APPENDIX N: INITIAL ACOUSTIC ASSESSMENT

DESIGN ADVICE MEMO

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ACOUSTIC

Memo No	**A01**
Job Name	**Springs Road Industrial Land Development**
Job No	**250625**
Date	**02 Apr 2026**
To	**Puna Property Holdings Ltd**
Address	s 9(2)(a)
Attention	**Ben Lagan**
Issued By	**Sam Jackson**

Initial Acoustic Assessment - Fast Track Referral Stage

1. Introduction

Powell Fenwick has been engaged by Puna Property Holdings to assess noise related to the proposed industrial land development along Springs Rd.

This memorandum is prepared to accompany an application for Fast Track Referral.

The proposed development covers 318, 320 and 376 Springs Rd, all of which are within Christchurch District. These properties are currently zoned Rural Urban Fringe as per the Christchurch District Plan. Puna Property proposes to rezone these properties to Industrial General and subdivide the area for use by industrial activities.

To the west and north of the proposed development is land within the Christchurch District, zoned Industrial Heavy. To the east is Springs Rd - a minor arterial road, and across Springs Rd is land zoned Rural Urban Fringe also within Christchurch District. To the south is Marshs Rd, a minor arterial road, and across Marshs Rd is land zoned General Rural Zone within Selwyn District Council.

A site plan of the proposed development area and subdivision is presented in Figure 1.1. The Christchurch and Selwyn District Plan maps are presented in Figure 1.2 showing the zoning of surrounding land.

In this memo, we provide a high-level summary of acoustic implications for the proposed development, specifically the ability of expected activities on the proposed industrial lots to meet Christchurch District and Selwyn District zone noise limits. We also provide commentary of the existing noise environment, specifically noise resulting from road traffic on Springs and Marshs Rd. This assessment is provisional only, for the purpose of determining whether noise generated by future industrial activities on 318, 320 and 376 Springs Rd are likely to meet zone noise limits at neighbouring properties, and what might be acceptable noise from future industrial activities given the existing noise environment. Where there are existing industrial zones adjacent we would expect compatibility.

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Figure 1.1: Subdivision plan

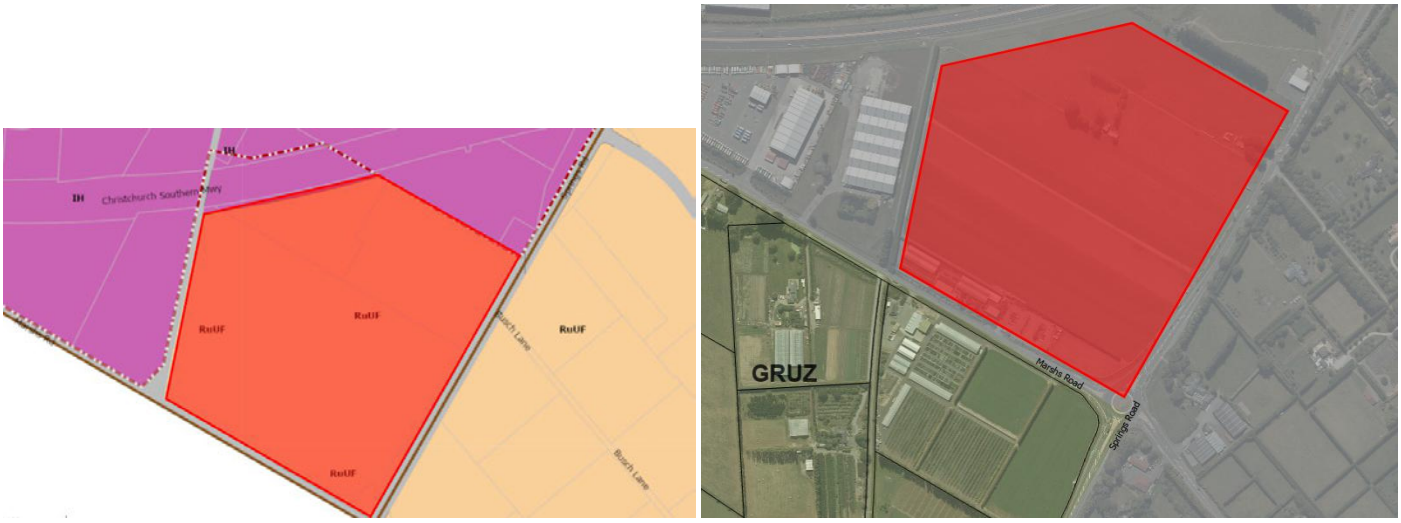


Figure 1.2: Zoning maps from the Christchurch (left) and Selwyn (right) district plans. The area of the proposed development is highlighted in red.

2. Criteria

2.1 Resource Management Act

Under the Resource Management Act 1991, local authorities are required to put in place district plans to manage the effects of land use activities. The principal tool in New Zealand to manage noise impacts is by zoning land to both sensitive and noise-producing areas and separating them, providing reasonable mitigation (acoustic insulation), and setting noise limits such that they are compatible and do not unreasonably interfere with each other's amenity and/or business operation.

Section 16 of the RMA also places a duty on the land occupier to avoid creating unreasonable noise effects by using the best practicable option for mitigation; this is additional to any district plan rule.

2.2 Christchurch District Plan

The Christchurch District Plan sets a framework for sustainable development and management of resources in the District. It includes objectives, policies and rules for the management of environmental effects of land use activities.

Rule 6.1.5.2.1 of the Christchurch District Plan governs noise generated by activities on one site to another and is reproduced below in part only.

a. *Outside the Central City , any activity that generates noise shall meet the Zone noise limits in Table 1 below at any site receiving noise from that activity, as relevant to the zone of the site receiving the noise.*

Table 2.1 (CDP Table 1): Zone noise limits outside the Central City

Zone of site receiving noise from the activity	***Time (hrs)***	***Noise Limit (dB)***	
		L_{Aeq}	L_{Amax}
… *b. All rural zones, except Rural Quarry Zone, assessed at any point within a notional boundary* *…*	*07:00-22:00*	*50*	*n/a*
	22:00-07:00	*40*	*65*
…	*07:00-22:00*	*70*	*n/a*
m. Industrial General Zone *…*	*22:00-07:00*	*70*	*n/a*

2.3 Selwyn District Plan

The Partially Operative Selwyn District Plan (appeals version) sets a framework for sustainable development and management of resources in the District. It includes objectives, policies and rules for the management of environmental effects of land use activities.

Rule NOISE-R1 of the Selwyn District Plan governs noise generated activities on one site to another and is reproduced below in part only.

NOISE-R1: Activities not otherwise specified

All Zones	Activity status: PER 1. Any land use activity not listed elsewhere in NOISE-R1 that generates noise, unless any of NOISE-R2 - NOISE-R16 applies. Where this activity complies with the following rule requirements: NOISE-REQ1 Zone Noise Limits	Activity Status when compliance not achieved: 2. When compliance with any rule requirement listed in this rule is not achieved: Refer to relevant rule requirement.

NOISE-REQ1: Zone Noise Limits

All Zones	1. Any activity that generates noise shall meet the noise limits of the zone of the site receiving noise from an activity, as set out in NOISE-TABLE5 Zone Noise Limits.	Activity status when compliance not achieved: 2. When compliance with any of NOISE-REQ1.1 is not achieved: RDIS Matters for discretion: 3. The exercise of discretion in relation to NOISE-REQ1.2 is restricted to the following matters: a. NOISE-MAT1 Health and Wellbeing and Amenity Values

NOISE-TABLE5: Zone Noise Limits

Zone of the site generating noise	**Zone of the site receiving noise**	**Assessment Location**	**Hours and Limits**
…	…	…	…
… GIZ …	GRUZ …	At the notional boundary of any noise sensitive activity within any site receiving noise	0700 to 2200: 55 dB $L_{Aeq\ (15min)}$ 2200 to 0700: 45 dB $L_{Aeq\ (15min)}$ / 70 L_{AFmax}

3. Existing Noise Environment

A proprietary software package (SoundPLAN) has been used to model the variation in road traffic noise levels across the site to determine the existing noise environment at rural properties in Christchurch to the east of Springs Rd and to rural properties in Selwyn to the south of Marshs Rd. SoundPLAN implements the principles of ISO 9613-2:1996 Acoustics – Attenuation of sound outdoors – Part 2: General method of calculation. The topography and local site features have been included in the model together with a correction for the surfaces surrounding the site.

For this initial assessment, we have modelled two situations, the average daytime traffic noise (from 0700 to 2200 h) and the one hour night time period with the lowest traffic volume (0200 to 0300 h). Traffic volumes have been obtained from the Christchurch City Council traffic counts dashboard.

Daytime noise is presented in Figure 3.1 and minimum night time noise is presented in Figure 3.2. The red limit line is set to 50 dB L_{Aeq} in Figure 3.1 to represent the lowest daytime noise limit of the Christchurch and Selwyn District Plans, while it is set to 40 dB L_{Aeq} in Figure 3.2 to represent the lowest night time noise limit.

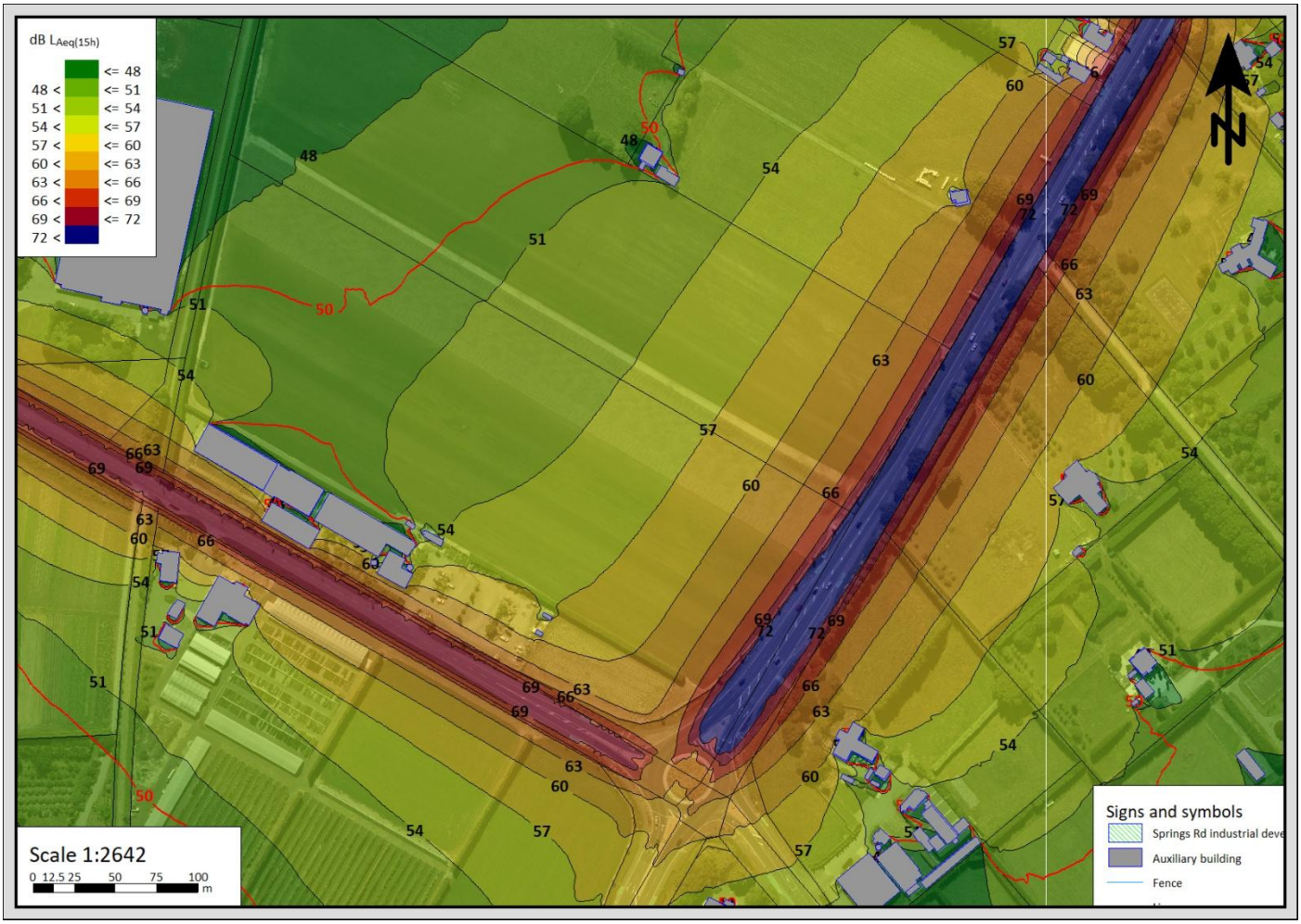


Figure 3.1: Average daytime noise from road traffic on Springs Rd and Marshs Rd, averaged between 0700 h and 2200 h. The red limit line is the 50 dB L_{Aeq} contour.

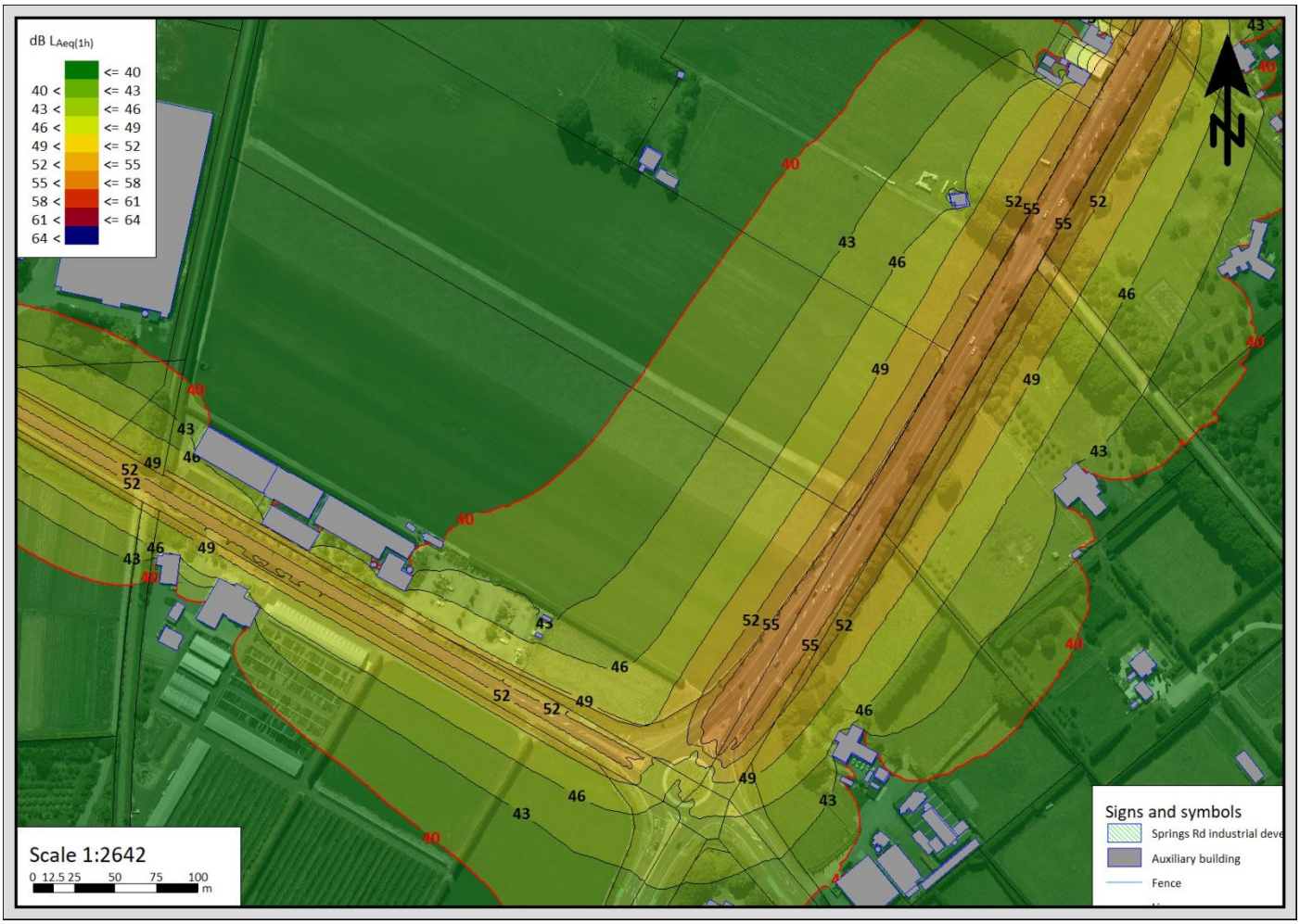


Figure 3.2: Minimum night time noise from road traffic on Springs Rd and Marshs Rd over a one hour period (between 0200 h and 0300 h). The red limit line is the 40 dB L_{Aeq} contour.

The above noise contour plots demonstrate that the noise exposure to rural sites directly adjacent to the proposed development are already exposed to road traffic noise that is at or above the permitted noise limits for future industrial activities.

4. Assessment

Industrial General zoning is intended for use by light industrial activities. As per feedback from the client, the majority of sites are expected to be used for warehousing and distribution. Heavy industry activities, for example container port activities, will not be permitted to occur within the development and lots are not sized to accommodate larger scale industrial activities with the majority being less than 0.5 ha in size.

We expect the largest source of noise within new industrial sites to be from trucks. Secondary noise sources of significance could include material handling with small vehicles (forklift trucks) and small scale workshop activities. We expect sites will largely operate during daytime hours when the higher daytime noise limits of the Christchurch and Selwyn District Plans apply, however some small scale night time activities, including sites commencing operations prior to 0700 h in the morning could occur.

We have previously measured noise from individual movements of large trucks. Without screening from fences or buildings, continuous large truck movements generate noise levels of 50 dBA at a distance of approximately 50 m. All current notional boundaries are greater than 50 m away. Noise levels of 40 dBA are generated at a distance of approximately 150 m, which is largely within 40 dBA contour for night time road traffic noise exposure as per Figure 3.2 in Section 3 above. We note that this considers continuous truck movements over an assessment period, whereas truck noise will be intermittent from any one site and actual noise levels and standoff distances will be somewhat lower over a typical 15 minute assessment period. While there may be more than one truck on more than one site, such movements being sufficiently continuous, close to the same noise sensitive receiver, and unscreened is unlikely therefore cumulative noise increases are not expected to be typical.

Other noise sources like mechanical services equipment, or machinery, at these setbacks can be located/enclosed to control noise emissions.

In conclusion we consider it is feasible for expected industrial activities within the proposed development to meet District Plan noise limits, and where limits are not met to generate noise that is below the existing noise environment. Conditions could be considered that would require heavy vehicle turning/delivery areas that would function during the night time period to face away from the roads, or provide a noise assessment. More detailed assessment would determine whether such measures are necessary.

Access to all lots within the proposed development will be from new internal roads. Road traffic noise along these new roads will not generate significant noise to adjacent rural residential areas.

Given the moderate size of the development and the current traffic levels along Springs Rd and Marshs Rd, we do not expect the development to significantly alter road traffic noise generated on existing roads. This will need to be confirmed following input from the traffic engineer.

5. Summary

Powell Fenwick has been engaged by Puna Property Holdings to assess noise related to the proposed industrial land development along Springs Rd, which will involve re-zoning 318, 320 and 376 Springs Rd from Rural Urban Fringe to Industrial General.

Based on the types of activities proposed within the development, which is expected to be largely warehousing and distribution, we expect noise from future industrial activities can largely comply with District Plan noise limits at neighbouring rural residential sites. We have shown in Section 3 that rural residential areas in the vicinity of the development are already exposed to elevated noise from road traffic along Springs Rd and Marshs Rd. Where there are marginal exceedances of District Plan limits from new industrial activities, the existing noise environment should not be significantly altered.

In summary, and based on these initial investigations, we expect that the proposed development and re-zoning of land will be suitable for the location regarding noise outcomes, given the existing noise environment and proposed scale and type of industrial activities. The location, being adjacent to existing industrial areas and bounded by busy roads has parallels to other industrial zones established within Christchurch and Selwyn Districts.

We can confirm that we have been engaged by the client to undertake a full noise assessment of the proposed development, including measurement of the existing noise environment and a detailed assessment of noise emissions from an industrial zone. Where necessary, suitable conditions of consent can be included to mitigate any adverse noise effects from new industrial activities.

This memorandum is suitable for submission to Ministry as part of a fast-track referral application.