

18 April 2018

Caro Limited
153 Hill Road
Te Aroha 3392

Attention: Roger Pryce

Dear Roger

153 HILL ROAD TE AROHA PROPOSED QUARRY: S92 RFI

Marshall Day Acoustics prepared the original noise assessment report¹ for the proposed quarry to be located at 153 Hill Road, Te Aroha. Our report concluded that predicted noise from the construction and operational phases of the project would comply with the relevant noise control provisions of the Matamata Piako District Plan, and no adverse effects would result.

The applicant has received a letter from Council² requesting further information pursuant to s92 of the Resource Management Act 1991 (RMA).

This letter sets out the matters of Council concern and our reply.

1 Noise Report

The Marshall Day Acoustics report provides good information on the noise effects and this will be helpful in understanding the effects of the application.

There are some matters which we would like to have clarified. Can you please pass this letter on to Marshall Day so they may provide a letter response which can then be part of the formal application documentation.

(i) Please confirm whether the noise from the truck movements takes into account factors that may influence the level of truck noise such as engine braking, different types of trucks and whether trucks are loaded or unloaded.

The measurement data used to model noise from truck movements includes contributions from tyre, engine and exhaust sources. The derived sound power level used (107 dB L_{WA}) is representative of the acoustic emission from a truck and trailer unit moving past the assessment location at a speed of approximately 20km/h. This type of truck is considered to represent the typical worst-case noise envelope.

The other factors mentioned i.e. engine braking and laden vs unladen trucks (unladen trucks typically create more noise when they encounter rough surfaces) have not been specifically addressed in our report however, they are matters which are best addressed through noise management measures and therefore, conditions of consent.

We consider it reasonable for quarry trucks driving on Hill Road to be prohibited from using engine braking as this has been shown to cause annoyance and is banned from hilly sections of many NZ motorways where they pass adjacent to built-up residential areas. Nevertheless, it is noted that Hill Road is relatively flat from Rawhiti Road to the quarry entrance and engine brakes would not likely be used. In addition, where site haul roads are well maintained and free from pot holes, we consider the issue of noise from unladen trucks to be acceptably mitigated.

¹ Rp 001 20180048 MC Assessment of Noise Compliance (6 April 2018)

² Matamata Piako District Council letter dated 13 April 2018 (ref 100.2017.11421)

We therefore consider two conditions of consent relating to the issues of engine braking and road maintenance and repair would address Council concerns.

(ii) The haul road passes a residence at the entrance to the site. If the haul road retains a metalled surface, this may cause additional vibration and noise effects. How has this been taken into account with the noise modelling?

This was not specifically addressed in the assessment. However, referring to (i) above where the haul road is well maintained we anticipate no adverse noise and vibration effects.

(iii) In accordance with Section 16 and 17 of the RMA, would it be appropriate to provide acoustic fencing and/or a hard pavement to mitigate noise effects from truck traffic on the haul road on the adjoining landowner?

Regarding screening, predictions indicate that constructing an acoustic barrier along the front boundary of 152 Hill Road would only provide 3-4 decibels of noise reduction for receivers on this property. Subjectively, this would be a barely noticeable reduction in noise level.

Considering the predicted marginal reduction as well as the fact that the quarry would generate a comparatively low number of truck movements i.e. six movements in the worst-case peak hour and significantly less for the remainder of the day³, we do not consider an acoustic barrier is required to satisfy s16 and 17 of the RMA.

Regarding the requirement for hard paving, we consider the added complexity and cost of engineering and constructing the road would not be the best practicable option in this instance, based on the comparatively low number of truck movements previously noted as well as the overall noise level generated.

We trust this information is satisfactory. If you have any further questions please do not hesitate to contact us.

Yours faithfully

MARSHALL DAY ACOUSTICS LTD

Mathew Cottle

Consultant

³ Section 2.2 top paragraph of page 5 of the MDA report