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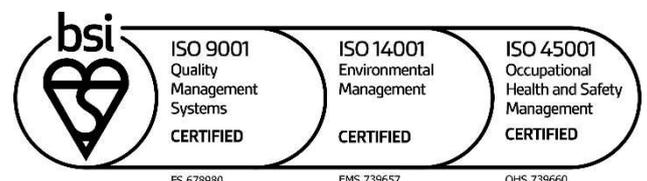
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## **Karuah East Quarry**

### **Environmental Monitoring Report:**

**June 2022**



# Table of Contents

1	Introduction .....	3
2	Air Quality Monitoring .....	4
2.1	Deposited Dust Monitoring .....	5
2.2	High Volume Air Sampling .....	5
3	Blast Monitoring .....	7
4	Noise Monitoring .....	8
4.1	Attended Monitoring .....	8
4.2	Unattended Noise Monitoring .....	8
5	Surface Water Monitoring .....	12
5.1	Monthly Surface Water Monitoring Program .....	12
5.2	Discharge Monitoring .....	15
5.2.1	Dam 1 (LDP1) .....	15
5.2.2	Dam 2 (LDP2) .....	15
5.2.3	Dam 3 (LDP3) .....	15
6	Weather Monitoring .....	16
7	Reporting .....	19
7.1	Community Consultative Committee .....	19
7.2	Production .....	19
7.3	Non-Compliance .....	19
7.4	Complaints .....	19
	Table 1 Environmental Protection Licence 20611 information .....	3
	Table 2 Project Approval 09_0175 information .....	3
	Table 3 PA 09_0175 Long Term Assessment Criteria for Deposited Dust .....	4
	Table 4 PA 09_0175 Long Term Impact Assessment Criteria for Particulate Matter .....	4
	Table 5 PA 09_0175 Short Term impact Assessment Criterion for Particulate Matter .....	4
	Table 6 Air quality monitoring locations .....	4
	Table 7 Deposited dust monitoring results .....	5
	Table 8 High Volume Air Sampling ( $\mu\text{g}/\text{m}^3$ ) results .....	5
	Table 9 Blasting criteria .....	7
	Table 10 Blast monitoring results .....	7
	Table 11 Operational noise criteria .....	8
	Table 12 Noise monitoring locations .....	8
	Table 13 Attended noise monitoring results (extracted from quarterly noise monitoring report prepared by EMM, July 2022) .....	9
	Table 14 Water monitoring results .....	13
	Table 15 EPL20611 - Pollutant concentration limits .....	15
	Table 16 Discharge monitoring – LDP1 .....	15
	Table 17 Discharge monitoring – LDP2 .....	15

Table 18 Discharge monitoring – LDP3 ..... 15  
Table 19 Non-compliance Register ..... 19  
Table 20 Complaints Register ..... 19  
Figure 1 KEQ Meteorological Station - monthly weather summary ..... 6  
Figure 2 Monthly weather summary – June 2022 ..... 17  
Figure 3 Wind rose report – June 2022..... 18

Appendix 1

Monitoring Locations

# 1 INTRODUCTION

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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 20611* (the EPL) (see Table 1) and *Project Approval 09\_0175* (the Consent) (see Table 2) for Karuah East Quarry (the Quarry).

**Table 1 Environmental Protection Licence 20611 information**

<b>Environmental Protection Licence Number</b>	20611
<b>Licensee's Name</b>	Karuah East Quarry Pty Limited
<b>Licensee's Address</b>	Licensee Postal Address: PO Box 3284 Thornton NSW 2322.  Premises Address: Karuah East Quarry, Blue Rock Close, Karuah NSW 2324.
<b>Link to Full Licence on the EPA Website</b>	<a href="https://apps.epa.nsw.gov.au/prpoeoapp/">https://apps.epa.nsw.gov.au/prpoeoapp/</a>

**Table 2 Project Approval 09\_0175 information**

<b>Development Application</b>	PA 09_0175
<b>Applicant</b>	Karuah East Quarry Pty Limited
<b>Approval Authority</b>	Minister for Planning
<b>Link to Full Development Approval on Major Projects Planning Portal</b>	<a href="https://www.planningportal.nsw.gov.au/major-projects/project/15026">https://www.planningportal.nsw.gov.au/major-projects/project/15026</a>

A summary of the environmental monitoring data for June 2022 is covered in this report.

Tables throughout this report provide key monitoring information from the EPL and the Consent, such as:

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

Monitoring locations are identified in Appendix 1.

## 2 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 (see Table 3, Table 4 and Table 5). Deposited dust and TSP/PM<sub>10</sub> monitoring is undertaken at the locations listed in Table 6.

**Table 3 PA 09\_0175 Long Term Assessment Criteria for Deposited Dust**

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

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

**Table 4 PA 09\_0175 Long Term Impact Assessment Criteria for Particulate Matter**

Pollutant	Average period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m <sup>3</sup>
Particulate matter <10 µm (PM <sub>10</sub> )	Annual	30 µg/m <sup>3</sup>

**Table 5 PA 09\_0175 Short Term impact Assessment Criterion for Particulate Matter**

Pollutant	Averaging period	Criterion
Particulate matter <10 µm (PM <sub>10</sub> )	24 hour	50 µg/m <sup>3</sup>

**Table 6 Air quality monitoring locations**

Site ID	EPL ID	Location	Address	GPS Coordinates
DDG 1	MP 4	South-West of Karuah East Quarry	5760 Pacific Hwy, Karuah NSW 2324	32°38'04"S 151°59'58"E
DDG 2	MP 5	South-West of Karuah East Quarry	5770 Pacific Hwy, Karuah NSW 2324	32°38'02"S 152°00'09"E
DDG 3	MP 6	South-West of Karuah East Quarry	DP 1024341, Karuah	32°37'57"S 151°59'41"E
DDG 4	MP 7	East of Karuah East Quarry	21 Halloran Rd North Arm Cove NSW 2324	32° 37' 30.87"S 152°01'10.18"E
DDG 5	MP 8	South-West of Karuah East Quarry	Lot 21 DP 1024341 Karuah NSW 2324	32° 37' 55.33"S 152°00'2.74"E
HVAS (TSP/PM <sub>10</sub> )	MP 9	South-West of Karuah East Quarry	5770 Pacific Hwy, Karuah NSW 2324	32°38'03"S 152°00'09"E

All dust monitoring is undertaken in accordance with the *Approved Methods of Sampling and Analysis of Air Pollutants in NSW* (EPA, 2022).

## 2.1 DEPOSITED DUST MONITORING

Deposited dust results for the twelve months prior to and including June 2022 are shown in Table 7.

**Table 7 Deposited dust monitoring results**

Date On	Date Off	DDG 1	DDG 2	DDG 3	DDG 4	DDG 5
5/07/2021	5/08/2021	0.5	0.4	0.5	1.0	0.2
5/08/2021	6/09/2021	2.3	0.8	1.4	0.6	1.2
6/09/2021	6/10/2021	0.7	0.4	0.5	0.4	0.4
6/10/2021	3/11/2021	3.6	0.1	0.5	0.1	0.5
3/11/2021	3/12/2021	0.5	0.2	0.4	0.2	0.5
3/12/2021	4/01/2022	1.3	0.3	0.2	1.0	0.5
4/01/2022	3/02/2022	0.9	0.7	0.3	0.4	0.8
3/02/2022	7/02/2022	1.4	0.8	1.2	0.1	0.9
07/03/2022	5/04/2022	0.8	3.6	0.8	0.4	0.9
5/04/2022	5/05/2022	0.1	0.3	0.1	0.2	0.2
5/05/2022	3/06/2022	0.4	0.6	0.4	0.3	0.3
3/06/2022	5/07/2022	0.3	0.2	0.2	0.2	0.3
<b>YTD average</b>		1.1	0.7	0.5	0.4	0.6

Monitoring results indicate that for the period from 3 June 2022 to 5 July 2022 the insoluble solid levels recorded at DDG 1 to DDG 5 monitoring locations were below the project criterion of 4 g/m<sup>2</sup>/month over an annual averaging period.

## 2.2 HIGH VOLUME AIR SAMPLING

The TSP and PM<sub>10</sub> results for June 2022, and a progressive annual average are shown in Table 8. Figure 1 illustrates the year-to-date results for HVAS monitoring.

**Table 8 High Volume Air Sampling (µg/m<sup>3</sup>) results**

Run Date	HVAS TSP (µg/m <sup>3</sup> )	HVAS PM <sub>10</sub> (µg/m <sup>3</sup> )
3/06/2022	10	6
9/06/2022	10	3
15/06/2022	13	7
21/06/2022	26	12
27/06/2022	14	6
<b>24hr Average Criteria<sup>1</sup></b>	<b>N/A</b>	<b>50</b>
<b>Annual Average Criteria<sup>1</sup></b>	<b>90</b>	<b>30</b>
<b>Progressive Annual Average<sup>2</sup></b>	16.8	10.3

Note: <sup>1</sup> Criteria as specified in PA 09\_0175.

<sup>2</sup> The progressive annual average is from 01/01/2022 to 27/06/2022, this is not a measure of compliance.

All HVAS monitoring results for June 2022 were compliant with the long term and short term impact assessment criteria outlined in *Schedule 3 Condition 13* of the Consent (see Table 3, Table 4 and Table 5).



### 3 BLAST MONITORING

Blasting must only be carried out between the hours of 9:00 AM and 4:00 PM Monday to Friday. No blasting is permitted on Saturday, Sundays, or Public Holidays. Blasting outside of the hours specified by the EPL/Consent, can only take place with the written approval of relevant regulatory authorities.

KEQ conduct monitoring at the nearest residential location (EPL 20611 EPA identification no. 11) to ensure that airblast overpressure level and ground vibration peak particle velocity do not exceed the EPL and Consent criteria (see Table 9).

**Table 9 Blasting criteria**

Location	Airblast Overpressure (Decibels (Linear Peak))	Ground Vibration Peak Particle Velocity (Millimetres/second)	Allowable exceedance
Private residence (Location B)	120	10	0%
	115	5	5% of total blasts over 12 months

There were 2 blasts conducted in June 2022, see Table 10 for monitoring results.

**Table 10 Blast monitoring results**

Date	Time	Location	Overpressure (dB(L))	Vibration (mm/s)
Wednesday, 8 June 2022	12:01pm	Bench (RL) 105	103.3	1.14
Thursday, 23 June 2022	10:58am	Bench (RL) 120	106.1	1.12

The monitoring results demonstrate compliance with blasting criteria of the Consent and the EPL.

## 4 NOISE MONITORING

Noise monitoring is undertaken in accordance with the approved *Karuah East Quarry Noise Management Plan* (April, 2022).

As the Quarry is operational with no construction activities being completed, construction noise is not being considered. Table 11 summarises the operational noise criteria.

Noise generated by the Quarry operation must not exceed the criteria specified in *Schedule 3, Condition 3* of the Consent at each location outlined in Table 11.

**Table 11 Operational noise criteria**

Monitoring Location ID	Description	Easting (MGA)	Northing (MGA)	Applicable noise limit, dB		
				Morning Shoulder <small>L<sub>Aeq(15 minute)</sub>/L<sub>Amax</sub></small>	Day <small>L<sub>Aeq(15 minute)</sub></small>	Evening <small>L<sub>Aeq(15 minute)</sub></small>
A	Mill Hill Close West	406623	6388704	35/52	42	40
B	Mill Hill Close West	406405	6388859	35/52	40	40
F	The Branch Lane West	405639	6389782	35/52	40	35
G	Halloran Road South	408154	6389523	35/52	43	39
H	Halloran Road West	407795	6389868	35/52	44	46

In accordance with the Consent, a noise monitoring program has been implemented. A summary of this monitoring program is outlined in Table 12.

**Table 12 Noise monitoring locations**

Monitoring Method	Location	Frequency	Criteria
Attended noise monitoring	A, B, F, G, H	Quarterly	Refer to Table 11

### 4.1 ATTENDED MONITORING

The most recent results for attended monitoring, undertaken 16 June 2022 and 28 June 2022 (see Table 13), show ambient noise levels include noise sources such as traffic from the nearby Pacific Highway and wildlife such as insects and birds. The Quarry operations were audible at locations G and H during day and evening periods. Monitoring for all locations across all periods was compliant with the criteria.

### 4.2 UNATTENDED NOISE MONITORING

A review of the historical unattended noise monitoring data by expert noise consultants (EMM) found no evident trends associated with Karuah East Quarry operations. As a result of this review, Karuah East Quarry has decided to cease the unattended noise monitoring component of the quarterly compliance noise monitoring program.

**Table 13 Attended noise monitoring results (extracted from quarterly noise monitoring report prepared by EMM, July 2022)**

Location	Date	Start time (Period)	Total noise levels, dB							Site contribution, dB			EPL / PA Limits, dB		Meteorological conditions <sup>2</sup> EPL limits apply (Y/N)	Exceedance, dB	Comments
			L <sub>Amin</sub>	L <sub>A90</sub>	L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A1</sub>	L <sub>Amax</sub>	L <sub>Ceq</sub>	Mod. Factor <sup>1</sup>	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Aeq</sub>	L <sub>Amax</sub>			
F	16/6	05:00 MS	41	46	52	55	57	60	60	Nil	IA	IA	NS / 35	52	0.6 m/s @ 326° F stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise occasionally audible.
A	16/6	05:19 MS	48	53	64	68	75	79	72	Nil	IA	IA	NS / 35	52	0.6 m/s @ 298° E stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise and a traffic passby occasionally audible.
B	16/6	05:36 MS	48	54	62	65	69	71	69	Nil	IA	IA	NS / 35	52	0.8 m/s @ 300° E stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise occasionally audible.
G	16/6	06:06 MS	39	41	54	50	65	79	60	Nil	IA	IA	NS / 35	52	0.6 m/s @ 289° F stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway, insects and frogs consistently audible. Bird noise and resident noise occasionally audible.
H	16/6	06:24 MS	36	39	43	44	50	57	54	Nil	IA	IA	NS / 35	52	0.6 m/s @ 306° E stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise frequently audible. Aircraft noise occasionally audible.
G	16/6	07:00 Day	39	42	45	47	50	55	60	Nil	38	N/A	38 / 43	N/A	0.9 m/s @ 308° B stability class Y	Nil	<b>Karuah East Quarry processing plant and engine revs consistently audible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise frequently audible. Aircraft noise, local traffic and livestock occasionally audible.

Location	Date	Start time (period)	Total noise levels, dB							Site contribution, dB			EPL / PA Limits, dB		Meteorological conditions <sup>2</sup> EPL limits apply (Y/N)	Exceedance, dB	Comments
			L <sub>Amin</sub>	L <sub>A90</sub>	L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A1</sub>	L <sub>Amax</sub>	L <sub>Ceq</sub>	Mod. Factor <sup>1</sup>	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Aeq</sub>	L <sub>Amax</sub>			
H	16/6	07:21 Day	39	44	52	56	61	66	60	2 dB	44 (42+2)	N/A	NS / 44	N/A	0.8 m/s @ 303° B stability class Y	Nil	<b>Karuah East Quarry processing plant and engine revs consistently audible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise and dogs barking frequently audible. Aircraft noise occasionally audible.
F	16/6	07:47 Day	49	52	55	58	62	66	63	Nil	IA	N/A	35 / 40	N/A	0.9 m/s @ 313° B stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise frequently audible. Aircraft noise and local traffic occasionally audible.
A	16/6	08:16 Day	47	51	54	56	58	69	67	Nil	IA	N/A	40 / 42	N/A	0.3 m/s @ 297° A stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway consistently audible. Bird noise frequently audible. Dogs barking occasionally audible.
B	16/6	08:38 Day	52	59	63	66	69	71	71	Nil	IA	N/A	37 / 40	N/A	0.3 m/s @ 307° A stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Traffic on the Pacific Highway consistently audible. Bird noise and resident noise occasionally audible.
A	28/6	18:00 Eve.	41	47	52	55	59	66	64	Nil	IA	N/A	NS / 40	N/A	0.4 m/s @ 2° F stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway and insects consistently audible. Dogs barking frequently audible. Bird noise occasionally audible.
B	28/6	18:17 Eve.	51	56	64	67	70	73	71	Nil	IA	N/A	NS / 40	N/A	0.6 m/s @ 332° F stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Traffic on the Pacific Highway consistently audible. Bird noise occasionally audible.

Location	Date	Start time (Period)	Total noise levels, dB							Site contribution, dB			EPL / PA Limits, dB		Meteorological conditions <sup>2</sup> EPL limits apply (Y/N)	Exceedance, dB	Comments
			L <sub>Amin</sub>	L <sub>A90</sub>	L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A1</sub>	L <sub>Amax</sub>	L <sub>Ceq</sub>	Mod. Factor <sup>1</sup>	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Aeq</sub>	L <sub>Amax</sub>			
F	28/6	18:36 Eve.	42	48	58	56	59	89	64	Nil	IA	N/A	NS / 35	N/A	0.6 m/s @ 342° F stability class Y	Nil	<b>Karuah East Quarry inaudible.</b> Distant traffic on the Pacific Highway, insects and frogs consistently audible. Distant dogs barking and traffic passbys occasionally audible.
G	28/6	19:00 Eve.	37	40	44	47	48	52	56	Nil	≤30	N/A	NS / 39	N/A	0.4 m/s @ 341° F stability class Y	Nil	<b>Karuah East Quarry hum and engine revs occasionally audible.</b> Distant traffic on the Pacific Highway, insects and frogs consistently audible.
H	28/6	19:17 Eve.	38	41	43	45	48	56	57	Nil	≤30	N/A	NS / 46	N/A	0.6 m/s @ 340° F stability class Y	Nil	<b>Karuah East Quarry hum and engine revs occasionally audible.</b> Distant traffic on the Pacific Highway, insects, frogs and hum from nearby shed (unrelated to Karuah East Quarry) consistently audible.

- Notes:
1. Modifying factor correction for LFN in accordance with Fact sheet C of the NPfI.
  2. Meteorological data were taken as an average over 15 minutes from the Karuah East Quarry on-site weather station (Refer to Section 5.1).
  3. IA = inaudible.
  4. N/A = not applicable.
  5. NS = not specified.

## **5 SURFACE WATER MONITORING**

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### **5.1 MONTHLY SURFACE WATER MONITORING PROGRAM**

Monthly water monitoring was undertaken on 3 June 2022 in accordance with the *Surface Water Monitoring Program* outlined in the *KEQ Water Management Plan (2015)*. Results are displayed in Table 14 along with the EPL discharge criterion and ANZECC (2000) Guidelines. These results do not determine compliance, they are used to analyse trends and assist with water management.

**Table 14 Water monitoring results**

Parameter	Units of measure	EPL 20611 concentration limit during discharge	Dam 1	Dam 2	Dam 3	SW 2	SW 3 (Not flowing)
Oil and grease	Milligrams per litre	5 and/or non-visible	<5	<5	<5	<5	-
pH	pH	6.5 – 8.5	7.32	7.20	7.39	6.77	-
Total suspended solids	Milligrams per litre	40	140	36	29	183	-
		<b>ANZECC Guidelines<sup>1</sup></b>					
Conductivity	µS/cm	125 – 2200	638	428	463	436	-
Total dissolved solids	mg/L	--	586	383	378	661	-
Total phosphorus	mg/L	0.025	0.16	0.08	0.11	0.16	-
Ammonia	mg/L	0.2	0.04	0.04	0.11	0.03	-
Nitrogen (Nitrate)	mg/L	0.350	13.8	0.32	2.3	4.41	-
Total hardness (as CaCO <sub>3</sub> )	mg/L	--	55	93	67	41	-
Arsenic	mg/L	0.024	0.001	<0.001	0.001	0.002	-
Cadmium	mg/L	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	-
Calcium	mg/L	--	9	29	17	17	-
Chromium	mg/L	0.001	0.008	0.004	0.005	0.012	-
Copper	mg/L	0.0014	0.011	0.004	0.006	0.016	-
Lead	mg/L	0.0034	0.005	0.002	0.003	0.009	-
Magnesium	mg/L	--	8	5	6	6	-
Manganese	mg/L	1.9	0.292	0.124	0.154	0.302	-
Nickel	mg/L	0.011	0.007	0.002	0.005	0.01	-

Potassium	mg/L	--	2	<1	1	1	-
Sodium	mg/L	--	96	35	58	58	-
Vanadium	mg/L	--	0.03	0.01	0.02	0.04	-
Zinc	mg/L	0.0312	0.045	0.016	0.02	0.064	-

Note 1 – Key default trigger values presented in ANZECC 2000 for slightly disturbed upland rivers in NSW. Heavy metals based on hard water (120-179 mg CaCO<sup>3</sup>/L).

SW3 creek not flowing.

## 5.2 DISCHARGE MONITORING

Condition L2 of the EPL outlines the requirement to monitor water discharges from the Quarry via the licensed discharge points (LDP1, LDP2 and LDP3), see Table 15.

**Table 15 EPL20611 - Pollutant concentration limits**

Pollutant	Units of Measure	Concentration Limit
Oil and Grease	Visible	5 &/or none visible
pH	pH units	6.5 – 8.5
Total suspended solids	Milligrams per litre	40

### 5.2.1 Dam 1 (LDP1)

Dam 1 had zero days of discharging during the month of June (see Table 16).

**Table 16 Discharge monitoring – LDP1**

Date	pH	Total suspended solids	Oil and grease	Controlled
-	-	-	-	-

### 5.2.2 Dam 2 (LDP2)

Dam 2 had one day of controlled discharging during the month of June. Daily monitoring during discharge was conducted and results during discharge were compliant with pollution concentration limits (see Table 17).

**Table 17 Discharge monitoring – LDP2**

Date	pH	Total suspended solids	Oil and grease	Controlled
Tuesday, 7 June 2022	7.3	22	None visible	Yes

### 5.2.3 Dam 3 (LDP3)

Dam 3 had zero days of controlled discharging during the month of June (see Table 18).

**Table 18 Discharge monitoring – LDP3**

Date	pH	Total suspended solids	Oil and grease	Controlled
-	-	-	-	-

## **6 WEATHER MONITORING**

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Karuah East Quarry has a permanent meteorological station to monitor various weather parameters including temperature, wind speed/direction, solar radiation, and rainfall. Figure 2 shows the recorded results for the local weather during June 2022.

A wind rose is a graphic tool used to depict the average direction and speed of the wind over a recorded period. Figure 3 shows the wind rose generated from data gathered during June 2022.

### Monthly Weather Summary



Site: **Karuah Quarry**

Month: **June 2022**

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	Wed	14.7	9.3	9.7	13.6	9.9	10.3	52.1	10.4	274	168.3	117.2	
2	Thu	15.6	3.1	8.0	14.4	4.6	8.3	21.3	2.6	205	172.5	104.2	
3	Fri	17.1	3.3	10.6	15.7	4.3	10.7	29.6	3.2	201	180.8	86.5	
4	Sat	16.6	7.4	9.4	15.7	8.3	10.2	45.0	5.1	203	149.2	89.9	6.4
5	Sun	18.6	4.4	9.4	17.4	5.8	10.0	41.4	4.1	204	178.3	70.0	
6	Mon	17.1	3.3	10.1	16.2	3.6	11.3	58.0	8.2	232	120.8	60.3	
7	Tue	16.3	3.9	11.3	15.5	5.8	11.6	47.3	10.0	273	124.1	62.3	
8	Wed	15.4	6.0	9.0	14.4	7.4	9.9	35.5	7.2	271	125.0	71.1	
9	Thu	15.3	3.3	11.0	14.2	6.2	11.2	46.1	9.9	272	130.8	67.2	
10	Fri	17.1	8.1	11.2	16.0	9.1	11.9	35.5	7.3	266	110.8	59.6	
11	Sat	17.2	4.6	12.0	15.9	8.0	12.2	42.6	10.9	273	114.2	61.1	
12	Sun	17.2	8.5	9.8	16.2	9.3	10.9	42.6	6.1	262	120.0	66.3	
13	Mon	18.5	2.4	8.6	16.2	3.9	9.1	26.0	2.8	210	116.7	63.2	
14	Tue	19.3	2.7	8.8	17.8	4.0	9.4	11.8	1.9	195	128.3	60.8	
15	Wed	20.1	3.3	9.9	19.4	4.3	10.8	20.1	2.6	222	128.3	57.8	
16	Thu	21.5	5.0	11.5	20.2	5.8	13.2	24.9	3.2	222	103.3	56.0	
17	Fri	20.1	5.7	12.3	18.1	8.0	12.7	26.0	4.4	218	100.0	58.9	
18	Sat	17.2	6.9	12.6	16.4	8.0	12.8	20.1	3.7	224	109.2	64.8	5.4
19	Sun	18.4	10.3	12.5	17.1	10.7	12.8	17.8	3.0	185	90.8	55.0	9.8
20	Mon	20.9	9.2	10.5	18.3	9.9	10.9	18.9	2.4	214	99.2	43.9	5.4
21	Tue	20.6	5.4	11.7	20.0	5.8	12.8	13.0	2.2	191	115.0	2.3	
22	Wed	18.9	5.1	8.7	17.3	6.3	9.3	26.0	3.2	215	0.0	0.0	
23	Thu	18.3	2.6	8.7	17.3	3.8	9.6	20.1	2.5	187	0.0	0.0	
24	Fri	19.3	3.4	10.6	18.4	4.5	12.2	33.1	4.4	260	0.0	0.0	
25	Sat	20.9	5.4	10.7	19.9	6.6	11.7	28.4	2.9	183	191.7	19.1	
26	Sun	21.4	5.0	11.4	19.8	6.2	12.6	14.2	2.3	201	290.8	122.3	
27	Mon	17.2	5.5	10.5	15.3	8.5	10.9	37.9	6.5	205	141.7	86.0	
28	Tue	12.2	6.9	9.2	12.1	7.4	9.6	16.6	2.7	246	130.8	5.8	9.4
29	Wed	15.4	5.5	11.1	14.8	6.2	11.4	11.8	1.9	198	0.0	0.0	2.2
30	Thu	18.8	9.1	11.9	17.7	9.5	12.1	18.9	2.0	217	0.0	0.0	
<b>Ave or Total</b>		<b>17.9</b>	<b>5.5</b>	<b>10.4</b>	<b>16.7</b>	<b>6.7</b>	<b>11.1</b>	<b>29.4</b>	<b>4.7</b>	<b>224.3</b>	<b>114.7</b>	<b>53.7</b>	<b>38.6</b>
<b>High</b>		<b>21.5</b>	<b>10.3</b>	<b>12.6</b>	<b>20.2</b>	<b>10.7</b>	<b>13.2</b>	<b>58.0</b>	<b>10.9</b>	<b>290.8</b>	<b>122.3</b>	<b>9.8</b>	
<b>Low</b>		<b>12.2</b>	<b>2.4</b>	<b>8.0</b>	<b>12.1</b>	<b>3.6</b>	<b>8.3</b>	<b>11.8</b>	<b>1.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>Notes:</b> 1. Values are for the 24 hour period from 9am to 9am next day.												<b>No. rain days &gt;1mm:</b>	<b>6</b>
2. Values are for the 24 hours to 9am.													

Figure 2 Monthly weather summary – June 2022

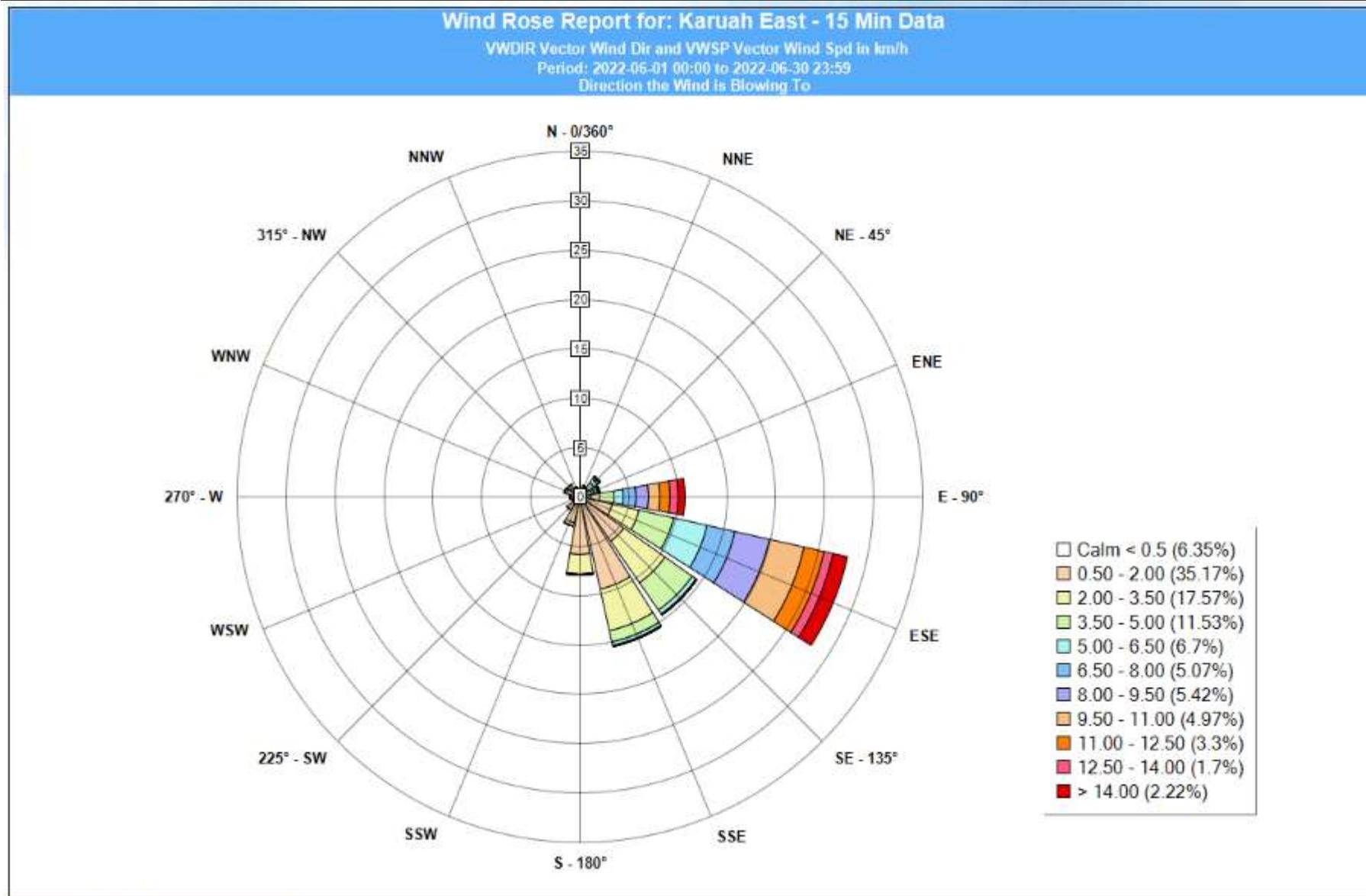


Figure 3 Wind rose report – June 2022

## 7 REPORTING

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### 7.1 COMMUNITY CONSULTATIVE COMMITTEE

The purpose of a Community Consultative Committee (CCC) is to provide a forum for discussion between a proponent (KEQPL) and representatives of the community, stakeholder groups and the local council on issues directly relating to a specific State Significant Project (KEQ).

The KEQ CCC generally meets biannually (twice a year). Meeting minutes can be found at Hunter Quarries website <<https://hunterquarries.com.au/>>.

On 14 March, the first KEQ CCC meeting for 2022 was held, below are the key details:

- A site inspection was undertaken with two KEQPL representatives and one community representative.
- The meeting was facilitated at the Karuah RSL with one chairperson, four community representatives and two KEQPL representatives.
- The next CCC meeting is scheduled for September 2022.

### 7.2 PRODUCTION

For the month of June 81,408 tonnes of various quarry products were produced.

### 7.3 NON-COMPLIANCE

There were nil non-compliance events during June 2022 to report (see **Table 19**).

**Table 19 Non-compliance Register**

Date	Nature of Incident	Action
June 2022	Nil incidents	Nil action required

### 7.4 COMPLAINTS

There were nil complaints received during June 2022 (see **Table 20**).

**Table 20 Complaints Register**

Date	Nature of Complaint	Action
June 2022	Nil complaints received	Nil action required

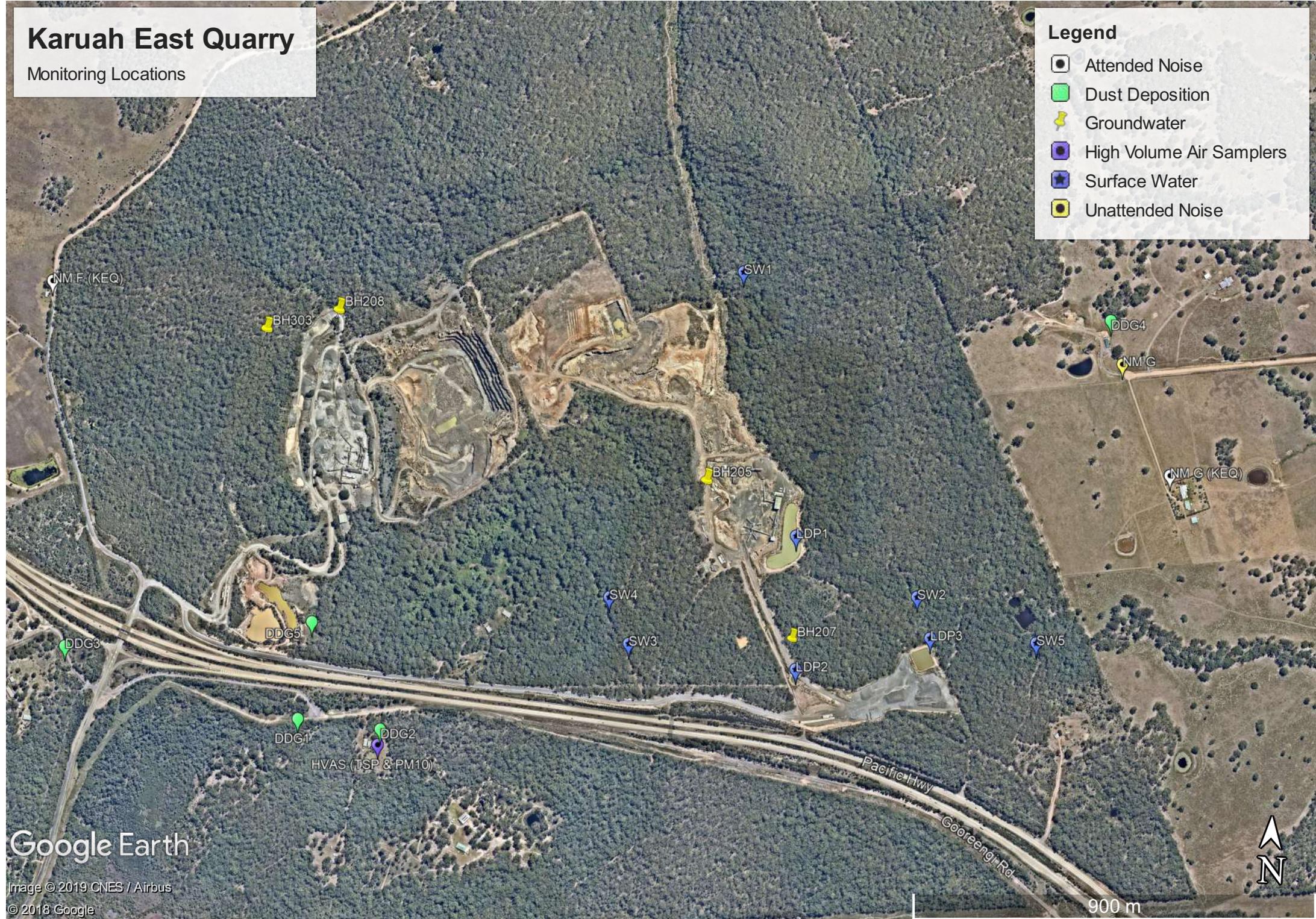
# Appendix 1 – Monitoring Locations

# Karuah East Quarry

Monitoring Locations

## Legend

- Attended Noise
- Dust Deposition
- Groundwater
- High Volume Air Samplers
- Surface Water
- Unattended Noise



Google Earth

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900 m

