

1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name:

Downtown Carpark Site Development

Fast-Track application number:

FTAA-2512-1158

BUN60460864, LUC60460865, DIS60460866 and WAT60460867

2.0 Technical Specialist Memo – Noise and Vibration

To:

Sarah Wilson – Lead Planner & Adonica Giborees - PPL

From:

Bin Qiu, Senior Specialist I Specialist Unit
Auckland Council | Planning & Resource Consents

Qualifications
& Relevant
Experience:

I hold the qualification(s) of National Diploma in Applied Health Science from Massey University and have 30 years of experience in environmental acoustics.
I have prepared expert evidence and technical assessments for resource consent applications, plan changes, notices of requirement for designation and fast-track applications, and have appeared as an expert witness before consent authorities on multiple occasions.

Preparation in
Accordance
with the Code
of Conduct:

I confirm that I have read the Environment Court Practice Note 2023 – Code of Conduct for Expert Witnesses ([Code](#)), and have complied with it in the preparation of this memorandum. I also agree to follow the Code when participating in any subsequent processes, such as expert conferencing, directed by the Panel. I confirm that the opinions I have expressed are within my area of expertise and are my own, except where I have stated that I am relying on the work or evidence of others, which I have specified.

Signature:



Date:

23 April 2026

3.0 Executive Summary / Principal Issues

Project proposal: Demolition of the Downtown Carpark, the Lower Hobson Street pedestrian bridge and Customs Street vehicle bridge, and construction of three podium buildings, two towers with four-level basement and public spaces and a laneway.

Scope of review: this review relates to the applicant's noise and vibration assessment, proposed noise and vibration mitigation measures and the proposed noise and vibration conditions.

I support the application.

4.0 Documents Reviewed

The following documents have been reviewed in preparing this memorandum:

- Downtown Carpark Site Development Draft Construction Management Plan. 09/10 / 2025
- Downtown Carpark Site Development Assessment of Effects Rp 006 20230126 | 6 November 2025 Marshall Day Acoustics (MDA)
- Downtown Carpark Site Development Construction Noise and Vibration Management Plan Rp 007 20230126 | 6 November 2025 MDA
- 2 Lower Hobson Street, Auckland CBD Assessment of Environmental Effects and Statutory Analysis 18 December 2025 B & A
- MDA Response Downtown West - Council Feedback 13/3/26
- MDA Acoustic Assessment Addendum 1/4/26

5.0 Additional Reasons for Consent Not included in AEE / Incorrect Reasons for Consent

None

6.0 Specialist Assessment

I have reviewed and considered the Applicant's Noise Specialist Assessment on the operational noise and the building acoustics is satisfactory.

My memo focuses on the construction noise and vibration and is based on the MDA reports and information summarized above.

It is noted that while the project's total construction duration is estimated to be 5.5 years, the stages of demolition, retention, excavation, basement construction, building foundation construction during which noise intensive works may occur are likely to be 3 years.

The MDA assessment shows that the construction noise will generally comply with the AUP noise standards (75 dB LAeq 6:30am-10:30pm Monday – Friday, 80 dB LAeq 7am-11pm Saturday, 65 dB LAeq 9am-7pm Sunday 60 dB LAeq all other times) except at four adjacent buildings where noise exceedances may occur for between one week and 3.5 months, see details in Table 7 of MDA report below:

Table 7: Highest representative noise levels

Building Address	Predicted Noise Level, dB LAeq			Duration of infringement
	D wall / Bored Piling	Sheet Piling	Concrete saw (slab removal)	
M Social – 196 – 200 Quay Street	79	< 75	80 ¹ – 75	3.5 months
Aon Building – 29 Customs Street West – Tower	76	85	< 75 ¹	1.5 weeks
Aon Building – 29 Customs Street West – Podium	79	90	< 75 ¹	2 weeks
HSBC – 188 Quay Street – Tower	< 75	80	< 75 ¹	1 week
The Sebel - 85 Customs Street West	< 75	80	< 75 ¹	1 week

¹includes 15 dB of shielding from a concrete cutting enclosure

While the sheet piling noise is high, the noise exceedance durations are relatively short compared to the total construction duration (5.5 years).

The MDA addendum confirms that all night works will be managed to comply with the relevant AUP noise standards.

To address the adverse noise effect, a draft CNVMP has been submitted. Separate Schedules will also be prepared for concrete saws, Dwall piling, Bored piling, sheet piling and all night works.

The main noise mitigation measures are: communication and consolation, use of noise barriers and enclosure, use of pulverizer instead of concrete breaker where practical, pre-cutting the pedestrian bridge and the vehicle ramp duration daytime for removal at night, pre drilled holes for vibratory piling, scheduling noisy works at time less sensitive to the receivers for example sheet piling within 40m of 29 Customs Street West will be undertaken between 5:00pm and 10:30pm or on Saturdays, preparing schedules for high noise activities, noise monitoring and complaint procedures.

I consider these measures are practicable and can effectively reduce the noise and vibration levels.

Effects of noise exceedances are summarized below:

M Social - 196-200 Quay St:

The main concerns may be potential disturbance to the guest's sleeping or use of the conference room from the construction noise.

Internal noise levels are predicted to be less than 45 dB LAeq in the most exposed hotel rooms and the conference room and less than 40 dB LAeq in rooms on higher floors and within the centre of the hotel.

MDA suggests that MSocial could prioritise rooms on higher floors and within the centre of the hotel for guests who are likely to be day sleepers (ie air staff) where noise levels will be less than 40 dB LAeq, which is typically suitable for sleeping during the day.

I agree with this assessment, the noise effect can be managed to be at a reasonable level as the predicted internal noise levels are within the noise levels recommend in AS/NZS 2107:2016 Acoustics: 35-40 dB LAeq in hotel room in city centre, and up to 45 dB LAeq in hotel's conference areas with sound equipment.

Aon Building – 29 Customs Street West

Internal noise levels in this building, from all activities except vibratory sheet piling, are predicted to be 50 dB LAeq or less in the offices facing the Site. This is reasonable in an office environment as this noise levels would fall into the typical office noise level range, for comparison, the predicted internal noise is not higher than the design indoor ambient noise criteria in Open plan spaces 45-50 dB LAeq recommended in *British Standard BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings*.

However, the internal noise from sheet piling may not be suitable for the office environment. As such, it is proposed in the MDA report to undertake sheet piling within 40m of the Aon building between 5pm and 10:30pm Monday to Friday or on Saturdays when occupancy will be lower. This is expected to take 1.5 weeks to complete. I agree that this arrangement can minimise the noise effect when the building is not or less occupied.

The noise report has advised that that the childcare centre Kindercare in podium of AON building will vacate their tenancy prior to the start of demolition of the Downtown Carpark Building. No confirmation of this (Kindercare vacating) has been provided in the application. Should Kindercare still be in operation within the building during the demolition and construction of the proposed development, the CNVMP will need to take this into consideration and provide suitable mitigation to address the noise effect for the childcare facility.

HSBC – 188 Quay Street – Tower

The noise levels at this building are less than the noise on the AON building, the noise effects can also be managed to be reasonable. See comments above.

The Sebel – 85 Customs Street West

All activities except for vibratory sheet piling are predicted to comply with the construction noise limits at this location. Internal noise levels are predicted to be less than 40 dB LAeq in the apartments for activities that comply with the noise limits. The noise effect is reasonable.

During the closest vibratory sheet piling, noise levels on façade of the apartments on Lower Hobson Street are predicted be 80 dB LAeq with internal noise 50 dB LAeq or less, for a period of approximately one week.

80 dB LAeq is still compliant with the AUP noise standard on Saturday. When the piling is to take place on Saturday, it is permitted.

Apart from CNVMP's engagement/communication, complaint procedures, the community liaison group required by the proposed consent conditions 4 & 5 will include the neighbours discussed above. The noise matters and the mitigation measures can be discussed in the community liaison group meetings.

The sheet piling will be subject to control of a Schedules.

Given the short exceedances, with effective communication, scheduling noisy works, use of predrilled method, and management measures in place, it is considered the mitigation is best practicable and the effects are reasonable.

Based on the above assessment, I confirm that the construction works are likely to exceed the Auckland Unitary Plan noise standards and the noise effects can be mitigated to a reasonable level through implementing certified CNVMP and various schedules and adhering to the relevant conditions.

7.0 Section 67 Information Gap

I have identified that there are no section 67 information gaps.

8.0 Recommendation

Overall, my review does not identify any reasons to withhold the application, I support the application subject to the relevant noise conditions.

9.0 Proposed Conditions

I have reviewed the proposed conditions 29-31, 65 - 73 related to construction noise and vibration and 74-77 for operational noise in Appendix 24_Proposed Consent Conditions and the proposed changes in the MDA's Acoustic Assessment Addendum.

Noting that the proposed conditions may be reviewed and amended further, in general I am agreeable to the proposed noise conditions and am happy to review and comment on them at a later stage.

10.0 Supporting Documents

none