

Before the Selwyn District Council

under: the Resource Management Act 1991

in the matter of: Proposed Private Plan Change 80 to the Operative
District Plan

and: **Two Chain Road Limited**
Applicant

Summary of evidence of Mark Lewthwaite (noise)

Dated: 20 October 2022

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SUMMARY OF EVIDENCE OF MARK LEWTHWAITE

- 1 My full name is Mark Douglas Lewthwaite. I am an acoustic consultant with 15 years of experience. I lead the Powell Fenwick acoustic team.
- 2 My evidence focuses primarily on the noise provisions of the Proposed District Plan (PDP), which I agree are more appropriate and which are likely to have legal effect by the time activities establish on the site (should it be rezoned).
- 3 The PDP rules do not offer any protection from reverse sensitivity that might be experienced on the site, which is not uncommon within industrial zoning, and as the likely activities on the site would not be sensitive to all but the loudest sources of noise, I do not consider noise generated in the nearby Inner Plains or Living zones will have a significant effect.
- 4 Infrastructure noise from the Main South and Midland Railway Lines (MSL, MDL) and State Highway 1 (SH1) have been assessed.
- 5 The MSL along this section is subject to typically sixteen train movements per day. I anticipate noise levels of 79-89 dBA at the south boundary of the site during a train pass by. This is a tolerable noise level for short periods. The MDL at the eastern end of the site would have similar effects though only over a small area of the site.
- 6 SH1 would generate noise in the order of 65 dB $L_{Aeq(24h)}$ at the south boundary of the site. This is a tolerable continuous noise level for undertaking work related tasks outside and where there are offices near the south boundary, standard construction methods can reduce the noise level to achieve acceptable internal noise outcomes.
- 7 There are therefore no reverse sensitivity concerns with the establishment of Business 2A zoning on the site.
- 8 Sensitive activities in rural areas to the north and areas of Rolleston Prison have protection from noise generation in the Operative SDP and PDP. PDP Rule NOISE-REQ1 requires noise from a General Industrial Zone received in a General Rural Zone to be no greater than 55 dB L_{Aeq} during the daytime (0700-2200 h) and 45 dB L_{Aeq} , 70 dB L_{Amax} at night-time (2200-0700 h).
- 9 Most industrial activities, if operating overnight, would take place at reduced levels. Those fronting Two Chain Rd or Walkers Rd may need to control noise output in order meet the 45 dB L_{Aeq} / 70 dB L_{Amax} PDP noise limits applicable within the General Rural Zone, although the Two Chain Road corridor width of 40.23 m (two chains) and setbacks to notional boundaries does provide a useful buffer.

- 10 But generally, I consider the industrial activities will comply with these noise limits.
- 11 The industrial zone to the east is of the same zoning/nature therefore there is no particular sensitivity identified.
- 12 Living/residential zones to the south have protection from noise generation in the SDP and PDP. PDP Rule NOISE-REQ1 requires noise from a General Industrial Zone received in a General Residential Zone to be no greater than 50 dB L_{Aeq} during the daytime (0700-2200 h) and 40 dB L_{Aeq} , 70 dB L_{Amax} at night-time (2200-0700 h).
- 13 Similar to the interface with the General Rural Zone activities, activities at the southern boundary, if operating overnight, may need to control noise output in order meet the 40 dB L_{Aeq} / 70 dB L_{Amax} noise limits applicable within the General Residential Zone, although the rail and road corridor does provide a useful buffer. Rail and road noise effects are notable existing components of the noise environment in the living/residential zone.
- 14 In terms of business activities that would be permitted to take place on the site, a range of business activities could be expected to be carried out, including general warehouse style activities, with consideration of noise mitigation if required.
- 15 Emphasis should be placed on locating, enclosing and/or screening of the louder activities, particularly if any of the activities may be carried out during the night-time assessment period. The site has sufficient width to provide flexibility when considering the location of a range of tenant activities.
- 16 Overall, I consider the PC80 site industrial activities will comply with the relevant noise limits in the PDP.
- 17 Assessment has been included of the marginal increase of road traffic noise due to the PC80 site, compared to predicted future levels resulting from highway changes. Due to the PC80 traffic generation and using traffic noise prediction methods, the noise level would be expected to increase by 1-2 dB at the eastern end of Two Chain Rd and the southern end of Walkers Rd. I would not expect such an increase to be readily discernible.
- 18 Night-time road traffic generation from the PC80 site is uncertain but I understand there is potential doubling of traffic volumes overnight along the east section of Two Chain Rd and the south section of Walkers Rd. These added movements are not expected to increase the maximum event noise, rather further increase the regularity, or "density" of vehicle noise.

- 19 I am unaware of any plan or commitment to establish rail sidings to the site (though sidings may in due course be proposed as shown in the ODP). Given this uncertainty, a site-specific assessment could not be carried out at this point in time due to a lack of detail as to the design, layout, and activities proposed to occur at these rail sidings. However, I understand the ODP now prevents rail sidings from extending north of the primary road which I consider would assist in minimising the potential for rail noise to affect Two Chain Road residents.
- 20 Noise from train movements within the rail corridor, including from shunting of wagons from sidings where within the rail corridor, is permitted in PDP rule Noise-R1.3 as follows: "Traffic and rail noise generated within a land transport corridor. This does not apply to the testing (when stationary), maintenance, loading or unloading of trains."
- 21 Loading and unloading of wagons would typically take place on a private siding within private land and therefore I expect would be subject to the PDP noise limits.
- 22 The noise generated on private land from periodic collection of wagons on sidings, and from loading and unloading of these, I would expect could readily meet the PDP day-time noise limits. More intensive activities, or activities carried out at night may also meet the noise limits, subject to appropriate noise assessment and where necessary mitigation.
- 23 The New Zealand Defence Force evidence raised concerns about reverse sensitivity effects due to noise from military activities undertaken in grazing land situated between Burnham Military Camp and Rolleston Prison, noting the potential for noise sensitive activities to be established on the PC80 site. The noise effects when the Military Camp was designated were presumably deemed appropriate for adjoining sensitive land uses such as may have included 250-534 Two Chain Rd dwellings, along with the Youth Facility and Rolleston Prison. This rezoning will introduce less sensitive activities, further away and therefore those effects should also be considered acceptable.

Dated: 20 October 2022



Mark Lewthwaite