

3 May 2022

Stevenson Aggregates
Private Bag 94000
Auckland 2241

Attention: c/o Mark Tollemache

Dear Mark

CLAUSE 23 RESPONSE

You have asked us to respond to Auckland Council's clause 23 request relating to the proposed plan change of the Quarry Zone at the McNicol Road Quarry. This letter should be read in conjunction with Marshall Day Acoustics (MDA) report RP001 20201046 "McNicol Road Quarry Plan Change – Acoustic Assessment" (MDA report), dated 14 September 2021.

Plan Change Scope

The clause 23 request appears to ask for information relating to a resource consent, e.g. specific operational scenarios, or equipment placement in a future quarry. We consider that the Plan Change information should provide a justification for the proposed zone and its rules (in this case the operative Quarry Zone rules relating to vibration and noise), rather than details relating to the operation of the quarry (for which no resource consent has been sought).

Our assessment showed that the sought Quarry Zone expansion (and contraction in some areas) would not materially change the existing noise environment based on the measured ambient noise levels, existing operational activities, and potential future activities in the expansion area. Therefore, the existing Quarry Zone performance standards are still appropriate to manage noise and vibration effects from the expansion, and that the Objectives and Policies for the Quarry Zone are still relevant and appropriate for the environment.

The clause 23 request also discusses theoretical worst-case equipment operations and locations. Our modelled scenario is based on a reasonable conservative scenario, which demonstrates compliance with the noise limits can be readily achieved with minimal change in overall noise emissions. In general, it is a large and well screened site, and equipment such as crushers can be positioned to minimise noise to the neighbouring properties as per standard best practice. We note that stripping ridgelines could result in higher noise levels for short periods, but this would be controlled to a reasonable level through the Quarry Zone noise limits applied at the time of resource consent.

Response to Acoustic Questions

Notwithstanding the Plan Change scope matters above, we provide responses to the acoustic questions in point 2 of the clause 23 request below.

a. *Please confirm whether the mobile crusher works at night?*

Refer Appendix C of the MDA report.

b. *Appendix D of the Marshall Day Acoustics (MDA) assessment shows the location of the plant that has been assessed. With respect to 600 McNicol Road, it appears that the closest modelled plant stops some distance from the western extent of the proposed Special Purpose Quarry Zone (SPQZ). Could MDA please confirm that all plant has been modelled in the correct location?*

Plant has been modelled in the most likely location where it may be used.

However, we have moved the stripping plant to the edge of the proposed zone expansion opposite 600

McNicol Road, and the resultant noise level is 38 dB L_{Aeq} during daytime. While it is unlikely that stripping will occur right to the edge of the zone, on a downward slope, the predicted level is well below the ambient noise level. (Refer MDA report Section 6).

- c. *Appendix D reports the location of the main plant as well as three locations of plant working about the edge of the quarry. Each of the three locations models a different activity, mobile plant, extraction and stripping. Could MDA confirm that the noise levels reported in Table 3 consider each of the above activities at the relevant locations for each of the neighbouring receivers?*

As noted in the introduction to this letter, we have modelled potential or likely scenarios of operation, with focus on operations in the plan change area. This is an appropriate approach for a plan change as it confirms that the operative provisions of the Unitary Plan are appropriate to the plan change. We have chosen locations of operation around the (existing and proposed) quarry zone to represent the locations most likely affecting neighbouring sites, taking account of equipment placement that will remain unchanged (e.g. the processing plant). We also note that operations in the existing quarry zone are consented, so only the location of equipment in the expansion area is relevant for this Plan Change. Only 600 McNicol Road is close to the proposed Plan Change zone expansion, all remaining receivers are close to the existing Quarry zone, and some will receive a reduction in noise level due to the proposed contraction of the Quarry Zone on the northern side, in favour of the southern expansion.

- d. *Appendix D also shows road trucks within the quarry as a source that has been considered but their sound power levels are not included in Appendix C. Could MDA please confirm that the permitted 90 truck movements per hour/ 900 movements per day were modelled and provide their sound power level?*

The consented number of trucks on the public road are unrelated to the Plan Change, which only relates to the Quarry Zone extent, not trucks on the road. We have therefore not included them in the model. If we had included the road trucks in the model, we would not be able to show the change in noise level from operations within the existing and proposed Quarry Zone, as road trucks are the controlling noise source for most dwellings.

- e. *The extent of the proposed SPQZ appears to approximate to the ridge above 600 McNicol Road which may provide the stripping equipment the opportunity to operate in an unshielded manner. At the reported distance of 150m, and using the sound power levels provided by MDA, noise from the stripping could be up to 58dB L_{Aeq} to 600 McNicol Road. As this is significantly higher than the 32dB L_{Aeq} reported in Table 3, could an explanation please be provided?*

As set out in question b above, we have modelled all sources in the most likely location that would result in the highest effects. Even moving the equipment to the edge of the proposed Plan Change will result in a noise level of no more than 38 dB L_{Aeq} as discussed in (b) above. Terrain in the area is complicated. Moving the equipment across one ridge means that it will be partially shielded by another ridge. It is unlikely that (based on this terrain) equipment can operate in the most exposed edge location modelled. In any event, wherever the equipment is placed, there will be a requirement to comply with the relevant noise limits (which currently apply at 600 McNicol Road as well).

- f. *The statement is made that as the plan change does not seek to modify the current night time activities, there will be no change to the current night time levels. However, the proposal appears to cut away much of the topography that currently screens the crusher from 600 McNicol Road. With this in mind, could confirmation be sought from MDA that sufficient screening remains to ensure no change in the current noise level?*

The extent of the Quarry Zone does not mean that all ridges will be cut away – this being a matter for a resource consent and quarry design to consider. Nevertheless, even if most of the ridges were cut away, sufficient screening will remain to ensure that the crushing equipment will remain shielded. Should future planning show a different outcome, the crushing equipment can be moved to a more shielded position within the pit.

We trust the above information answers all questions.

Yours faithfully

MARSHALL DAY ACOUSTICS LTD



Siiri Wilkening

Acoustician