Beachlands South Fast-track

Auckland Council Specialist Memo

Annexure Y:

Noise and Vibration

Duffy Visser

05 October 2026

1.0 APPLICATION DESCRIPTION

Application and property details

Fast-Track project name:	Beachlands South
Fast-Track application number:	EPA reference: FTAA-2606-1256 Council reference: BUN60467962

2.0 Technical Specialist Memo – Noise and Vibration Assessment

To:	Brooke Dales – Lead Planner Adonica Giborees – Principal Project Lead
From:	Duffy Visser Specialist: Contamination, Air & Noise. Specialist Input, Planning & Resource Consents
Qualifications & Relevant Experience:	I hold the qualification of: Diploma in Public Health and have 5 years of experience in contaminated soil assessment. I have prepared expert evidence and technical assessments for resource consent applications, 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:	5 October 2026

3.0 Executive Summary / Principal Issues

I have assessed the application in terms construction noise and vibration as well as operational noise with reference to Chapter E25 of the Auckland Unitary Plan (AUP).

4.0 Documents Reviewed

The following documents have been reviewed in preparing this memorandum:

Assessment of Environmental Effects and Statutory Analysis, prepared by Unio Environmental, dated 26 June 2026. (AEE)

- Proposed conditions, prepared by Unio Environmental, dated 26 June 2026. (PC)
- Beach lands South -Rules Assessment, prepared by Unio Environmental, dated 26 June 2026. (RA)
- Assessment of Noise and Vibration Effects, prepared by Hegley Acoustic (HAC), dated 1 September 2026. (acoustic report)

5.0 Specialist Assessment

The site is comprised of 110 Jack Lachlan Drive and 620, 712, 758 and 770 Whitford-Maraetai Road, Beachlands.

Proposal

The applicant proposes to develop residential dwellings, a hotel and conference venue, community and commercial activities, protected ecological restoration areas, walking and cycling networks, and community facilities, and enable the potential development of two schools. The Project requires earthworks and all associated infrastructure, including transport facilities, intersection upgrades and roading, telecommunications, power, and water supply and stormwater, and wastewater infrastructure, which includes an outfall some 2km off the Project's coast.

CONSTRUCTION NOISE AND VIBRATION

Compliance criteria

Noise

The noise from the activities must not exceed the levels permitted by Rule E25.6.27 of the Auckland Unitary Plan (AUP) provides the construction noise limits for the Project.

The overall works are anticipated to take more than 20 weeks and is therefore considered long-term duration. High noise and vibration generating activities must be restricted to the hours of 7:30am to 6:00pm Mondays to Saturdays.

In accordance with the Auckland Unitary Plan requirements for the subject site zoning, the noise limits are Monday – Saturday 7:30am to 6:00pm Leq 70 dBA and Lmax 85 dBA.

Vibration

Vibrations emanating from construction activities must be considered against two criteria: Effects on Buildings and Structures, and Effects on Humans.

Effects on humans (for occupied buildings)

The AUP requires a lower limit during daytime works for occupied structures of 2mm/s. Works generating vibration for three days or less between the hours of 7am to 6pm may exceed the limits of 2mm/s, but must not exceed a limit of 5mm/s, providing that all occupied buildings within 50m of the extent of the works generating vibration are advised in writing no less than three days prior to the vibration-generating works commencing; and the written advice must include details of the location of the works, the duration of the works, a phone number for complaints and the name of the site manager.

Effects on building structures and unoccupied buildings: The following limits are as per DIN 4150-3:1999 as referenced in 25.6.30.(1).(a) of the AUP, based on the residential structures: 5mm/s @ 1-10 Hz, 5mm/s-15mm/s @ 10-50Hz, 15mm/s-20mm/s @ 50-100Hz, 20mm/s @ more than 100Hz

Potential noise and vibration

Noise

HAC used Predictor noise modelling software to predict/calculate the potential noise from proposed construction activities.

Provided the mitigation measures and in the CNVMP are adhered to, the predicted noise levels can be maintained as low as practicably possible. Notwithstanding that, due to proximity and elevation of the adjacent neighbours, noise levels are expected to exceed the compliance limits at some receivers during the highest noise generating activities in proximity.

The following noise level exceedances are expected at the assessment location of 1m from the facades facing the subject:

Noise Levels from the Construction of the Roundabout

During excavation

Noise levels are predicted to extend into the 71 – 75dBA Leq range at 49, 51 53,55, 57 and 59 Jack Lachlan Drive

Given the linear nature of road construction, it is impracticable to determine a specific duration. Through discussions with the contractor, it is estimated that the exceedances could occur for several days, several times during the estimated five months of construction on Jack Lachlan Drive.

Minor Upgrades to Jack Lachlan Drive

During excavation

Noise levels are predicted to extend into the 71 – 75dBA Leq range at 61, 83, 85 & 87 Jack Lauchlan Drive, 1 & 2 Karo Road, 31 - 36 Doidge Street, 1 Mahutonga Avenue, 31, 33, 36, 38, 40 & 42 Kaiawa Street, 1, 2, 3, 4, 6 & 8 Kibblewhite Avenue and 15, 17, 19 & 26 Lydiard Place for 2 to 3 days.

During compaction

Noise levels are predicted to extend into the 80 – 90 dBA Leq range at 61, 83, 85 & 87 Jack Lauchlan Drive, 1 & 2 Karo Road, 31 - 36 Doidge Street, 1 Mahutonga Avenue, 31, 33, 36, 38, 40 & 42 Kaiawa Street, 1, 2, 3, 4, 6 & 8 Kibblewhite Avenue and 15, 17, 19 & 26 Lydiard Place. For up to 2 to 3 days.

Construction Noise Levels from Northern Bulk Earthworks

While using the motor scraper

Noise levels are predicted to extend into the 71-75 dBA Leq range at 18,19, 24 &27 Tui Brae.

During excavation
Noise levels are predicted to extend into the 76-80 dBA Leq range at 18,19, 24 &27 Tui Brae.

The earthworks in this area would take approximately two weeks to complete and that the exceedances would be limited to a relatively small portion of this time.

Vibration
HAC predicted /calculated that it will be practicable to complete the project in full compliance with the vibration limits of the AUP.

There is the potential for the amenity criterion of the AUP to be exceeded to the neighbors closest to the earthworks for short periods. It is proposed to manage these effects through consultation via a Construction Noise and Vibration Management Plan (CNVMP).

Consents required

In terms of construction noise and vibration:

As the Permitted Activity Standards stipulated under the AUP OP for construction noise - E25.6.27 cannot be met due to the proximity and elevation of the adjacent receivers with line of sight into the works, and no practicable options to shield them, consent is required for a **Restricted Discretionary Activity** pursuant to E25.4.1(A2).

With the proposed mitigation measures in place, noise and vibration levels can be maintained at reasonable levels commensurate with the type of works and proximity of the adjacent neighbors and therefore are considered acceptable.

OPERATIONAL NOISE

The Project contains a suite of zones that provide for a range of residential, business and open space uses as well as schools and Future Urban zoning. The Project is surrounded by sites in the Residential – Single House zone. The Rural – Countryside Living zone, or the Open Space- Informal Recreation zone.

For each zone, the noise provisions contained in Chapter E25 of the AUP provide suitable controls, and it is proposed that they be adopted in full.

Noise from the wastewater treatment plant

HAC predicted that noise from the WWTP will not exceed the permitted noise levels as:

The preliminary design of the WWTP consists of a mechanical inlet screen and UV disinfection equipment, both of which produce relatively low levels of noise, and two circulation pumps, each of which are understood to produce a level of 85dB at 5m. This equipment will be located within a purpose-built enclosure, the construction of which could be specified during detailed design to provide the attenuation needed for compliance with the limits of the AUP.

Assessment

I agree with the acoustic report that: while some adverse effects are predicted from the construction of the Project, those effects are typical of most large construction activities and that it will be practical to manage those effects using current best practices.

I consider that with the proposed mitigation measures including a CNVMP, is the best practicable option to ensure that the noise and vibration levels will not be unreasonable.

6.0 Recommendation

I recommend that the application be approved.

Comments on proposed noise and vibration conditions

Condition 31 is lengthy and can be replaced by the following:

Prior to the commencement of works, the consent holder must submit a Construction Noise and Vibration Management Plan (CNVMP) for certification. The objective of the CNVMP is to set out the Best Practicable Option for the management of noise and vibration effects. The CNVMP must be prepared with reference to Annex E, New Zealand Standard NZS6803:1999 Acoustics – Construction noise and Appendix B in DIN 4150-3:1999 Structural Vibration – Part 3

Effects of vibration on structures and include but not necessarily be limited to the following:

a) details of the community consultation to be undertaken to advise the owners and occupiers

- *a brief description of the works, timing and duration;*
- *the times and days when the highest noise and vibration is likely to be generated;*
- *mitigation measures to be implemented;*
- *noise and vibration monitoring;*
- *a contact name and number of the project manager who can be contacted if any issues arise; and*
- *how noise and vibration complaints will be managed and responded to*

b) a description of the works and their duration, plant and equipment to be used, the methodology to be undertaken and the predicted noise and vibration levels; and

c) identification of the best practicable options that will be undertaken to mitigate and minimise noise and vibration including use of boundary or localized noise barriers.

The CNVMP must be prepared by a suitably qualified person and submitted to the Council for certification a minimum of ten (15) working days prior to commencement of the works. Any subsequent amendment of the certified CNVMP which comprises material changes to proposed construction methodology must also be prepared by a suitably qualified person.

Amendments must be tracked and the revised CNVMP submitted to the Council for certification.

Condition 71 – I recommend it be replaced by the AUP rule in C72:

Noise arising from construction work activities on the Site, except for noise generated by works within the road and provided for in the CNVMP required by Condition 31, and noise levels allowed for in condition XXXX, must not exceed the noise limits specified in Tables E25.6.27.1 and E25.6.27.2 of the AUP(OP) decreased by 5 dB when measured 1m from the most exposed façade of any building that is occupied during the works. Noise from construction work activity must be measured and assessed in accordance with the requirements of New Zealand Standard NZS 6803:1999 Acoustics – Construction Noise.

Condition XXXX

During the northern bulk earthworks, for works not occurring on the road, the activities must be managed to ensure that the following noise limits are not exceeded:

- During the use of the motor scraper, up to 75dBLAeq at 18,19, 24 &27 Tui Brae.
- During excavation up to 80 dBLAeq at 18,19, 24 &27 Tui Brae.

Intermittently for a portion of two weeks.

Condition 75 – The acoustic report is based on the times that the higher noise limits apply. I suggest changing this condition to:

High noise and vibration generating activities must be limited to the hours of Monday –Saturday 7:30am to 6:00pm.

Conditions 75 and 76 can be part of the CNVMP and may not need to be set as consent conditions.

7.0 Proposed Conditions

C1. Prior to the commencement of works, the consent holder must submit a Construction Noise and Vibration Management Plan (CNVMP) for certification. The objective of the CNVMP is to set out the Best Practicable Option for the management of noise and vibration effects. The CNVMP must be prepared with reference to Annex E, New Zealand Standard NZS6803:1999 Acoustics – Construction noise and Appendix B in DIN 4150-3:1999 Structural Vibration – Part 3

Effects of vibration on structures and include but not necessarily be limited to the following:

a) details of the community consultation to be undertaken to advise the owners and occupiers
- a brief description of the works, timing and duration;
- the times and days when the highest noise and vibration is likely to be generated;
- mitigation measures to be implemented;
- noise and vibration monitoring;
- a contact name and number of the project manager who can be contacted if any issues arise; and
- how noise and vibration complaints will be managed and responded to

b) a description of the works and their duration, plant and equipment to be used, the methodology to be undertaken and the predicted noise and vibration levels; and

c) identification of the best practicable options that will be undertaken to mitigate and minimise noise and vibration including use of boundary or localized noise barriers.

The CNVMP must be prepared by a suitably qualified person and submitted to the Council for certification a minimum of ten (15) working days prior to commencement of the works. Any subsequent amendment of the certified CNVMP which comprises material changes to proposed construction methodology must also be prepared by a suitably qualified person.

Amendments must be tracked and the revised CNVMP submitted to the Council for certification.

C2. The construction works must be carried out in accordance with the certified CNVMP referred to in C1 and a copy of the certified CNVMP must be made available to authorised Council staff during monitoring inspections.

C3. During the northern bulk earthworks, for works not occurring on the road, the activities must be managed to ensure that the following noise limits are not exceeded:
- During the use of the motor scraper, up to 75dBLAeq at 18,19, 24 &27 Tui Brae.
- During excavation up to 80 dBLAeq at 18,19, 24 &27 Tui Brae.

Intermittently for a portion of two weeks.

C4. Noise arising from construction work activities on the Site, except as otherwise provided for in the CNVMP required by Condition 1, must not exceed the noise limits specified in Tables E25.6.27.1 and E25.6.27.2 of the AUP(OP) decreased by 5 dB when measured 1m from the most exposed façade of any building that is occupied during the works. Noise from construction work activity must be measured and assessed in accordance with the requirements of New Zealand Standard NZS 6803:1999 Acoustics – Construction Noise.

C5. High noise and vibration generating activities must be limited to the hours of Monday –Saturday 7:30am to 6:00pm.