

8 August 2019

Waikato District Council
Private Bag 544
Ngaruawahia 3742

Attention: Victoria Majoor

Dear Victoria

MCPHERSON QUARRY – ACOUSTIC PEER REVIEW

The Waikato District Council has engaged Marshall Day Acoustics (MDA) to undertake a peer review of the acoustic aspects related to McPherson Quarry's proposal to obtain consent for their current operations, and to expand operations in several stages.

The noise assessment was undertaken by Hegley Acoustic Consultants (HAC). We reviewed the following documentation relating to acoustic effects, with the application and in response to requests for further information:

- Resource Consent Application & Assessment of Environmental Effects by Kinetic Environmental, dated 31 Jan 2019.
- Assessment of Noise Effects report No. 18185, by HAC, dated 9 October 2018.
- Letter in response to Section 92 request, by HAC, dated 2 July 2019 (first S92 response).
- Letter with further information in response to a further Section 92 request, by HAC, dated 24 July 2019 (second S92 response).
- Letter with further information in response to a further Section 92 request, by HAC, dated 5 August 2019 (third S92 response).
- Various emails between the project planner and WDC planner containing information clarification, new information, and progressive changes to the original application.

Noise performance standards

The quarry is located in the Waikato District – Franklin Section, in the Rural zone. HAC recommends applying the relevant noise limits of the Proposed Waikato District Plan. We agree with this recommendation.

In addition, we recommend that blasting noise be controlled through conditions.

Existing environment

Some ambient noise level measurements for daytime have been provided. The ambient noise environment is affected by noise from SH2 and potentially SH1, and natural sounds. The noise levels measured were 44 dB L_{Aeq} and 40 dB L_{A90} . These levels are as expected for a rural environment during daytime, and support the District Plan daytime noise limit of 50 dB L_{Aeq} .

The quarry activities will be audible at receivers, when activities are in close proximity, but not unreasonable compared with existing noise levels.

Noise level predictions

HAC predicted noise levels for various operating scenarios, both existing and future. Allowance was made for all equipment operating concurrently and in "worst case" locations for each stage.

The predicted noise levels indicate that compliance with the daytime noise limit can be achieved at all dwellings for all stages of works, including the fill activities in the south of the site. For some locations, the predicted noise levels are just within the relevant daytime noise limit, which suggests that the quarry needs to manage its noise generation well in order to ensure compliance at all times.

We note that the predictions are based on ground floor levels. Where a house is double storey, less shielding may be experienced by the upper floor. Compliance is still required at the first-floor height if a dwelling is double storey.

“Emergency Works”

The AEE seeks the formalisation of some limited night-time works (noted as “emergency works”) during the shoulder periods from 5am to 7am and from 7pm to 10pm. The third S92 response dated 5 August 2019 from HAC, states that “other than possible emergencies no night work is proposed”.

We are unsure about what the applicant defines as an “emergency”. The second S92 response from HAC states that: “it is understood the activity that would occur when the lower night-time noise limits are applicable is when it is necessary to move overburden after hours for safety reasons”. We have based our assessment on this statement.

In our opinion, emergency works would be required infrequently, be unplanned and occur only in situations where health and safety is at risk. It appears unusual to set timeframes for these works as health and safety considerations do not normally fall within predetermined times. We consider that actual emergency works would not fall under the general operational noise limits but would be governed by other legislation.

We are also reluctant to “normalise” emergency works with a condition that effectively permits night-time works – site planning should be sufficiently organised to ensure that no after hour work are required.

Our experience with a large number of quarries across New Zealand is that such condition is unusual. We have not come across it in the past and query why McPherson Quarry would run differently to all other quarries we have been involved with.

In our opinion, the only two valid options forward are;

- The application is for quarry operations to extend from 5am to 10pm, in which case a full and proper assessment of effects (including noise effects) would be required. We note that the third S92 response does not provide ambient night-time noise levels as requested, which does not allow for an assessment of effects; or
- The application is for quarry operations between 7am and 6pm Monday to Saturday (as stated in the AEE), without “special provisions” for works that should not be occurring in the first instance.

Overall, we concur with the noise level predictions, but disagree with the potential to extend the works through “emergency works” provisions, which should only occur unexpectedly and unplanned, and would be covered by health and safety requirements rather than standard noise limits. Section 16 of the RMA remains in force in any event.

Assessment of effects

No assessment of effects has been provided, rather, only an assessment of compliance has been undertaken. During daytime, compliance with the relevant noise limits is reasonable to protect from annoyance, and we consider noise effects to be reasonable in a rural daytime context. The measured ambient noise levels indicate that while the quarry will be audible, the noise levels will be within a reasonable range. Audibility is not an assessment feature in any event.

However, should the applicant apply for an extension of hours of 5am to 10pm, authorised through conditions, then we would object to such application because;

- No assessment of effects has been undertaken based on ambient noise levels, and
- No assessment of the potential for annoyance/sleep disturbance at nearest houses has been undertaken.

Recommended conditions

We recommend that the following conditions be attached to any consent granted:

1. McPherson Quarry shall only operate between the hours of 7am and 6pm, Monday to Saturday. No quarry activity, including but not limited to extraction, overburden removal, transport and distribution of material shall occur outside those hours.
2. Noise from all activities within the quarry, measured at or within the notional boundary of any other site in the Rural Zone, shall not exceed the following noise limits:
 - a. 50 dB L_{Aeq} 7am to 7pm all days
 - b. 45 dB L_{Aeq} 7pm to 10pm all days
 - c. 40 dB L_{Aeq} and 65 dB L_{AFmax} 10pm to 7am all days
3. Noise from all activities within the quarry, measured within any site in any zone, other than the Rural Zone, shall not exceed the noise limits for that zone.
4. Noise shall be measured in accordance with the requirements of NZS6801:2008 Acoustics – Measurement of Environmental Sound, and shall be assessed in accordance with the requirements of NZS6802:2008 Acoustics – Environmental Noise.
5. The noise created by the use of explosives for any blasting activity measured at or within the notional boundary of any other site shall not exceed a peak sound pressure level of 128 dB $_{Zpeak}$.

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

Siiri Wilkening

Acoustician