



**HEGLEY
ACOUSTIC
CONSULTANTS**

1/355 Manukau Road
Epsom, Auckland 1023
PO Box 26283
Epsom, Auckland 1344

T: 09 638 8414

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Aaron Collier
Collier Consultants
PO Box 14371
Tauranga Mail Centre
Tauranga 3143

Dear Aaron

PITAU ROAD – PRELIMINARY ACOUSTIC ASSESSMENT

The Pitau Road development is an aged care residential project. It consists of a basement car park with a podium and three residential towers of up to six storeys above. The project is in a residential zone and is surrounded by residential dwellings. This letter provides an overview of the noise and vibration effects from the construction of, and subsequent operation of, the proposal.

CONSTRUCTION NOISE EFFECTS

The Tauranga District Plan (DP) references the New Zealand Construction Noise standard, NZS 6803, through rule 4E.2.1.1. This standard is used extensively throughout New Zealand for addressing construction noise.

As with all large projects, it is unlikely that it will be practicable for all construction activities to be undertaken in compliance with the DP rule. The noisier activities, such as the installation of any retaining walls, piles and excavation, typically exceed the noise limits. Subsequent quieter activities, such as the completion of the superstructure and fit out, generally comply with the construction noise rules.

Non-compliance during the earthworks and the installation of foundations is common. The approach adopted is one of best practice. Firstly, the design team will develop the best practicable option for construction, which includes noise (and vibration, as discussed below). From there, a Construction Noise and Vibration Management Plan (CNVMP) will be developed and implemented to help mitigate and manage the adverse effects of the proposal. A key component of the CNVMP is the liaison with neighbours so that they are aware of upcoming works and so that mutually agreeable times for the most intensive work can be investigated. The success of this approach is evidenced by the large number of construction projects that are completed under it.

The above approach is proposed for the Pitau Road project to manage construction noise in accordance with best practice.

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CONSTRUCTION VIBRATION EFFECTS

The DP contains no vibration limits for construction or operational activities. While not as common as NZS 6803, the German standard DIN 4150 is used widely in New Zealand to address construction vibration. The scope of this standard is for the protection of structures from cosmetic damage, such as cracked plaster.

The design process and CNVMP proposed above for construction noise is used with equal success for addressing construction vibration and is proposed for this project.

OPERATIONAL NOISE EFFECTS

Rule 4E.2.1 of the DP provides the operational noise limits for the activities of the proposal to comply with 50dB L_{Aeq} during the day time and 40dB L_{Aeq} at night. These levels are common for the residential zone in district plans throughout New Zealand.

Given the residential nature of the project, it is considered well suited to its residential environment with the daily activities of the residents expected to readily comply with the DP limits.

A café and retirement village dining space are proposed meaning there is likely to be some mechanical plant on site. Controlling noise from such plant is a simple engineering exercise where the mitigation required is described by the plant noise levels and DP limit at neighbours. Typical mitigation includes the selection of suitable plant, and its location, enclosures, screens and attenuators. It is typical to develop such mitigation during the detailed design of the project.

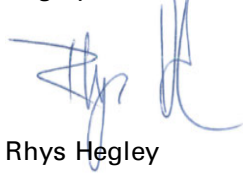
Given the number of vehicles expected on site, noise from their movements to and from the site is typically considered. Experience with other, similar sized residential projects has shown that noise from vehicle movements is generally relatively low and readily compliant with the DP rules. This is particularly so for aged care developments which typically do not experience the same intensity of movements during the conventional peak commuter peak periods.

OPERATIONAL VIBRATION EFFECTS

As stated above, the DP contains no rules for vibration. It is expected that operational vibration would be negligible from the activities of the proposal and it is not provided to specifically address this issue.

Should you have any questions regarding the above please do not hesitate to contact me.

Yours sincerely
Hegley Acoustic Consultants



Rhys Hegley