

BEFORE INDEPENDENT COMMISSIONERS WELLINGTON CITY COUNCIL

In the matter of the Resource Management Act 1991

And

In the matter of A Resource Consent application by **Ryman Healthcare Limited** to establish a retirement care village at 26 Donald Street and 37 Campbell Street Karori, WELLINGTON.

SUMMARY STATEMENT OF EVIDENCE

LINDSAY JOHN HANNAH
NOISE

Prepared on behalf of

Wellington City Council

14 September 2022

Absolutely Positively
Wellington City Council

Me Heke Ki Pōneke

Summary Statement of Evidence Lindsay John Hannah - Noise

1. My full name is Lindsay John HANNAH. I am Wellington City Councils acoustic engineer. My qualifications and experience are set out in my statement of evidence attached as Appendix 6 to the Wellington City Council Section 42A 'Report to the Hearings Panel'.
2. I have read the evidence of Ms Siiri Wilkening the Applicants noise expert.

Construction Noise and Vibration Summary

3. The Applicants noise expert has assessed typical worst case construction noise, noting *'construction noise can generally comply with the noise criteria. Where exceedances are predicted¹, they are generally slight (2 to 3 dB only) and for a limited period when the equipment operates immediately adjacent to the boundary'*².
4. The Applicants noise expert further notes with respect to construction noise there will be limited exceedance of the 70 dB L_{Aeq} permitted construction noise limit at two locations being the Karori Pool by up to 7 dB and Karori Normal School by up to 6 dB³. The Applicants noise expert also notes exceedance of the permitted construction noise limit of between 2 dB to 11 dB⁴ will occur for a limited time from external concrete wall panel cutting from Allen Ward Hall⁵.
5. The Applicants noise expert notes the vibration limits can be complied with provided there is either an 8m set back or the vibrating roller function is not used within the 8m buffer⁶. I understand only two dwellings are located within this 8m buffer⁷.
6. **In my opinion, construction noise will be noticeable at times throughout the project, however by adopting best practice, in line with s.16 RMA duties, as proposed by the Applicant, construction noise and vibration can be appropriately managed and mitigated to a reasonable level.**

Operational Noise Summary

7. The Applicants noise expert concludes with respect to operational noise *"predicted compliance for all site operations that are required to comply with Operative District Plan noise limits"*⁸. Operational noise sources assessed by the Applicant, that will comply include vehicle activity (and car parking surfaces), warning devices, waste compactor and fixed plant. There is one exception, being a minor exceedance of up to 3 dB from daytime rubbish truck movements⁹.
8. **In my opinion, all proposed operational noise sources can be suitably mitigated and managed by the Applicant, so as not to produce adverse noise effects off site.**
9. **In summary, in my opinion, through the imposition of the recommended conditions below, should the Hearing Panel grant consent, I consider operational noise, construction noise and vibration effects can be appropriately managed and mitigated where possible, so as to ensure noise and vibration levels remains reasonable at all times.**
10. I am in agreement with the minor refinements the Applicant seeks with respect to the draft noise conditions attached to my original statement of evidence. I attach the amended draft noise conditions below.

Lindsay Hannah 14th September 2022

¹ Minor exceedances up to 3 dB are predicted by the Applicant at 8,10,12,14,24 Scapa Terrace

² Statement of Evidence of Siiri Wilkening Paragraph 12

³ Statement of Evidence of Siiri Wilkening Paragraph 56, 56.1 and 56.2. Exceedance due to Drilling Rig Piling Activity

⁴ Exceedance between 2 dB and 10 dB are predicted by Applicant at 21,23,25,27,29,31,35,37 Donald Street

⁵ Statement of Evidence of Siiri Wilkening Paragraph 66, 66.1 to 66.8

⁶ Statement of Evidence of Siiri Wilkening Paragraph 74

⁷ 33 and 33A Campbell Street are the two sites within the 8m buffer

⁸ Statement of Evidence of Siiri Wilkening Paragraph 16

⁹ Exceedances of up to 3 dB is predicted by the Applicant at the ELC (29 Campbell Street)

Recommended Draft - Noise and Vibration Conditions (Conditions 34 to 41)

Construction Noise and Vibration Management Plan

34. The consent holder must submit to the Council's Compliance Monitoring Officer a Construction Noise and Vibration Management Plan (CNVMP) for certification at least 20 working days prior to any work commencing on site. The purpose of the CNVMP is to set out the best practicable option for the management of noise and vibration effects associated with the construction activities on the site.

The CNVMP must be prepared by a suitably qualified and experienced acoustic and vibration expert. The CNVMP shall be drafted in accordance with Appendix E2 of NZS6803:1999 Acoustics – Construction'.

The CNVMP must also include:

- Identify and describe all specific activities that cannot comply with the upper recommended noise levels set in Table 2 of 6803:1999;
 - Identify and describe all specific activities that cannot comply with vibration limits in 'DIN 4150-3:1999 'Structural Vibration – Part 3: Effects of vibration on structures'.
 - Specify the predicted noise and vibration limits, and identify each separate affected property, for each activity (stage) that exceeds the recommended levels;
 - Specify the duration of the works exceeding the recommended noise and vibration levels;
 - Specify the physical and managerial noise mitigation methods that must be adopted to reduce noise to a reasonable level of noise and vibration in accordance with section 16 Best Practical Option (BPO) of the Resource Management Act 1991; and
 - Mechanisms to review and amend the CNVMP in the event of a change of construction methodology or equipment.
35. No work may commence on site until the CNVMP is certified by the Council's Compliance Monitoring Officer. The construction activities must be carried out in accordance with the certified CNVMP.

Construction Noise Hours

36. The consent holder must ensure that construction activities only operate between the hours of 7.30am and 6.00pm Monday to Saturday (excluding public holidays). This restriction shall not apply to low noise creating activities such as site set up, painting, electrical works or planting, which may occur outside of these hours on Monday to Saturday only.

Construction Noise Limits and Management

37. The consent holder must ensure that construction activities, except were identified in the CNVMP as predicted to exceed the levels in the NZS Acoustic standard "NZS6803:1999 Acoustics Construction Noise', shall be managed and controlled so that the noise received at any residential or commercial site does not exceed the limits set out in Table 2 and Table 3 of 'NZS6803:1999 Acoustics – Construction' Noise' when measured and assessed in accordance with that Standard.

Construction Vibration and Management

38. The consent holder must ensure that construction activities, except were identified in the CNVMP as predicted to exceed the levels in 'DIN 4150-3:1999 "Structural Vibration – Part 3: Effects of vibration on structures', shall be managed and controlled so that the vibration levels received at any site does not exceed the limits in 'DIN 4150-3:1999 "Structural Vibration – Part 3: Effects of vibration on structures'.

Schedule to the Construction Noise and Vibration Management Plan

- 38A. Schedule to the CNVMP
- (a) Unless otherwise provided for in a CNVMP, a Schedule to the CNVMP (Schedule) shall be prepared by a suitably qualified and experienced person, in consultation with the owners and occupiers of sites subject to the Schedule, when:

- (i) Construction noise is either predicted or measured to exceed the noise standards in condition 37;
- (ii) Construction vibration is either predicted or measured to exceed the vibration standards in condition 38.
- (b) The objective of the Schedule is to set out the Best Practicable Option for the management of noise and/or vibration effects of the construction activity beyond those measures set out in the CNVMP. The Schedule shall include details such as:
- (i) Construction activity location, start and finish times;
 - (ii) The nearest neighbours to the construction activity;
 - (iii) The predicted noise and/or vibration level for all receivers where the levels are predicted or measured to exceed the applicable standards in conditions 37 and / or 38;
 - (iv) The proposed mitigation;
 - (v) The proposed communication with neighbours; and
 - (vi) Location, times and types of monitoring.
- (c) Except in unforeseen circumstances, the Schedule shall be submitted to the Council's Compliance Monitoring for certification at least five working days in advance of the construction works that are covered by the scope of the Schedule and shall form part of the CNVMP.

Fixed Plant Noise

39. All fixed plant must be specified, located, designed and operated so that noise emission levels when measured at or within the boundary of any site, other than the site from which the noise is generated do not exceed the following limits:
- | | | |
|----|------------------------------|--------------------------|
| a. | Monday to Sunday 7am to 10pm | 45 dB L_{Aeq} (15 min) |
| b. | Monday to Sunday 10pm to 7am | 40 dB L_{Aeq} (15 min) |
| c. | Monday to Sunday 10pm to 7am | 65 dB L_{AFmax} |

Fixed plant noise must be measured in accordance with 'NZS 6801:2008 Acoustics - Measurement of Environmental Sound' and assessed in accordance with 'NZS 6802:2008 Acoustics - Environmental Noise'.

Note: Fixed Plant means plant that is permanently or temporarily located and operated at any location and includes mechanical and building services equipment such as equipment that is required for ventilating, extracting, heating, cooling, conditioning, and exhaust either of buildings or commercial activities; associated with boilers or plant equipment, furnaces, incinerators or refuse equipment; electrical equipment, plumbing (including pumps), lift or escalator equipment; or similar plant, equipment, items, rooms or services.

Acoustic Design Certificate District Plan Compliance (Fixed Plant Noise)

40. Prior to the occupation of the buildings authorised by this consent (i.e., at the conclusion of any stage), the consent holder must submit to the Council's Compliance Monitoring Officer an Acoustic Design Certificate (ADC) for fixed plant. This certificate must certify that suitable acoustic mitigation measures have been incorporated into the final design that are sufficient to ensure noise emitted from all fixed plant on the site authorised by this consent complies in all respects of the permitted noise standards set out under the condition 39 above. The ADC must be prepared by a suitably qualified and experienced acoustic expert.

Note: The intent of this condition is to ensure final design and specifications of fixed plant is suitably designed, specified, located and operated to ensure noise emissions comply with the fixed plant operational noise limits.

Wheel Squeal Noise Reduction

41. The undercroft car parking surfaces are to be appropriately treated/surfaced to reduce wheel squeal noise impact from the development. Prior to first occupation of the proposed village, the consent holder must provide the Council's Compliance Monitoring Officer with details of the treatment measures that have been applied to the undercroft car parking surfaces to reduce wheel squeal noise.