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Dear Kristina

Karuah East Quarry modification (MP09_175-MOD-10)

Thank you for providing the opportunity for Council to comment on the proposed modification to the Karuah East Quarry (MP09_175-MOD-10).

Council's response on the proposal is as follows:

Biodiversity

A Biodiversity Development Assessment Report, prepared by Kleinfelder and dated 22 June 2022, has been submitted in support of the modification application.

The proposed modification seeks to expand the disturbance area of the existing quarry by 7.17-ha (from 33.01 to 40.18-hectares) to primarily establish additional stockpiling areas, as well as facilitate improved surface water management, a new administrative building and improved areas for vehicle manoeuvring and parking. The project approval as it relates to extraction rates, quarrying activity and vehicle movements will not be affected by the modification proposal.

The new disturbance area is located within an existing Biodiversity Offset Area and a like for like replacement offset has been identified, as well as a new offset for the Modification 10 proposed action. The proposal is associated with other biodiversity impacts, including:

- Direct loss of 6.68-hectares of PCT1619 and 0.30-hectares of PCT1692,
- Direct loss of 6.98-hectares of habitat and 2,102 individuals of the threatened *Tetratheca juncea* and 6.68-hectares of habitat and one (1) individual of the threatened *Grevillea parviflora* subsp. *parviflora*,
- Direct loss and impacts of the known habitats of the threatened little bentwing-bat, southern myotis, east-coast freetail-bat, squirrel glider, grey-headed flying-fox, little lorikeet, varied sittella and glossy black-cockatoo,
- Indirect and related impacts on threatened species and native vegetation.

A Biodiversity Stewardship Site is proposed on land in the vicinity of the development. A Site Assessment Report is proposed for this area.

Council is of the opinion that the proposal is unsatisfactory from a biodiversity perspective.

The BDAR considers that the proposed modification does not compromise the survival of the local population of *Tetratheca juncea*. However, the proposal affects an area that has been established and managed as a Biodiversity Offset Area. The proposal reduces the total known local population of Tetratheca juncea by 2,102 individuals (6.4% of the local population). While the proposed Stewardship Site apparently preserves 6,907 individuals, the proposal does not uplift the local environment to compensate for the loss of 2,102 individuals / 6.4% of the local subpopulation, which is considered an unacceptable outcome.

In light of NSW Land and Environment Court judgments, it is Council's opinion that the case that the development has satisfactorily "*avoided*" biodiversity impacts on threatened species is not satisfactorily settled. The development has a significant, unavoided, residual impact on *Tetratheca juncea* and worsens the plight of survival of this plant in this locality. Council is of the opinion that alternate measures for the development have not been satisfactorily examined or that biodiversity impacts have been under-considered in respect of possible noise and air quality issues. Alternate options to source, secure and site the activity on more appropriate lands need to be better explored.

Noise

An acoustic impact assessment titled 'Karuah East Quarry Mod 10 Noise Impact Assessment' (Report No. H200705 RP4) was prepared by EMM Consulting, dated March 2022.

The acoustic impact assessment concluded that the predicted noise levels from the proposal will have negligible impact on the existing noise emissions from the quarry. The assessment predicts that the noise emitted will be below the associated Project Noise Tigger Levels (PNTL) for all sensitive receivers, excluding sensitive receiver H in which it was predicted the PNTL would be exceeded by up to 4 dB(A) during the day and 3 dB(A) during the evening. The modelling predicted however that the noise emitted would still comply with the current PNTL for the operation for receiver H (Environmental Protection Licence No. 20611).

Following review of the acoustic impact assessment the following matters have been noted as requiring further investigation/information:

1) Appendix B depicts the location of plant and equipment used to model noise emitted from the site. However, the figure does not clearly depict that:

    a) Modelling was calculated from the proposed disturbance areas (central and southern disturbance areas as per Figure 5 of the Karuah East Quarry S4.55(2) Modification Report prepared by Adw Johnson dated 27.6.22). It appears modelling was calculated from the current southern stockpile area.

    b) The specific location/s in which plant and equipment was modelling from. For example it is noted that it is proposed that heavy vetches will be parking on the south eastern corner of the site, was this noise source included for this location?

    c) Modelling should also represent worst case operational scenarios, with plant and equipment operating at the closest permitted points to each sensitive receiver, as well as multiple pieces of plant and equipment operating at any one time (if permitted).

2) The assessment concluded that ‘based on results of the operator-attended noise measurements it was determined that the LFN (Low Frequency) Noise modifying factor did not apply at location G’. Comments from observations made during the operator-attended surveys included ‘Processing plant and feed from jaw predominant, trucks on Highway, dogs at residence, occasional loading of truck from Quarry, local traffic; resident returning home’. Further justification for excluding the low frequency noise modifying factor should be provided. Comments from the current residence (if possible) may help to support the above conclusion.

Air Quality Impacts

An air quality impact assessment titled ‘Karuah East Quarry Mod 10 Air quality and greenhouse gas assessment’ (Report No.H200705) was prepared by EMM Consulting, dated April 2022. The air quality impact assessment predicted that the proposed modifications to the Karuah East Quarry is ‘acceptable in terms of local air quality’ impacts.

The cumulative impact of the future Karuah South Quarry (KSQ) (not approved), Karuah Red (KRQ) Quarry (not approved) and Karuah East Quarry (KEQ) operating concurrently has been included in the assessment. The Karuah Quarry will cease operating completely prior to the operation of the Karuah South Quarry (which has a larger footprint) and hence it was assumed that the concurrent operation of the Karuah East Quarry and Karuah Quarry would meet air quality criteria if modelling for the Karuah South, Karuah Red and Karuah East predict compliance.

Total suspended particulate matter (TSP), particulate matter less than 10 micrometres in aerodynamic diameter (PM10) and particulate matter less than 2.5 micrometres in diameter (PM2.5) where identified as key pollutants from quarrying activities.

The assessment predicts that the cumulative impact of the KSQ, KRQ and KEQ would exceed the PM10 criteria 24 hour average impact assessment criteria at assessment location A, one day per year due to elevated background levels. It should be noted that the 24 hour average background PM10 concentrations (only average maximum PM10 were provided) were not provided in the assessment, a copy should be provided so as the predicted with cumulative (with background) can be reviewed.

It was predicted that the average annual PM10 criteria would not be exceeded at any sensitive receiver. Furthermore, the assessment determined that PM2.5 and TSP criteria would not be exceeded over a 24-hour average or annual average.

Dust mitigation measures were incorporated into the emissions inventory used to predict air quality impacts, as such and as stated in the assessment the current Air Quality and Greenhouse Gas Management Plan should be updated to reflect mitigation measures assumed in the assessment.

Stormwater / Erosion and Sediment Control

The proposal results in significant change in the stormwater quality leaving the site. It is documented in the surface water management plan that there will be an increase in the size of dams and relocation of a dam and these will be sized to meet the requirements of the blue book. It is also noted that the proposal will utilise stored water for dust suppression within the development.

In order to have no new impacts on the Karuah River Estuary and Port Stephens Great Lakes Marine Park it is recommended that the applicant demonstrate that the proposed sediment ponds are sized to achieve neutral or beneficial effect for water quality for the operational phase of development. This can be demonstrated using MUISC modelling which will identify concentration discharge values required to achieve the pre-development loads (note this is above the requirements set by the Blue Book)

It is recommended that the erosion and sediment control plan must be developed by a Certified Professional in Erosion and Sediment Control (CPESC) with current certification through the International Erosion Control Association (IECA) Australasia.

Yours faithfully,

Bruce Moore
Coordinator Major Assessment