	16.4	24.3	36.7	24.1	192	1140.0	203.1	0.0	
Ave or Total		29.9	15.1	21.7	27.7	15.8	21.4	35.5	22.0	174.3	1044.4	236.8	15.6	
High		38.5	20.2	25.8	37.0	20.7	25.8	50.9	30.3		1275.8	308.8	5.4	
Low		23.3	7.2	16.0	20.6	8.1	15.4	20.1	14.0		907.4	96.3		
Notes: 1. Values are for the 24 hour period from 9am to 9am next day.													No. rain days >1mm: 3	
2. Values are for the 24 hours to 9am.														

**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-25	352	12,215
Feb-25	794	26,011
Mar-25	745	23,981
Apr-25	329	10,524
May-25	576	20,295
Jun-25	1,126	39,666
Jul-25	569	19,637
Aug-25	316	11,005
Sep-25	843	27,642
Oct-25	808	26,552
Nov-25	774	24,824
<b>Progressive Annual Total</b>	<b>7,232</b>	<b>242,352</b>

## 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 air-quality related non-compliance occurred at the Quarry, as outlined below:

- An exceedance of short-term (daily) particulate monitoring criteria occurred on 14 November 2025 as a result of three bushfires in the vicinity of the Karuah Quarry Complex, including the Tenterfield Road, North Arm Cove; the Pacific Highway, Karuah; and the Warraba Road, The Branch bushfires.

Refer to the Karuah East Quarry Environmental Monitoring Report for November 2025 available on the Hunter Quarries' website (<https://hunterquarries.com.au/reporting/>) for future details.

### 8.3 Community Complaints

During the Reporting Period, one transport-related complaint was received by the Quarry, as outlined below:

- A complaint was received by phone on 18 November 2025 regarding recent interactions with trucks exiting Andersite Road and turning left into The Branch Lane to access the A1 Pacific Highway interchange. The complainant requested anonymity and to not be contacted with any investigation outcomes.

At the time of writing, KEPQL are currently reviewing signage options to reduce vehicle speed through the intersection.

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## Appendix 1 – EPL 11569 Monitoring Locations

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## Environmental Monitoring Report

### APPENDIX 1 - Environmental Monitoring Locations