



AL APPLICATION- F NOISE EFFECTS

THE REST
1073 Tauwhare Road

PREPARED FOR
Shannon Leigh Trust

DATE
11 March 2026

Assessment of noise effects prepared by Styles Group for Shannon Leigh Trust.

REVISION HISTORY

Rev:	Date:	Comment:	Version:	Prepared by:	Reviewed by:
1	16/02/26		Final Draft	Jon Styles, MASNZ Director and Principal Styles Group	Gemma Styles Consultant Styles Group
2	11/03/26		Final		

Statement of experience

I am and have been the Director and Principal of Styles Group Acoustics and Vibration Consultants for 21 years. I am a Council Member of the Acoustical Society of New Zealand, and I am on the Board of Directors of the Australasian Association of Acoustical Consultants.

I have over 24 years' experience advising on the management of construction and operational noise and vibration effects. I have worked on a significant number of plan changes and resource consent applications for large-scale residential and mixed-use developments across New Zealand. I have extensive experience advising on the management of noise effects from land transport infrastructure, and development of controls to improve the compatibility of residential development around such infrastructure.

I am a regular and experienced expert witness for Council, Environment Court, District Court, High Court and Board of Inquiry hearings. I confirm that, in my capacity as author of this report, I have read and abide by the Environment Court of New Zealand's Code of Conduct for Expert Witnesses Practice Note 2023.

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Executive summary

Styles Group has assessed the construction noise and vibration and operational noise effects from The Rest development at 1073 Tauwhare Road (the **Site**).

This assessment has been prepared to accompany a referral application under the Fast-track Approvals Act 2024. The purpose of this assessment is to confirm that the proposal can be designed, managed and constructed to comply with the relevant permitted activity noise standards of the Waikato District Plan Operative in Part (**WDPOP**). This assessment also identifies the mitigation measures that should be formally assessed and considered into the substantive application to ensure the proposal is compatible with the level of noise-related amenity that is anticipated and provided for in the General Rural Zone (**GRUZ**) of the Waikato District.

The Rest is a comprehensively planned rural development, designed to deliver high-quality lifestyle, education, and retirement living outcomes while supporting the long-term growth and resilience of the Waikato region. The proposal includes a purpose-built agri-education institute, a series of rural lifestyle lots, a modern retirement village, a small commercial centre, and discreetly located storage sheds integrated to form a cohesive, well-designed development that maintains and enhances Tauwhare's rural character.

This assessment considers the construction and operational noise in accordance with the permitted activity noise standards prescribed by the WDPOP for noise generated and received between the sites in the GRUZ. This assessment finds that the masterplan has been designed to achieve ample separation between operational noise sources within the Site and nearby dwellings.

This assessment finds that the proposal can be designed, constructed and operated to comply with the permitted activity noise standards that are designed to deliver a very good level of acoustic amenity to rural dwellings in the GRUZ of the Waikato District.

1.0 Introduction

Shannon Leigh Trust has engaged Styles Group to assess the construction and operational noise effects from The Rest development at 1073 Tauwhare Road (the **Site**). This advice has been prepared accompany a referral application under the Fast-track Approvals Act 2024.

This assessment comprises an assessment of construction and operational noise effects in accordance with the relevant permitted noise standards prescribed by the Waikato District Plan Operative in Part (**WDPOP**).

This report identifies the key considerations to be addressed by the substantive application to ensure the application is designed, constructed and operated in accordance with the noise standards prescribed by the WDPOP.

This report should be read in conjunction with the documentation submitted with the Referral application and site plans. A glossary of acoustical terms used within this document is attached as Appendix A.

2.0 The proposal

The Rest is a comprehensively planned rural development, designed to deliver high-quality lifestyle, education, and retirement living outcomes while supporting the long-term growth and resilience of the Waikato region. The proposal includes a purpose-built agri-education institute, a series of rural lifestyle lots, a modern retirement village, a small commercial centre, and discreetly located storage sheds integrated to form a cohesive, well-designed development that maintains and enhances Tauwhare's rural character.

The masterplan in Figure 1 identifies the proposed land use activities across the Site.

3.0 The Site and closest receivers

The Site and surrounding land is in the General Rural Zone (**GRUZ**) of the Waikato District. The Site is not subject to any noise overlays according to the WDPOP.

3.1 Receivers

The GRUZ noise standards apply at the notional boundary¹ of any dwelling on an adjacent site. Figure 1 identifies the existing dwellings (receivers) on adjacent sites. These receivers are primarily consolidated to the east of the Site. The adjacent land to the north, west and south of the Site is primarily used for rural production activities.

The western and northern boundaries of the Site adjoin vacant land that is used for rural production activities. This assessment assumes that a dwelling may be established on any adjacent vacant site in the future, and the noise levels from the Site must be managed to comply with the permitted noise standards prescribed by the WDPOP at any existing or future notional boundaries.

¹ Defined by the WDPOP as "a line 20 metres from any side of a residential unit or other building used for a noise sensitive activity, or the legal boundary where this is closer to such a building".



Figure 1 The Rest Masterplan and closest adjacent notional boundaries (red circle)

4.0 Operational noise

NOISE-R8 of the WDPOP controls the operational noise levels generated and received between sites in the GRUZ.

NOISE- R8 requires that noise levels received at the notional boundary of any site in the GRUZ must not exceed 50 dB L_{Aeq} between 7am and 7pm, 45 dB L_{Aeq} between 7am and 10pm and 40 dB L_{Aeq} and 65 dB L_{Amax} between 10pm and 7am².

² Noise levels must be measured and assessed in accordance with the requirements of New Zealand Standard NZS 6801:2008 "Acoustics - Measurement of Environmental Sound" and New Zealand Standard NZS 6802:2008 "Acoustic - Environmental noise".

The proposal is to ensure that these noise levels are complied with at all times.

We have reviewed the Masterplan to identify the location of all potential noise generating activities and to confirm any measures that may be required to ensure that noise levels from the Site comply with the maximum permitted noise levels prescribed by NOISE-R8.

The primary operational noise sources associated with the proposal include:

- Commercial activities (café, superette and small-scale commercial tenancies) within the 9,000m² “Commercial Centre”
- Agricultural activities associated with the Agri-Education Institute
- Vehicle noise on the internal road network
- Retirement village activity

4.1 Noise from commercial lots

A 9000m² commercial centre is proposed in the southern part of the Site, adjacent to Tauwhare Road. The commercial centre is expected to include a range of small commercial tenancies, as well as a superette, café and church to service the needs of future residents and wider community. An 8000m² storage facility is proposed to the north of the commercial centre.

The masterplan shows that the local road servicing the commercial activities is centrally located within the Site and a 20m wide buffer runs along the eastern boundary. The indicative footprints of the commercial tenancies achieves ample separation distance (>50m) to proximate notional boundaries.

We have not identified any challenges in terms of commercial activities operating in compliance with the permitted noise levels prescribed by NOISE-R8 at the closest notional boundaries (within and adjacent to the Site) due to the relatively small-scale of the future commercial land uses and ample separation distances to adjacent notional boundaries.

The substantive application will confirm that the final layout of the commercial area (including parking and loading bays) have been designed to ensure compliance with NOISE-R8.

4.1.1 Agri-Education Institute Area

An Agri-Education Institute is proposed on the northern part of the Site. The Agri-Education Institute will include a specialised learning hub for agricultural training, on-site farming and campus facilities for students.

Noise generated from farming³ is permitted in the GRUZ. The operational noise associated with the on-site farm (including mobile farming machinery and equipment and farm dogs and animals) will be consistent with the noise sources that are anticipated and provided for in the GRUZ.

NOISE-R8 controls the noise levels generated from any fixed farming equipment and facilities. The Masterplan shows that the Agri-Education Institute facility buildings are generally consolidated centrally

³ Farming noise is defined by the WDPOP as “noise generated by farming activities, including vehicles, any aircraft used for aerial spraying or fertiliser application (excluding aerodromes), mobile farming machinery or equipment and farm animals, including farm dogs. It does not include fixed equipment or facilities, bird scaring devices and frost fans.

within the Site. Based on the separation distances between facility buildings and adjacent notional boundaries (>150m beyond the Site and >50m within the Site) we have not identified any concerns in terms of the fixed equipment and facilities operating in compliance with NOISE-R8.

4.1.2 Residential and retirement village activity

The Masterplan displays the location of the rural-residential lots and retirement village.

The noise from residential activity within the rural-residential lots and retirement villas is expected to be controlled by intermittent vehicle movements and noise from typical household activities. The overall character, timing and duration of noise generated by residential activity will be consistent with the rural lifestyle lots to the east of the Site. We have not identified any concerns in relation to noise levels from residential and retirement village activity.

Overall, our review of the Masterplan has not identified any constraints in terms of residential and retirement living activities achieving compliance with the permitted noise standards prescribed by NOISE-R8 at any adjacent notional boundary.

5.0 Assessment of construction noise and vibration effects

NOISE-R4 of the WDPOP require that construction noise levels are managed in accordance with the recommended numerical limits set out in NZS 6803:1999 '*Acoustics – Construction Noise*' (**NZS6803**). NZS6803 provides guideline noise limits that are based on the duration of construction works at any one location, and the occupation (sensitivity) of the receiving site. The noise limits must be measured and assessed 1m from the façade of any occupied dwelling in a rural or residential zone.

We understand that the construction timeframe will be greater than 20 weeks in duration. We have therefore assessed the potential construction noise levels in accordance with the NZS6803's recommended noise limits for long term projects⁴ affecting rural receivers.

We understand that construction activity will take place between 7:30am and 6:00pm, Monday to Saturday, when NZS6803 recommends that a noise limit of 70 dB L_{Aeq} and 85 dB L_{AFmax} . The proposal is to ensure that these noise limits are complied with.

5.1 Proposed construction work

Construction noise will be generated from the preliminary earthworks to prepare the Site for infrastructure, building platforms and road construction, followed by the vertical construction of buildings.

We expect that the construction works will require very typical plant and machinery such as bulldozers, compactors, chainsaws, excavators, paving machines, concrete pours and trucks. We understand that the proposed construction works will not include any rock breaking or blasting.

The highest construction noise levels are likely to be experienced where high noise generating works (such as road construction and vegetation removal) are undertaken within 50m of occupied dwellings on adjacent sites. Figures 1 and 2 shows that the closest receivers adjacent to the Site are typically separated from areas of high noise generating construction work by distances exceeding 50m.

⁴ The construction noise limit applying to construction projects greater than 20 weeks in duration.

At this point in time, the proposed construction methodology detailing the construction equipment and durations of construction work in various parts of the Site is not yet available. This means that we have not been able to predict the construction noise levels with a high degree of certainty. However, based on our review of the Masterplan and the relatively straightforward nature of the construction activities required, we expect that construction noise levels can be managed to achieve compliance with the permitted construction noise standards.

A detailed construction noise and vibration assessment will be provided as part of the substantive application that will include a detailed assessment of the proposed construction works in accordance with the recommended numerical limits and assessment procedures set out in NZS 6803:1999. The assessment will confirm whether any mitigation measures will be required to achieve compliance with the permitted noise standards.

5.2 Construction vibration

The WDPOP does not include any rules or standards to control vibration generated from construction work.

Notwithstanding, we have reviewed the likely separation distances between the closest areas of potential construction work and adjacent dwellings to determine whether vibration from construction work would be likely to approach or exceed the vibration limits set out in German Standard DIN 4150-3:1999 *Structural vibration – Effects of vibration on structures* (the **DIN limits**). The DIN limits are designed to ensure that construction vibration avoids damage to buildings. The DIN limits are commonly used in District Plans and resource consents to manage vibration generated by construction activities.

Our preliminary assessment of the proposed construction activities and separation distances to adjacent buildings finds that any vibration generated by construction work will readily comply with the limits for avoiding building damage without requiring any specific mitigation. This is due to the considerable separation distances between potential vibration-generating construction activities on Site and the nearest buildings.

6.0 Summary

This assessment finds that The Rest Masterplan has been designed to provide considerable separation between operational noise sources within the Site and nearby dwellings.

This assessment finds that the proposal can be designed, constructed and operated to comply with the permitted activity noise standards that are designed to deliver a very good level of acoustic amenity to rural dwellings in the GRUZ of the Waikato District. We expect that if any specific noise mitigation measures are required to achieve compliance, they will be modest.

A comprehensive acoustic assessment will be provided as part of the Substantive Application that will demonstrate how the operational and construction noise levels will be managed to comply with the permitted noise standards at all adjacent receivers.

Appendix A WDPOP Noise standards

These provisions apply to noise generated from the Site and received at other sites in the Waikato District.

Definition of Noise Sensitive Activities

Means buildings or parts of buildings used for, or intended to be used for the following purposes:

1. Residential activity;
2. Visitor accommodation;
3. Schools and tertiary education premises;
4. Health centre

Definition of Noise Sensitive Activity

Means any or all of the following:

- (a) buildings used for residential activities, including boarding establishments, retirement villages, papakaainga housing development, visitor accommodation, and other buildings used for residential accommodation but excluding camping grounds;
- (b) marae and marae complex;
- (c) hospitals;
- (d) teaching areas and sleeping rooms in an education facility;
- (e) places of assembly

Construction Noise

NOISE- R4	Noise- Construction	
All zones	(1) Activity status: PER Where: (a) Noise from any construction, maintenance, or demolition activity that is measured, assessed and managed in accordance with the requirements of NZS6803:1999 'Acoustics - Construction Noise'	(2) Activity status where compliance not achieved: RDIS (a) Effects on amenity values; (b) Hours and days of construction; (c) Noise levels; (d) Timing and duration; and (e) Methods of construction.

Construction Noise – All Infrastructure (Appeal 000086)

AINF-R2	Construction noise	
All zones	(1) Activity status: PER Where: (a) Construction, maintenance, repair, replacement, upgrading or removal of infrastructure or the installation of new infrastructure must comply with NZS 6803:1999 Acoustics - Construction noise.	(2) Activity status where compliance not achieved: RDIS Council's discretion is restricted to the following matters: (a) Effects on amenity values; (b) Hours of construction; (c) Noise levels; (d) Timing and duration; and

		(e) Methods of construction
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Noise generated and received in the General Rural Zone

NOISE- R8	Noise- general	
GRUZ- General Rural Zone	(1) Activity status: PER Where: (a) Noise measured at the notional boundary on any other site in the GRUZ - General Rural Zone must not exceed: (i) 50dB L_{Aeq}, 7am to 7pm every day; (ii) 45dB L_{Aeq}, 7pm to 10pm every day; (iii) 40dB L_{Aeq} and 65dB L_{Amax}, 10pm to 7am the following day. (b) Noise measured within any site in any zone, other than the GRUZ - General rural zone, must meet the permitted noise levels for that zone. (c) Noise levels must be measured in accordance with the requirements of New Zealand Standard NZS 6801:2008 "Acoustics - Measurement of Environmental Sound". (d) Noise levels must be assessed in accordance with the requirements of New Zealand Standard NZS 6802:2008 "Acoustic - Environmental noise".	(2) Activity status where compliance not achieved: DIS