

13 July 2026

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**Re: Response to NSW Environment Protection Authority Advice
Modification 11 Karuah East Quarry (KEQ) (MP09_0175-Mod-11) (EPL 20611); and
Modification 2 Karuah Hard Rock Quarry (KHRQ) (DA265-10-2004-Mod-2) (EPL 11569)**

Dear James,

1 Introduction

Karuah East Quarry Pty Ltd (KEQPL) has engaged EMM Consulting Pty Limited (EMM) to undertake a review of the NSW EPA advice dated 30 May 2026 (for KEQ) and 3 June 2026 (for KHRQ) in relation to the concurrent Modification Applications for the Karuah Pit Consolidation Project as follows:

- Modification 11 to KEQ (MP09_0175-Mod-11) (EPL 20611); and
- Modification 2 to KHRQ (DA265-10-2004-Mod-2) (EPL 11569).

The NSW EPA advice provides recommended Environment Protection Licence (EPL) conditions in relation to the Noise Impact Assessments (NIA) developed to support the concurrent Modification Applications. This letter provides a response to the recommended noise conditions as well as other matters within each respective EPL that will require minor adjustment.

We note that the EPA is generally satisfied with the outcomes of the concurrent NIA's completed for both quarry operations, subject to the application of increased monitoring frequency at the KHRQ from six-monthly to quarterly (as has been proposed by the MOD 2 application). This approach will align monitoring frequency at KHRQ with current practices at the KEQ and is supported by the Applicant.

It is proposed that these management arrangements be addressed post-determination of the concurrent Modification Applications through the routine Management Plan revision process and associated EPL Variations.

EMM and the Applicant have reviewed the draft conditions provided by the NSW EPA for each modification. Provided below is our response, which seeks to establish some minor changes to some recommended conditions to allow a consolidated monitoring program to be effectively implemented.

It is considered that these minor adjustments can be formalised during the routine Management Plan revision process and associated EPL variations. There are no matters within the draft EPL conditions or our below response which would affect the ongoing assessment of the concurrent Modification Applications by NSW Planning.

2 Noise conditions

Provided below is a summary of our comments and recommended adjustments to the draft or current EPL conditions where relevant.

2.1 Modification 11 to the KEQ Project Approval (MP09_0175-MOD11)

2.1.1 EPL 20611 Draft Condition L4.1

i Proposed condition

The NSW EPA provided the following recommended noise limit condition:

L4 Noise Limits

L4.1 Noise generated at the premises must not exceed the noise limits in the table below.

Noise Assessment Location	Morning Shoulder L _{Aeq,15minute}	Morning Shoulder L _{Amax}	Day L _{Aeq,15minute}	Evening L _{Aeq,15minute}
A (74 Mill Hill Close, Karuah, Lot 100 DP1028885)	35	52	42	40
B (64 Mill Hill Close, Karuah, Lot 3 DP785172)	35	52	40	40
G (2 Halloran Road, North Arm Cove, Lot 1 DP1032636)	35	52	43	39
H (21 Halloran Road, North Arm Cove, Lot 10 DP1032636)	35	52	45	47
I (51 Halloran Road, North Arm Cove, Lot 11 DP1032636)	35	52	40	37
All other residences	35	52	40	35

ii Applicant response

The Applicant notes that the noise limits in the draft condition are consistent with the recommendations of the NIA. This condition is accepted as proposed by the EPA.

2.1.2 EPL 20611 Current Condition P1.4

i. Proposed condition and requested amendments

Post determination of the KEQ MOD 11 Application (at the time the Applicant seeks to update EPL 20611), the Applicant will seek to amend current Condition P1.4 to include additional monitoring points to allow a consistent monitoring regime to be established between both KEQ and KHRQ. Suggested updates are provided in provided in blue text below.

P1.4 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

EPA identification no.	Type of Monitoring Point	Location description
11	Air blast overpressure & ground vibration peak particle velocity monitoring	Blast monitor located adjacent to Residence B as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
17	Noise monitoring	Attended noise monitoring location adjacent to Residence B as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
18	Noise monitoring	Attended noise monitoring location adjacent to Residence D as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
19	Noise monitoring	Attended noise monitoring location adjacent to Residence F as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
20	Noise monitoring	Attended noise monitoring location adjacent to Residence G as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
21	Noise monitoring	Attended noise monitoring location adjacent to Residence H as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402

ii Justification

To facilitate the Karuah Pit Consolidation Project, it is considered appropriate to establish a holistic and consistent set of quarterly noise monitoring locations that can be used to assess noise compliance at both sites (i.e. KEQ and KHRQ) within a single monitoring program.

Current EPL condition M8.1 implies compliance noise monitoring should occur at all the locations listed in the noise limits table in Condition L4.1. We recommend that the EPL is amended to reference specific noise monitoring points as proposed in the amended Condition P1.4 above. This is detailed further in Section 3.

2.1.3 EPL 20611 Current Condition M8.1

i Proposed condition and requested amendments

Post determination of the KEQ MOD 11 Application (at the time the Applicant seeks to update EPL 20611), the Applicant will seek to amend Condition M8.1 of EPL 20611 (suggested updates provided in blue text below):

M8.1 To assess compliance with the noise limits for this premises attended noise monitoring must be undertaken in accordance with all noise conditions and:

- a) during a period of normal quarry operations;
- b) at [Points 17, 18, 19, 20 and 21 identified in Condition P1.4](#) ~~each one of the locations listed in the noise limits table of this licence;~~
- c) occur quarterly in the reporting period;
- d) occur during each day, [evening and morning shoulder](#) period as defined in the NSW Noise Policy for Industry.

Note: Quarterly attended noise monitoring must be completed (unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent. The frequency of noise monitoring will be reviewed, upon request.

ii Justification

Current condition M8.1 implies compliance noise monitoring should occur at all the locations listed in the noise limits table in Condition L4.1. We recommend that Condition M8.1 is amended to reference specific noise monitoring points as proposed in the amended Condition P1.4 above (refer Section 2.1.2).

Further, Condition M8.1, as it is currently worded, only requires noise monitoring during the daytime period. However, it requires update for monitoring during the day, evening, and morning shoulder periods, to align with the KEQ's approved operating hours and the approved KEQ Noise Management Plan (NMP).

It is of note that, since the extension of operating hours was approved as part of Modification 9 in November 2021, quarterly noise monitoring has been undertaken during the applicable operating periods (day, evening and morning shoulder), in accordance with the approved KEQ NMP.

2.2 Modification 2 to the KHRQ Development Consent (DA265-10-2004-MOD2)

2.2.1 EPL 11569 Draft Condition L5.1

i Proposed condition

The NSW EPA provided the following recommended noise limit condition:

L5 Noise Limits

L5.1 Noise generated at the premises must not exceed the noise limits in the table below.

Noise Assessment Location	Morning Shoulder $L_{Aeq,15minute}$	Morning Shoulder L_{Amax}	Day $L_{Aeq,15minute}$	Evening $L_{Aeq,15minute}$
A (74 Mill Hill Close, Karuah, Lot 100 DP1028885)	35	52	40	40
B (64 Mill Hill Close, Karuah, Lot 3 DP785172)	35	52	43	43
C (54 Mill Hill Close, Karuah, Lot 1 DP785172)	35	52	41	41
D (827 Tarean Road, Karuah, Lot 250 DP1024341)	35	52	43	43
E (789 Tarean Road, Karuah, Lot 22 DP1024341)	35	52	40	38
All other residences	35	52	40	35

ii Applicant response

The Applicant notes that the noise limits in the draft condition are consistent with the recommendations of the NIA. The condition is accepted as proposed by the EPA.

2.2.2 EPL 11569 Draft Conditions L5.2, L5.3, L5.4 & L5.5

i Proposed conditions

The NSW EPA provided draft conditions L5.2 – L5.5 which deal with noise limit definitions, meteorological conditions, determining compliance (noise monitoring equipment location) and the application of modification factors in accordance with the NSW EPA's *Noise Policy for Industry*.

ii Applicant response

The Applicant has no comments or suggested adjustments to these draft conditions and they are accepted as proposed by the EPA.

2.2.3 EPL 11569 Draft Condition M7.1

i Proposed condition and requested amendments

Following review of draft Condition M7.1, the following amendments are requested (in blue text):

M7.1 To assess compliance with the noise limits for this premises attended noise monitoring must be undertaken in accordance with all noise conditions and:

- a) during a period of normal quarry operations;
- b) at **Points 10, 11, 12, 13 and 14 identified in Condition P1.3**~~each one of the locations listed in the noise limits table of this licence;~~
- c) occur quarterly in the reporting period;
- d) occur during each day, **evening and morning shoulder** period as defined in the NSW Noise Policy for Industry.

Note: Quarterly attended noise monitoring must be completed (unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent. The frequency of noise monitoring will be reviewed, upon request.

ii Justification

Draft Condition M7.1 implies compliance noise monitoring should occur at all of the locations listed in the noise limits table in Condition L5.1. We recommend that draft Condition M7.1 is amended to reference specific noise monitoring points as proposed in Condition P1.3 below (refer Section 2.2.4).

Further, Condition M7.1, as it is currently worded, only requires noise monitoring during the daytime period. However, it requires update to for monitoring during the day, evening, and morning shoulder periods, to align with the KHRQ's proposed operating hours (which are proposed to be extended to align with the approved operational hours of the KEQ).

2.2.4 EPL 11569 Current Condition P1.3

i Proposed condition and requested amendments

Post determination of the KHRQ MOD 2 application, (at the time the Applicant seeks to update EPL 11569), the Applicant will seek to include the following entirely new condition (in blue text) as Condition P1.3 of EPL 11569:

P1.3 The following points referred to in the table below are identified in this licence for the purposes of noise monitoring and/or setting limits for the emission of noise from the premises.

EPA identification no.	Type of Monitoring Point	Location description
10	Noise monitoring	Attended noise monitoring location adjacent to Residence B as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
11	Noise monitoring	Attended noise monitoring location adjacent to Residence D as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
12	Noise monitoring	Attended noise monitoring location adjacent to Residence F as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
13	Noise monitoring	Attended noise monitoring location adjacent to Residence G as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402
14	Noise monitoring	Attended noise monitoring location adjacent to Residence H as identified in 'Figure 1 - Appendix 2 - Noise Receiver Locations' located in EPA document DOC15/253402

ii Justification

To facilitate the Karuah Pit Consolidation Project, it is considered appropriate to establish a holistic and consistent set of quarterly noise monitoring locations that can be used to assess both sites (i.e. KHRQ and KEQ) within a single monitoring program.

Condition M7.1, as currently worded, implies compliance noise monitoring should occur at all the locations listed in the noise limits table in Condition L5.1. We recommend the EPL is amended to reference specific noise monitoring points as proposed in Condition P1.3 above. This is detailed further in Section 3 below.

3 Karuah Consolidated Monitoring Program

To facilitate the Karuah Pit Consolidation Project, it is a logical and efficient outcome to establish a consistent set of quarterly noise monitoring locations that can be used to assess noise compliance for both sites (i.e. KEQ and KHRQ) within a single monitoring program.

The current wording of the noise monitoring conditions ties the noise monitoring locations to the locations listed in the relevant noise limits tables (i.e. Condition L4.1 of EPL 20611 and Condition L5.1 of EPL 11569). This has the effect that the current proposal will effectively introduce two separate sets of noise monitoring locations for each site (A, B, C, D & E for KHRQ and A, B, G, H & I for KEQ).

In practical terms, this arrangement is impractical and would make it difficult to complete all required monitoring within a single morning shoulder period (5:00 am – 7:00 am), and therefore it is not feasible to capture all proposed monitoring locations within a single compliance monitoring survey in order to minimise the disturbance to residential receivers and landholder properties.

In consideration of the above, we believe it is appropriate to seek an amendment to the recommended conditions, with a view to establishing a consistent and practical set of monitoring locations that can be undertaken within a single compliance monitoring survey for both sites and develop a consistent and comparable dataset of results.

We recommend that the relevant noise monitoring conditions (Condition M8.1 of EPL 20611 (refer Section 2.1.3) and Condition M7.1 of EPL 11569 (refer Section 2.2.3)) be amended to reference specific noise monitoring points identified in Condition P1.4 of EPL 20611 (refer Section 2.1.2) and Condition P1.3 of EPL 11569 (refer Section 2.2.4).

These changes will establish a logical arrangement where quarterly noise monitoring is undertaken at a single suite of monitoring locations for both sites, namely noise monitoring points adjacent to Locations B, D, F, G and H (as outlined in Figure A.1 of Appendix A). Monitoring is proposed to be undertaken during the morning shoulder, day and evening periods.

Justification for the proposed noise monitoring locations is provided below:

- Location B is the most noise-exposed residence to the south in the Mill Hill Close receiver group. Demonstrating compliance at this location would also demonstrate compliance at Locations A and C. It is also an established monitoring location within the KEQ noise monitoring program.
- Location D is the most noise-exposed residence to the south-west in the Tarean Road receiver group. Demonstrating compliance at this location would also demonstrate compliance at Location E.
- Location F is the only noise-exposed residence to the west. It is also an established monitoring location within the KEQ noise monitoring program.
- Locations G & H are the most noise-exposed residences to the east. Demonstrating compliance at these locations would also demonstrate compliance at Location I. These are also established monitoring locations within the KEQ noise monitoring program.

The proposed noise monitoring program would provide appropriate coverage of all relevant surrounding receptors and ensure their noise amenity is protected, while avoiding unnecessary duplication of monitoring requirements and intrusion for nearby residents.

It is of note that conducting noise monitoring at a single representative worst-case location for groups of proximal receivers is an appropriate and efficient approach that is commonly applied at mining and extractive operations across NSW and is consistent with EPA expectations and their approach taken to compliance noise monitoring.

4 Summary

EMM has completed a review of the EPA advice and recommended conditions in relation to the concurrent Modification Applications for the Karuah Pit Consolidation Project consisting of Modification 2 to the KHRQ Development Consent (DA 265-10-2004-MOD2) and Modification 11 to the KEQ Project Approval (MP09_0175-MOD11).

It is noted that the EPA is generally satisfied with the Noise Impact Assessments submitted as part of each Modification Application and has provided draft conditions for the subsequent routine Management Plan revisions and EPL Variations to be addressed post-determination.

EMM and the Applicant generally support the draft EPL conditions, however, proposed amendments have been suggested for the noise-related EPL conditions and the reasoning behind these recommendations has been provided to ensure effective implementation of the consolidated monitoring program can be achieved.

If you have any questions or require any further information, please do not hesitate to contact me on 02 4907 4800 or email.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'L. Adamson' with a stylized flourish at the end.

Lucas Adamson

Associate Acoustics Consultant

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Review: Robert Kirwan (7 July 2026)

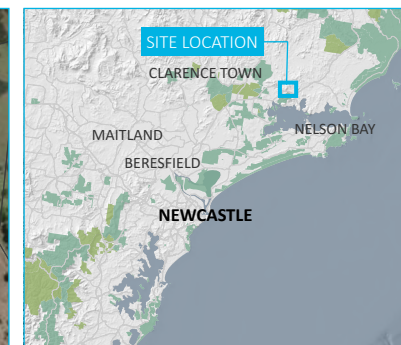
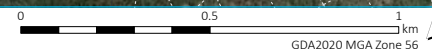
Appendix A

Proposed noise monitoring locations

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Source: EMM (2026); ABS (2021); DCSRS (2024); ESRI (2026); GA (2009)



KEY

- KHRQ approved disturbance boundary
- KEQ approved disturbance boundary
- Proposed KEQ Mod 11 additional disturbance area
- Proposed noise monitoring location

Existing environment

- Major road
- Minor road
- Vehicular track
- Named watercourse
- Cadastral boundary
- NPWS reserve

INSET KEY

- Major road
- NPWS reserve
- State forest

Proposed noise monitoring locations

Karuah Pit Consolidation Project
Response to NSW Environment
Protection Authority Advice
Figure A.1

