



Karuah East Quarry - Community Consultative Committee

Meeting Minutes – 14 September 2020

Venue: KEQ site office (former dwelling) on Lot 12 DP 1024564

Time: CCC Meeting: Start 4.00pm
End 4.45pm

Minutes

Attendees: Michael Ulph (Chairperson), Tony Ebben (Community Representative), Wade Cameron (Community Representative), Greg Dressler (Karuah East Quarry Pty Ltd), Joel Fleming (Karuah East Quarry Pty Ltd) and Mat Radnidge (ADW Johnson).

Agenda

1) Welcome

- Michael Ulph paid respect to the traditional Aboriginal land owners of Karuah, past, present and future.

2) Apologies

- Goetz Schraer (Community Representative) – Apology.
- Mat Bell (Mid Coast Council) – Absent.

3) Declaration of Pecuniary Interests

- Michael Ulph confirmed that KEQ Pty Ltd is paying GHD (his employer) a fee for Michael to act as the independent chairperson for the CCC.
- Mat Radnidge confirmed that KEQ Pty Ltd is paying ADW Johnson (his employer) a fee for Mat to be a member of the CCC.
- Greg Dressler & Joel Fleming are employees of Hunter Quarries / Karuah East Quarry Pty Ltd.

4) Acceptance of Previous Minutes

- Draft CCC Meeting Minutes dated 9 March 2020 (attached to this agenda); and
- Draft Site Inspection Record dated 9 March 2020 (attached to this agenda).

Moved: Greg Dressler
Seconded: Joel Fleming

5) Business Arising from Previous Minutes:

- Mat Radnidge to advise Michael Ulph when a decision on MOD 8 (acoustics) is made by the NSW DPIE. Michael will then advise the CCC members.

Comment – Mat Radnidge advised the CCC of the following:

- This application remains under assessment by the NSW DPIE.
- There do not appear to be any issues with the application. The NSW EPA provided recommended conditions of consent in March 2020. The NSW DPIE assessment staff confirmed in May 2020 that there is no outstanding information required.
- The most recent advice from the DPIE assessment staff is that they are currently awaiting NSW DPIE Director review / sign off.

No questions / comments were raised by the CCC.

- Mat Radnidge to advise Michael Ulph as any progress on MOD 9 (proposed additional disturbance area for stockpiling) is made. In particular when an application is lodged with the NSW DPIE.

Comments:

- Mat Radnidge advised the CCC of the following:
 - This proposed MOD application has been flagged at previous CCC meetings.
 - The project has advanced but remains preliminary in nature.
 - The proposal involves an additional disturbance area of approximately 7.2ha.
- Mat Radnidge & Greg Dressler confirmed the following key points of justification for the proposed MOD:
 - KEQ's customer base has evolved since initial quarry design. Customers now include Transport for NSW (formerly RMS), Port of Newcastle and local Councils.
 - To comply with tendering requirements, KEQ needs to demonstrate proof of stockpiling capacity that has been subject to quality assurance testing. This

often requires three (3) x 4,000m³ stockpiles. Given that KEQ produce 15 different products, stockpiling area is insufficient. This is a problem that will lead to lost tenders.

- As an example, KEQ's available stockpiling area is approximately 27,000m², whereas other local quarries have stockpile areas in excess of 100,000m².

○ Mat Radnidge noted:

- As identified at previous meetings, the proposal will cut into the edge of the biodiversity offset area on Lot 13 DP 1024564.
- KEQ Pty Ltd have met with both State and Federal ecology assessment regulators and they have advised that projects such as this have been done in the past and can be done again provided that:
 - The offset to be impacted is replaced with like for like vegetation;
 - The impacts of the proposal are then offset.
- At this stage KEQ Pty are considering fulfilling offsetting requirements by using the northern and southern portions of nearby Lot 201 DP 1042537 and the northern section of Lot 21 DP 1024341 plus payment into the Biodiversity Conservation Divisions' (BCD) Conservation Fund or securing offsets credits from the Biodiversity Credits Register (an open market database).

○ Mat Radnidge noted that:

- Ecology fieldwork is complete;
- The stormwater management strategy is largely complete;
- The following studies will shortly be progressed:
 - Aboriginal Archaeology;
 - Noise;
 - Air Quality;
 - Groundwater;
 - Visual Impact;
 - Soil & Land Resource; and
 - Rehabilitation.
- KEQ Pty Ltd will provide a further update to the CCC when the application is submitted to the DPIE.

○ Wade Cameron – Totally understands and accepts the rationale of the additional disturbance area.

○ Wade Cameron – Why can't other land be secured by KEQ PL to offset the proposal instead of utilising land already owned by Hunter Quarries?

Mat Radnidge – The land being considered by KEQ Pty Ltd to be used for offsetting (part Lot 21 and part Lot 201) is currently within a zone that allows for a range of development. Formally offsetting these lands protects them from future development.

No further questions were raised by CCC members.

6) Correspondence.

- a) 4 April 2020 – Michael Ulph supplied the draft minutes of the 9th March 2020 CCC meeting and site inspection to all CCC members and invited comment.

Noted by CCC members.

7) Company Report and Overview of Activities.

The Company Report and Overview of Activities (see attached) was presented by Joel Fleming and included the following:

- Progress of the Project
- Monitoring and Environmental Performance
- Community Complaints and Response to Complaints
- Information Provided to the Community and any Feedback

Joel advised that the format of the report was new and invited any feedback from the CCC following review of the document.

Michael Ulph – Indicated that inserting photos would be helpful.

No further feedback was supplied.

Questions / discussions resulting from the above were as follows:

- Michael Ulph – Will there be more cut into the ridgeline?

Greg Dressler – Yes, the current quarry pit will move approximately 50-60m north towards the rear boundary. After that, the quarry pit will do down to a suitable depth. At present, clay weathered material is being encountered which is unsuitable.

Joel Fleming – Visually, you cannot see the KEQ disturbance area when driving north along the Pacific Highway, unlike the old Karuah Quarry pit which is visible.

- Joel Fleming & Greg Dressler – Side casting is underway. Side casting involves the transport of overburden from KEQ to the benches of the adjoining Karuah Quarry to the west. The benches will then be hydro mulched, likely from January 2020. The ridgeline that separates the KEQ and Karuah Quarry will be planted with tube stock. This will soften the visual impact of the Karuah Quarry when travelling north along the Pacific Highway. The works are in line with the approved rehabilitation plans.

The owner of Lot 11 DP 1024564 has also requested water storage within the Karuah Quarry void.

No further questions were raised by CCC members.

8) Update on status of Modification Applications discussed at March 2020 CCC meeting.

Addressed in Item 5 above.

Greg Dressler – Advised the CCC that KEQ Pty Ltd are considering a new modification application that will involve extending the hours of operation of the quarry. This will likely relate to the sales component of the KEQ (ie. the loading of trucks with material to transport to market). Greg advised that this is necessary because KEQ is located approximately 1 hour from key projects in the Newcastle and Hunter Valley area. Given that the quarry cannot open until 7am (Mon – Sat), there is a delay in supply of product to building sites, which are typically operating from 7am. The proposal will address this delay in supply of product.

Greg Dressler – The details of the proposal are very preliminary in nature and an acoustic assessment will be undertaken to inform the reasonable extent of what is applied for.

Mat Radnidge – Advised that state wide, as a Covid-19 economic stimulus measure, the NSW Government are supporting infrastructure and construction projects and this has included greater flexibility in construction hours. The proposal will support this initiative.

Wade Cameron – Will this application include public consultation?

Mat Radnidge – Yes. The process for this MOD application will likely be:

- KEQ PL will commission an acoustic specialist to review the proposal and confirm if the project is feasible or not (in terms of expanding approved hours of operation).
- Once the full details of the application are known, this will be reported back to the CCC.
- The application will be lodged and assessed by the NSW DPIE and EPA. As part of this process, there is a mandatory public exhibition phase.

No further questions / comments were raised by the CCC.

9) General Business

- Joel Fleming – Invited any CCC member comment relevant to the adjoining Karuah Quarry.

No comments / questions.

- Wade Cameron – Asked if the CCC were aware of the status of the proposed (separate) Karuah South Quarry?

Greg Dressler – Indicated that he understands the application remains under assessment.

- Joel Fleming – The first independent audit for KEQ is underway.

Wade Cameron – What is the independent audit?

Mat Radnidge – It is a consent requirement that an independent party is commissioned to undertake a detailed review of all conditions of consent for the KEQ.

Michael Ulph – Confirmed that as part of the independent audit, the auditor contacts regulatory agencies. Michael advised that whilst the CCC is not a regulatory agency, he received contact from the auditor to discuss the operation of the CCC and key issues that have arisen. Michael advised that noise was the most common matter discussed and KEQ had implemented a range of noise mitigation measures to address the matter.

Greg Dressler – This is a very thorough process and the independent auditor's appointment needs to be approved by the NSW DPIE.

Joel Fleming – Once complete, an action plan is developed to address any outstanding items. The audit will be made publicly available on the KEQ website.

- Wade Cameron – Have there been any non-compliances in monitoring?

Joel Fleming – Noted that the regional bushfires during the 2019/20 summer season caused a spike in air quality monitoring results; however these were not recorded as non-compliances as the consent excludes monitoring results recorded during extraordinary events such as bushfires.

- Joel Fleming – There is one item for attention, which relates to undertaking noise monitoring at 2 x receivers south of the Pacific Highway. Noise from the quarry is inaudible at the 2 x monitoring locations south of the Pacific Highway and this has been confirmed by two separate acoustic experts. For this reason the NSW DPIE have agreed that monitoring is not necessary at these locations, however the Environment Protection License contains a requirement for monitoring at these 2 x southern receivers. KEQ Pty Ltd are currently resolving this matter with the NSW EPA.

- Wade Cameron – How are dam capacities?

Greg Dressler – Since February 2020, very good. Prior to this, due to the drought, levels were low.

- Wade Cameron – Why are pH levels so high?

Greg Dressler – KEQ PL are still learning about the site as the quarry develops.

Joel Fleming – Dam 3 receives runoff from stockpiles, which may be an influencing factor of dam water pH as the stockpiled material (crushed andesite) has an alkaline pH. Dam 1 and 2 frequently have neutral pH results.

- Joel Fleming – The 2nd fauna crossing was installed recently. A 12 monthly monitoring program will commence shortly.

Wade Cameron – With cameras?

Joel Fleming – Yes. Additionally, 195 nest boxes were recently installed.

Wade Cameron – That is an excellent outcome.

- Michael Ulph – Were there different sized nest boxes installed?

Joel Fleming – Yes, there were approximately 6 different sizes of nest box used to cater for different fauna including bats, possums and glossy black cockatoos. Two year monitoring will occur at nest boxes.

- Wade Cameron – How is the *Tetratheca juncea* (TJ) translocation site going?

Michael Ulph – Arrangements will be made for the CCC to view the (TJ) translocation area in 12 months to coincide with the flowering period.

Wade Cameron – He is interested in this matter because the survival rate is typically 20% after five years.

Joel Fleming – The 5th and final year of TJ monitoring is underway. At this time the translocation area is having a success rate of between 20% - 30% from memory.

10) Next CCC meeting and site inspection to be scheduled.

Next meeting scheduled for Monday 1st March 2021. Details as follows:

- 3pm – Site Inspection (meet at Karuah East Quarry Office, Blue Rock Close, Karuah); and
- 4pm – CCC Meeting at Karuah East Quarry office.

Michael Ulph confirmed he would issue calendar invites to CCC members.

Meeting closed – 4.45pm.

Summary of Actions Arising from Meeting

- Mat Radnidge to advise Michael Ulph when a decision on MOD 8 (acoustics) is made by the NSW DPIE. Michael will then advise the CCC members.
- Mat Radnidge to advise Michael Ulph as any progress on the MOD for proposed additional disturbance area for stockpiling is made. In particular when an application is lodged with NSW DPIE.
- Mat Radnidge to advise Michael Ulph as any progress on the MOD to extend sales activity is made, in particular details of the proposal once KEQ PL is informed by an acoustic assessment.
- Michael Ulph to issue calendar invites for 1st March 2021 CCC meeting.

Enclosed:

- Site Inspection Minutes 14 September 2020; and
- Company Report & Overview September 2020 (refer to Item 7 above).



Karuah East Quarry – Community Consultative Committee

Site Inspection Record – 14 September 2020

Venue: Karuah East Quarry

Time: Start 3.00pm
End 4.00pm

Attendees: Michael Ulph (Chairperson), Tony Ebben (Community Representative), Wade Cameron (Community Representative), Greg Dressler (Karuah East Quarry Pty Ltd), Joel Fleming (Karuah East Quarry Pty Ltd) and Mat Radnidge (ADW Johnson).

Apologies: Goetz Schraer (Community Representative).

Absentees: Mat Bell (Mid Coast Council).

Record of Site Inspection

- All CCC members met at the Karuah East Quarry weighbridge office at 3pm.
- Greg Dressler and Joel Fleming transported the CCC members in two (2) vehicles to the crushing plant (Lot 13 DP 1024564). At the crushing plant all CCC members exited the vehicles for discussion.
- CCC members were then transported to the KEQ site office (former dwelling) on Lot 12 DP 1024564 at 4pm for the CCC meeting.

Record of Matters Discussed During Site Inspection

- Greg Dressler:
 - Confirmed that no plant / equipment has changed since the last site inspection.
 - Provided a general summary of the quarrying process as follows:
 1. Quarried rock is transported from the pit and fed through the primary jaw crusher;
 2. Rock is then conveyed through the secondary and tertiary cone crushers;
 3. Rock is then conveyed through the barmac crusher;
 4. Rock is then fed into the screening plant where various rock sizes are achieved (eg. 7mm, 10mm, 12mm, etc); and
 5. Rock is then transported to stockpile areas for sale.
- Wade Cameron: Noted that the stockpiles were larger now than at the time the previous CCC site inspection occurred.

Greg Dressler:

- Noted that the stockpiles come and go based on product demand.
 - Identified that the large stockpile feeding directly into the secondary crusher was approximately 4,500 tonnes. Confirmed that the stockpile had built up because the secondary crusher was temporarily not operational.
- Greg Dressler:
 - Approximately 320,000 – 340,000 tonnes of material has been processed at Karuah East Quarry over the past 6 months.
 - The quarry is still in its infancy and clay and weathered rock are being encountered. Clay is problematic to processing activity.
 - Joel Fleming: Advised that a polo citrus dust suppression system has been installed at the secondary crusher.

Greg Dressler:

- The treatment involves water and air blended with orange peel. It has the texture of shaving foam.
- An added benefit of the use of the polo citrus is that it reduces the risk of contamination of the quarry product which can be caused by too much water being blended with the rock.
- KEQ Pty Ltd are also investigating the implementation of insertable dust collectors.

Mat Radnidge: Does the polo citrus reduce overall site water usage?

Greg Dressler: Yes.

- Joel Fleming:
 - Air quality levels have been well below criteria.
 - There was a recent spike on a Sunday, however the quarry does not operate on Sundays.
Michael Ulph: Was this because of high wind?
Joel Fleming: Yes. Suspects the high wind and dry conditions caused the spike.

- Wade Cameron: Asked is operational activity is status quo moving forward.

Greg Dressler: Confirmed yes.

- Greg Dressler: Confirmed that KEQ Pty Ltd can now meet specifications to supply rail ballast material. Greg identified a stockpile of suitable rail ballast material to the CCC members.

- Wade Cameron: Have there been any breakdowns?

Greg Dressler: Confirmed nothing significant.

- Wade Cameron: Is the quarry still running on generator power?

Greg Dressler: Yes. Two (2) generators are located adjacent to the secondary / tertiary cone crusher enclosure.

Wade Cameron: How much diesel usage?

Greg Dressler: Diesel usage is approximately half of what was originally predicted. Approximately 140L / hr per generator is being used (original prediction was 270L/hr per generator).

- Wade Cameron: The noise mitigation at the primary jaw crusher works well.

End of Site Inspection Discussions



Karuah East Quarry

Company Report & Overview of Activities



September 2020

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the Consent Development Consent 09_0175

DAWE Australian Government Department of Agriculture, Water and the Environment (formerly the Department of Environment)

the Department Department of Planning, Industry and Environment

EPA NSW Environmental Protection Authority

EPL Environmental Protection Licence 20611

KEQPL Karuah East Quarry Proprietary Limited

the Quarry Karuah East Quarry

the reporting period 1 January 2020 to 30 June 2020

RMS Roads and Maritime Services

1 INTRODUCTION

The Quarry is an approved hard rock quarry located at Karuah in the Hunter Region of New South Wales. The Quarry was approved by the NSW Planning Assessment Commission as a State Significant Development (formerly referred to as a Part 3A Major Project) on 18 June 2014 (*Project Approval 09_0175*). The project also received approval from DAWE on 20 March 2015 (*EPBC 2014/7282*).

The key elements of the approved project are as follows:

- Extraction of up to 1.5 million tonnes of andesite material per year from a total resource of approximately 29 million tonnes.
- Removal and stockpiling an estimated 380,000m³ of overburden from the quarry extraction area. Overburden is not included in the extraction rate of 1.5 million tonnes of andesite per annum.
- Construction of quarry plant (crushing plant, wash plant, pug mill, workshop and weighbridge), stockpile areas, and haulage road.
- Quarry Lands – Pt Lot 12 and Part Lot 13 DP 1024564.
- Disturbance Area of proposed works – 31.63ha (actual vegetation disturbance 28.09ha).
- Environmental Offset Lands – Lot 13 and Lot 14 DP 1024564, and Lot 5 DP 838128. Total environmental offset 138.22ha. These offset lands were confirmed acceptable by DPIE and DAWE.
- Upgrade and extension of Blue Rock Lane (RMS owned land) to provide access to the quarry.
- Haulage of product from site to market by 25 – 30 tonne haul trucks via the Pacific Highway.
- Approximately 216 laden truckloads per day at maximum production.
- Drilling and blasting activity.
- Crushing and screening of extracted material.
- Loading and hauling of extracted material.
- Employment of approximately 28 staff to operate the Quarry and approximately 56 construction jobs will be created.
- The Karuah East Quarry is a stand-alone operation, separate to the existing Karuah Hard Rock Quarry.

All environmental modelling undertaken (eg, air quality and noise) considered the cumulative impacts of both quarries combined and results satisfied legislative goals.

All Project Approval documents and Environmental Reporting are available on the Hunter Quarries website at www.hunterquarries.com.au (see 'Karuah East Documents' at the bottom of the webpage).

Prior to the commencement of vegetation clearing and construction, the Project Approval and EPBC Approval required the preparation of a number of important management plans inclusive of environmental safeguards. These management plans (prepared by experts endorsed by DPIE) include:

- Biodiversity Offset Area Management Plan.
- Tetratheca Juncea Translocation Management Plan.
- Noise Management Plan.
- Air Quality and Greenhouse Gas Management Plan.
- Blast Management Plan.

- Water Management Plan.
- Traffic Management Plan (including Construction Management and Operational Traffic Management).
- Heritage Management Plan.
- Landscaping and Rehabilitation Management Plan.
- Environmental Management Strategy.

All of the abovementioned management plans have been endorsed by DPIE. In addition, the Biodiversity Management Plan was also endorsed by DAWE.

Construction of the Karuah East Quarry began on 27 April 2016 with operations commencing on 16 November 2017.

2 AIR QUALITY MONITORING

KEQPL ensure that all practical mitigation measures are used to prevent and minimise particulate matter emissions generated by the Quarry operation, so emissions do not exceed the criteria in Tables 7 to 9 of the Consent at any residence on any privately-owned land.

Air quality monitoring is undertaken in accordance with the approved *Air Quality Management Plan*.

2.1 DEPOSITED DUST MONITORING

Deposited dust monitoring results for the reporting period are displayed in **Table 1**. The results are compliant with the criteria of the Consent.

DDG4 was not able to be analysed for date 7/05/2020 due to the sample jar being broken during collection. This was immediately reported to the Department and no further action was required.

Table 1 Deposited dust monitoring results

Date	DDG1	DDG2	DDG3	DDG4	DDG5
13/01/2020	2.0	2.7	1.9	2.0	2.8
13/02/2020	3.4	1.6	2.3	3.5	3.5
12/03/2020	1.7	1.5	0.7	0.9	1.6
9/04/2020	0.8	0.8	0.5	0.1	0.5
7/05/2020	1.2	0.9	1.0	-	1.3
4/06/2020	0.2	0.3	0.3	0.7	0.1
Rolling Annual Average	1.4	1.3	1.2	1.5	1.6
Annual Average Criteria	4.0	4.0	4.0	4.0	4.0

2.2 HIGH VOLUME AIR SAMPLING

High volume air sampling monitoring results for the reporting period are displayed in **Table 2**. The results are compliant with the criteria of the Consent.

Table 2 High volume air sampling results

Date	TSP ($\mu\text{g}/\text{m}^3$)	PM10 ($\mu\text{g}/\text{m}^3$)	Comment
3/01/2020	49	26	
9/01/2020	45	30	
15/01/2020	32	14	
21/01/2020	66	32	
27/01/2020	47	25	
2/02/2020	57	29	
8/02/2020	26	16	
14/02/2020	22	15	
20/02/2020	31	16	
26/02/2020	36	16	
3/03/2020	34	14	
9/03/2020	21	7	
15/03/2020	23	10	
21/03/2020	38	18	
27/03/2020	20	9	
2/04/2020	51	17	
8/04/2020	13	10	
14/04/2020	27	12	
20/04/2020	18	11	
26/04/2020	27	15	
2/05/2020	15	7	
8/05/2020	29	16	
14/05/2020	9	4	
20/05/2020	16	8	
26/05/2020	15	8	
1/06/2020	12	6	
7/06/2020	15	11	
13/06/2020	8	3	
19/06/2020	17	8	
25/06/2020	5	1	
¹ 24hr Max Criteria	N/A	50	
Year-to-date Average	37.2	18.1	
¹ Annual Average Criteria	90	30	

3 BLAST MONITORING

KEQPL conducts blasts in accordance with the approved *Blast Management Plan* and conditions stipulated in the Consent and the EPL to avoid harm and minimise nuisance to environment and the surrounding community.

Blast monitoring results for the reporting period are displayed in **Table 3**. The results are compliant with the criteria of the Consent and the EPL.

Table 3 Blast monitoring results

Date & Time	Overpressure (dB(L))	Vibration (mm/s)
Thursday, 16 January 2020 12:35 PM	n/t	n/t
Wednesday, 5 February 2020 12:28 PM	113.3	0.86
Friday, 14 February 2020 12:28 PM	101.7	0.7
Thursday, 20 February 2020 12:55 PM	114.8	0.72
Tuesday, 10 March 2020 12:32 PM	112.0	0.59
Friday, 27 March 2020 12:31 PM	n/t	n/t
Thursday, 9 April 2020 1:55 PM	n/t	n/t
Friday, 24 April 2020 1:30 PM	111.6	0.69
Thursday, 7 May 2020 12:30 PM	n/t	n/t
Friday, 22 May 2020 12:26 PM	n/t	n/t
Thursday, 4 June 2020 12:30 PM	n/t	n/t
Tuesday, 16 June 2020 12:30 PM	111.1	0.62
Monday, 22 June 2020 12:26 PM	n/t	n/t
Tuesday, 30 June 2020 12:30 PM	n/t	n/t

Not triggered = n/t

4 NOISE MONITORING

KEQPL uses all practical mitigation measures to ensure that the operational noise generated by the Quarry does not exceed the criteria stipulated in the Consent and the EPL.

Noise monitoring is undertaken in accordance with the approved *Noise Management Plan*.

4.1 ATTENDED MONITORING

Attended noise monitoring was undertaken twice during the reporting period, in April and June. The results are displayed in **Table 4** and **Table 5** respectively.

The results detail all noise sources, such as traffic, insects, birds, Karuah Hard Rock Quarry operation, and the Quarry operation. The results are compliant with the criteria of the Consent and the EPL.

Table 4 Attended noise monitoring results - April 2020

Location	Date Start Time Weather	LAMAX	LA1	LA10	LA90	LAEQ	Description of noise and typical maximum noise levels (dBA)
F	18/04/2020 11:35 AM W = 10 km/hr	78	59	46	40	51	Pacific Highway 45-50 Insects 40-45 Birds 45-50 Airplane 45 Local traffic 60 Karuah East Quarry inaudible
G	18/04/2020 10:15 AM W = 10 km/hr	64	49	45	41	44	Reversing Alarm 35 Trucks 38-40 Pacific Highway 40 Birds 50 Karuah East Quarry audible

Table 5 Attended noise monitoring results - June 2020

Location	Date Start Time Weather	LAMAX	LA1	LA10	LA90	LAEQ	Description of noise and typical maximum noise levels (dBA)
A	15/06/2020 1:15 PM Calm	72	69	65	57	63	Pacific Highway 50-70 Karuah East Quarry inaudible
B	15/06/2020 1:45 PM Calm	76	73	69	60	66	Pacific Highway 55-75 Birds 45-50 Airplane 45 Karuah East Quarry inaudible

F	15/06/2020 2:15 PM Calm	76	66	61	52	58	Pacific Highway 50-60 Exhaust brakes 75 Local traffic 60-70 Karuah East Quarry inaudible
G	15/06/2020 12:30 PM Calm	69	66	58	43	54	Insects 35 Pacific Highway 45 Dogs Barking 45-65 Karuah East Quarry audible

4.2 UNATTENDED NOISE MONITORING

Unattended noise monitoring was undertaken twice during the reporting period, in April and June. The results are displayed in **Table 6** and **Table 7** respectively.

The unattended noise monitoring results have been determined to be compliant with the criteria of the Consent and the EPL for April and June.

Table 6 Unattended noise monitoring results - April 2020

INP Period	LA1	LA10	LA90	LAEQ
Day	58	51	38	49
Evening	60	55	44	51
Night	56	48	38	49

Table 7 Unattended noise monitoring results - June 2020

INP Period	LA1	LA10	LA90	LAEQ
Day	61	51	37	54
Evening	55	51	37	48
Night	52	48	34	45

5 WATER MONITORING

Water monitoring is undertaken in accordance with the approved *Water Management Plan*. This includes periodical monitoring of surface water and groundwater, and daily monitoring of water during discharge events from licenced discharge points.

5.1 SURFACE WATER

Surface water monitoring is to be undertaken monthly and compared against baseline data to ensure that ecological health downstream of discharge locations are not compromised due to the Quarry operation.

5.2 GROUNDWATER

Groundwater levels are monitored on a quarterly basis and groundwater quality is analysed on a six-monthly basis. The monitoring results are analysed and compared against baseline results to identify any impacts arising from the Quarry operation and to identify long-term groundwater level trends.

5.3 DISCHARGE COMPLIANCE

Water quality monitoring is undertaken daily during discharge in order to demonstrate compliance with pollutants specified in the EPL.

5.3.1 Dam 1

During the reporting period, there were 15 days of discharging from Dam 1. Water quality monitoring results are displayed in **Table 8**. The results are compliant with the criteria of the EPL.

Table 8 Water quality monitoring results - Dam 1

Date	Temperature	pH	Conductivity	Turbidity	Total Suspended Solids	Oil and Grease
Thursday, 5 March 2020	23.9	6.8	681	36	19	<5
Friday, 3 April 2020	24.2	6.9	781	75	36	<5
Monday, 20 April 2020	22.2	7.1	774	34	17	<5
Tuesday, 21 April 2020	20.3	7	755	40	18	<5
Wednesday, 22 April 2020	19.7	7.1	751	36	20	<5
Thursday, 21 May 2020	20.5	7.1	762	27	15	NV
Thursday, 28 May 2020	20.5	7	676	35	13	NV
Friday, 29 May 2020	21.1	6.8	737	21	10	NV
Monday, 1 June 2020	20.1	6.8	1430	45	23	NV

Tuesday, 2 June 2020	15.6	6.7	677	55	21	NV
Wednesday, 3 June 2020	18.5	7.2	701	55	26	NV
Wednesday, 17 June 2020	18.8	6.9	789	60	29	NV
Monday, 22 June 2020	18.8	6.9	794	28	13	NV
Tuesday, 23 June 2020	19.3	7	839	31	16	NV
Wednesday, 24 June 2020	14.6	7	773	35	18	NV

Not visible = NV

5.3.2 Dam 2

During the reporting period, there were eight days of discharging from Dam 2. Water quality monitoring results are displayed in **Table 9**. The results are compliant with the criteria of the EPL.

Table 9 Water quality monitoring results - Dam 2

Date	Temperature	pH	Conductivity	Turbidity	Total Suspended Solids	Oil and Grease
Thursday, 5 March 2020	23.8	6.8	387	30	21	<5
Wednesday, 1 April 2020	22.1	6.9	549	13	9	<5
Thursday, 2 April 2020	21.1	6.8	545	13	8	<5
Friday, 22 May 2020	21.9	7.2	597	80	40	NV
Thursday, 28 May 2020	21.1	6.6	404	55	22	NV
Friday, 29 May 2020	23.4	6.6	424	50	23	NV
Monday, 1 June 2020	19.9	6.6	448	32	18	NV
Friday, 12 June 2020	21	6.8	417	75	36	NV

Not visible = NV

5.3.3 Dam 3

During the reporting period, there were 11 days of discharging from Dam 3. Water quality monitoring results are displayed in **Table 10**. The results are compliant with the criteria of the EPL.

Table 10 Water quality monitoring results - Dam 3

Date	Temperature	pH	Conductivity	Turbidity	Total Suspended Solids	Oil and Grease
Thursday, 5 March 2020	23.5	7.6	999	60	35	<5
Wednesday, 1 April 2020	22.1	8	987	45	21	<5
Thursday, 2 April 2020	21.3	8.1	985	45	21	<5
Tuesday, 21 April 2020	20.2	8.2	943	40	18	<5
Wednesday, 22 April 2020	19.3	8.2	933	39	39	<5
Monday, 1 June 2020	22.5	8.3	836	40	28	NV
Tuesday, 2 June 2020	15.3	8.4	762	33	21	NV
Wednesday, 3 June 2020	18.5	8.5	824	29	21	NV
Monday, 15 June 2020	18.3	8	726	45	32	NV
Tuesday, 16 June 2020	18	8.2	758	36	25	NV
Wednesday, 17 June 2020	19.6	8.2	765	30	20	NV

Not visible = NV

6 PRODUCTION

Monthly monitoring of sales across the reporting period is detailed in **Table 11**, showing that there were a total of 13,960 truck movements taking 415,967.59 tonnes of material from the Quarry to various customers across New South Wales.

Table 11 Monthly production data

Date	Truck Movements	Material (tonnes)
January 2020	1,329	37,517.08
February 2020	3,193	96,429.96
March 2020	2,662	79,786.71
April 2020	2,609	80,014.36
May 2020	2,075	61,434.10
June	2,092	60,785.38
Total	13,960	415,967.59

7 REPORTING

7.1 INCIDENTS

During the reporting period, KEQPL did not have any environmental incidents.

7.2 NON-COMPLIANCE

During the reporting period, KEQPL did not have any reportable non-compliances.

7.3 COMPLAINTS

During the reporting period, KEQPL did not receive any complaints.

7.4 TRAINING

KEQPL conducts a monthly meeting for all employees to be updated on:

- operational performance.
- company planning and strategy.
- environmental and safety training.

During the reporting period, two key environmental factors were revised with all site workers:

- Dust (7 February 2020); and
- Noise and vibration (13 March 2020).

Due to physical distancing protocol in place for infection control and COVID precaution, scheduling of the monthly meetings was hindered.

Appendix 1 – EPL 20611 Monitoring Locations



Plotted By: Zochary Janvie Plot Date: 11/06/20 4:35:48PM Cad File: N:\11819\DWG\11819-EPL-002-A.DWG
 This plan includes coloured information. If you have a black and white copy you do not have all of the information. This note is coloured RED.

EPA IDENTIFICATION POINTS ^

No.	TYPE	EASTING*	NORTHING*	DESCRIPTION
1	DISCHARGE	407 341 m	6 389 325 m	Water Discharge From Dam 1
2	DISCHARGE	407 358 m	6 389 032 m	Water Discharge From Dam 2
3	DISCHARGE	407 654 m	6 389 119 m	Water Discharge From Dam 3
4	MONITORING	406 254 m	6 388 851 m	Air Quality Sensitive Receiver DDG1
5	MONITORING	406 439 m	6 388 841 m	Air Quality Sensitive Receiver DDG2
6	MONITORING	405 723 m	6 388 979 m	Air Quality Sensitive Receiver DDG3
7	MONITORING	408 016 m	6 389 831 m	Air Quality Sensitive Receiver DDG4
8	MONITORING	406 271 m	6 389 067 m	Air Quality Sensitive Receiver DDG5
9	MONITORING	406 439 m	6 388 828 m	Air Quality Sensitive Receiver B HVAS
11	MONITORING	406 398 m	6 388 903 m	Air Blast Monitor

*COORDINATES SHOWN ARE ON GDA94 DATUM

ver.	date	comment	surveyed	drawn	checked	pm	co-ordinate information	level information	scale (A1 original size)	page
A	11.06.2020	INITIAL EPL PLAN	--	Z.J.	M.R.	M.R.	CO-ORDINATE SYSTEM: M.G.A. ZONE 56 GDA94 ORIGIN OF CO-ORDINATES: P.M.	DATUM: A.H.D. CONTOUR INTERVAL: 2.0 m ORIGIN OF LEVELS: LIDAR DATA	0 100 200m SCALE: 1:4000 (FULL)	1 OF 1

^ MONITORING POINTS HAVE BEEN PROVIDED BY HUNTER QUARRIES PTY LTD. REFER TO PLAN 'KARUAH HARD ROCK QUARRY ENVIRONMENTAL MONITORING LOCATIONS - FIGURE 1' BY SLR CONSULTING AUSTRALIA - REFERENCE: 633.HQP00.0030 DATED 23/06/2014.

PLAN OF:
ENVIRONMENTAL
PROTECTION LICENCE
(EPL 20611)
KARUAH EAST QUARRY

location:
LOT 12 D.P. 1024564,
LOT 13 D.P. 1024564
ANDERSITE ROAD,
KARUAH, NSW, 2324

council: MID COAST

dwg ref: 11819-EPL-002-A

client:



central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411

www.adwjohanson.com.au