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Department of Planning, Infrastructure and Environment  
GPO Box 39  
SYDNEY NSW 2001

Attention: Anthony Barnes

Email: [anthony.barnes@planning.nsw.gov.au](mailto:anthony.barnes@planning.nsw.gov.au)

30 August 2019

Dear Mr Barnes

**Karuah East Quarry Project Modification 8 (MP 09\_0175)  
Request for Additional Information**

I refer to your email to the Environment Protection Authority (EPA) received 9 August 2019, seeking the EPA's comments in relation to the modification application for the Karuah East Quarry Project (MP 09\_0175 MOD 8). The Karuah East Quarry is approved to produce up to 1.5 million tonnes per annum of 'andesite' material suitable for use as road base, construction aggregate, concrete batching and other various applications. The site is located approximately 3 kilometres north of Karuah, off Branch Lane, in the MidCoast local government area.

The application seeks to modify the operational noise criteria in Condition 3 of Schedule 3 of the Approval, in accordance with the *NSW Noise Policy for Industry (2017)* (NPfI). The proposed modification does not relate to extraction rates, quarrying, processing, operational activity, hours of operation or rehabilitation activities.

The EPA has reviewed the supporting documents titled:

- *Karuah East Quarry- Proposed Modification to Operational Noise Criteria and Implementation of Improved Acoustic Mitigation Measures - Project Approval 09\_0175* (ADW Johnson Pty Ltd, June 2019) (the Modification Report), and
- *Karuah East Quarry Noise Impact Assessment* (Thearle Acoustics Pty Ltd, 10 June 2019) (the NIA).

The EPA has also reviewed:

- Letter to EPA titled "*Noise Mitigation Review – Pollution Reduction Study* (Karuah East Quarry, received May 2019) (the KEQ letter), and
- *Karuah East Quarry Noise Mitigation Review* (Thearle Acoustics Pty Ltd, 26 February 2019) (the PRP Noise Report).

However, the EPA is unable to provide further advice on this matter until the following information is provided:

- **Details of noise monitoring used to calculate Rating Background Level** – The proponent must provide additional information and justification that the calculated Rating Background Levels (RBLs) are representative of the noise environment at the receivers. The RBLs in the NIA at Locations G, H and J are not consistent with other measurements conducted in the area and do not appear to agree with the monitoring graphs in the NIA.
- **Justification of sound power levels** – The proponent must justify each sound power level (SWL) used and provide more information on the mitigation measures included in the NIA. The SWLs of some equipment used in the NIA are not consistent with those specified in the PRP Noise Report nor the KEQ letter. It is not clear how some of the SWLs used in the NIA have been determined.

The EPA notes that on 20 August 2019, the Department of Planning Industry and Environment wrote to the proponent seeking further justification for the proposed modification. While the EPA does not object to reassessment of noise limits in line with the Noise Policy for Industry (NPfI), the EPA did not require the proponent to reassess its noise limits.

The NIA states:

*"The noise impact assessment...reflects a request by the NSW EPA to update the quarry project approval (MP09\_0175) to include the NSW Noise Policy for Industry (2017), which supersedes the former NSW Industrial Noise Policy (2000)."*

This statement is incorrect. The proponent approached the EPA about varying the noise limits on the licence on the basis that the original noise assessment they commissioned was not accurate in terms of establishing the background noise criteria. The EPA advised the proponent that the EPA would not consider any proposal to increase noise limits without an appropriate noise impact assessment of background noise as part of a comprehensive noise impact assessment. The EPA noted that the noise limits were requirements of the consent for the premises and advised that if the proponent wanted a reassessment of noise limits it needed to lodge an application to modify the consent that fully justifies any changed noise limits. The EPA advised that it would assess any proposed noise limits as part of this modification application process.

Further detail of the information required is provided in **Attachment A**.

If you have any questions about this matter, please contact Genevieve Lorang on (02) 4908 6869 or by email to [hunter.region@epa.nsw.gov.au](mailto:hunter.region@epa.nsw.gov.au)

Yours Sincerely

**MITCHELL BENNETT**  
**Head Strategic Operations Unit - Hunter**  
**Environment Protection Authority**

Encl: Attachment A: Further Information Required by the EPA

## **Attachment A: Further Information Required by the EPA**

### **1) Noise monitoring and rating background levels**

The NIA states that noise monitoring was carried out at location B in 2003 and H, G and J in 2019. The Rating Background Levels (RBLs) from these measurements are presented in Table 5 of the noise report. Data in the noise monitoring graphs (Appendix 2 of the NIA for locations G, H and J) and the RBLs presented in Table 5 are not consistent. The Assessment Background Level (ABL) is defined by the lowest 10<sup>th</sup> percentile  $L_{90,15min}$  measurement in the day period for each valid period. Estimating noise levels from the graphs indicates that the ABLs are typically in the low 30s (dB) for relevant operational days.

Data on Friday 1/2/19 does not display the same diurnal pattern as the other days and looks atypical at all the monitoring locations. The proponent should justify why this has been included in the RBL calculations. It is also noted there are incomplete days of monitoring on 30/1 and 6/2. These do not meet the NPfI's requirements for data sets to be included in the RBL calculation.

Reviewing the quarterly unattended noise monitoring from 2019 and 2018 carried out as part of the quarry's noise management plan, indicates that when the quarry is not contributing to the noise environment at Location G, the RBL is between 34 and 35 dBA.

Based on data available from the compliance assessments and from the noise monitoring graphs in Appendix 2 of the report, the RBLs in Table 5 do not appear to be representative. The RBLs should be determined in accordance with Fact Sheets A and B of the NPfI unless a strong justification can be provided that the values currently in the report are appropriate.

### **2) Project noise trigger levels**

- a) The project noise trigger levels are set by the lowest 15-minute noise level between the intrusiveness and amenity levels. The amenity levels should be converted to a 15-minute level as per Sections 2.1 and 2.2 of the NPfI prior to being compared with the intrusiveness level to establish the amenity level. The report has not done this, but as the intrusiveness level is the lower level, any correction would not change the outcome.
- b) The RBLs used to set the intrusiveness criteria are not considered appropriate as discussed above. The PNTLs should be reviewed when the RBLs are updated.

### **3) Operational noise assessment**

- a) The site is operational and therefore the noise model should be validated and its accuracy demonstrated by comparison of measured levels at reference points with predicted noise levels.
- b) The report should provide a reference to the Pollution Reduction Program (PRP) that established mitigation measures to enable the site to meet its Environment Protection Licence noise limits. Section 5 of the NIA identifies the included mitigation measures. However, it has not included some mitigation measures which were listed in the PRP Noise Report. These are mitigating the sound power levels (SWLs):
  - a) Haul Trucks;
  - b) Front End Loaders; and
  - c) Excavators.

The report should include the details of these mitigation measures.

- a) Clarification is required in relation to the SWL of the drill rig. The drill in the PRP Noise Report has a SWL of 109 dBA. It is listed in Appendix 1 of the NIA with SWL of 105 dBA, but in Chapter 5 of the NIA it has an SWL of 114 dBA.
- c) The predicted noise levels in Table 15 of the noise report at Location G are 2 dB higher than those in the PRP noise report. There were a number of mitigation measures in the PRP noise

report to address this, but the KEQ letter said these were not required because of the assumption that the stated noise reduction performance of these measures had been overstated in the PRP Noise Report. Therefore, it is not clear why the noise report has predicted noise levels higher than in the PRP noise report. The proponent should explain this discrepancy.

- d) The recommended noise mitigation measures in Chapter 8.1 of the NIA do not appear to consider the SWL restrictions for mobile plant items as required by the PRP Noise Report.