

File Ref: AC18208 – 02 – R1

12 October 2018

Mr K. Haycock
Network Tasman Ltd
PO Box 3005
NELSON 7050

Dear Kerry,

**Re: Proposed extension of Schedule for the Network Tasman Hope Depot
Assessment of Environmental Noise Effects**

Acoustic Engineering Services (AES) have been engaged to provide acoustic engineering advice in relation to the proposed extension of the Schedule for the Network Tasman Hope Depot. The Applicant requires an assessment of environmental noise effects with regard to section 104 (1) of the Resource Management Act (RMA), which requires the potential effects of the activity on the environment to be considered.

We have based our analysis on the email correspondence with Mark Lile titled *Network Tasman [DC-Documents.FID2614955]*, and dated the 28th of August 2018.

Please find our analysis and recommendations below.

1.0 BACKGROUND

The sites which are proposed to be included in the Schedule are located at 68 Main Road Hope, Richmond, in Nelson, with legal descriptions of Lot 1 DP 19736 and Lot 1 DP 20392. The sites are zoned Rural 1 as defined in Map 127 of the Tasman District Council's Tasman Resource Management Plan (TRMP) as are all the surrounding sites. However, the rules for Schedule 17.5A (Activities on Network Tasman Ltd Site at Main Road, Hope) set out in the TRMP apply to the sites to the northeast which are used for a range of light industrial, commercial and residential purposes by Network Tasman, as shown in figure 1.1 below.

As the land use pattern of the applicant site does not match the underlying zoning (Rural 1), Network Tasman proposes to extend the Schedule 17.5A over the property containing the applicant site.

The site to the southwest (82 Main Road Hope) includes a two-storey dwelling and a single storey dwelling. A Caltex petrol station is located at 70 Main Road Hope to the southeast with a storage yard to the rear of the site.

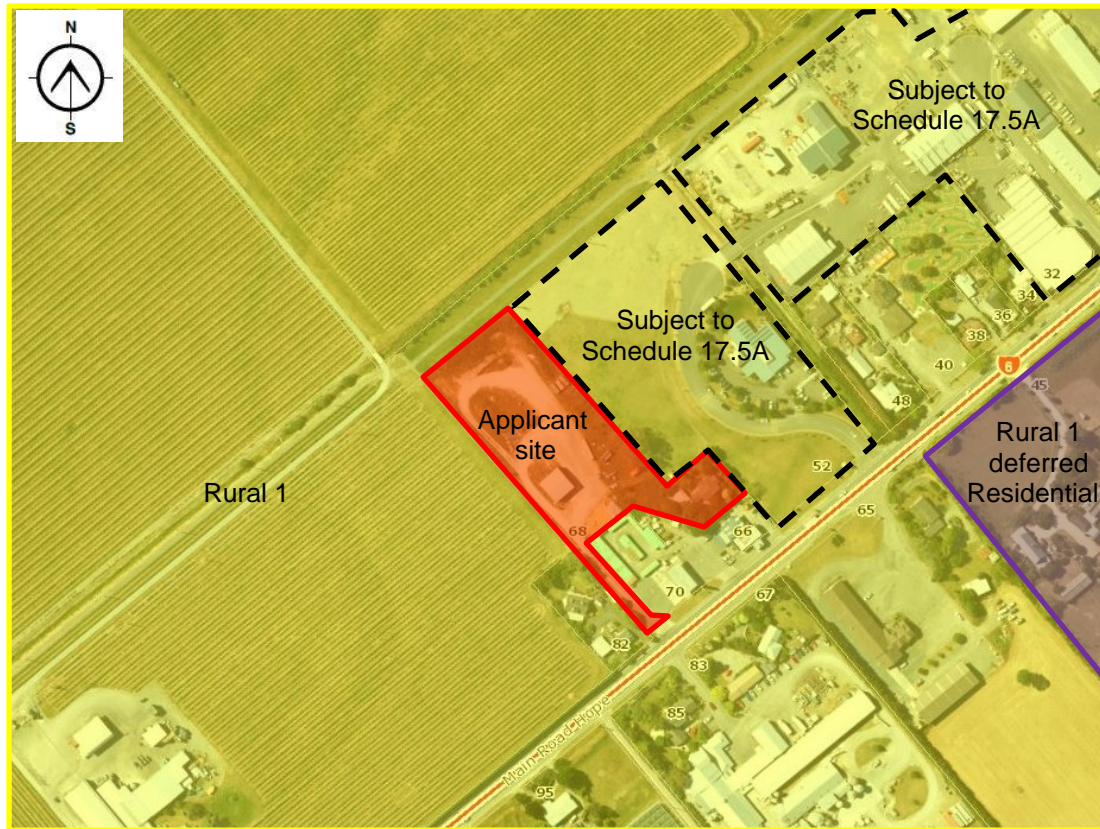


Figure 1.1 – Location plan (Source: Top of the South Maps)

2.0 ACOUSTIC CRITERIA

The Resource Management Act requires consideration of the significance of any adverse effects associated with the proposal. Guidance as to the significance of any adverse noise effects may be obtained from several sources.

2.1 Tasman Resource Management Plan noise rules

2.1.1 Rural 1 zone rules

The site and surrounding area are currently located within the Rural 1 zone, and therefore the Tasman Resource Management Plan, *Volume 1: Text, Part II Chapter 17 – Zone Rules, 17.5: Rural 1 Zone Rules, 17.5.2.a Permitted Activities (Land Use – General)*, noise rule applies as follows:

Noise

- (c) *Except in the Richmond West Development Area, noise generated by the activity when measured at or within the notional boundary of any dwelling in a Rural zone (other than any dwelling on the site from which the noise is being generated), Rural Residential, Papakainga or Tourist Services zone, or at or within any site within a Residential Zone, does not exceed:*

	Day	Night
L_{eq}	55dBA	40 dBA
L_{max}		70 dBA

*N.B. Day = 7.00 am to 9.00 pm Monday to Friday inclusive and 7.00 am to 6.00 pm Saturday (but excluding public holidays).
Night = all other times, plus public holidays.*

2.1.2 Schedule 17.5A rules

As discussed above, the Network Tasman proposes to extend Schedule 17.5A over the property containing the applicant site.

Schedule 17.5A: Activities on Network Tasman Ltd Site at Main Road, Hope requires that the activity complies with Condition (m) as set out in rule 17.4.2.1, as follows:

Noise

- (m) *Except as specified in condition (n), in the Light Industrial and Heavy Industrial Zones, noise generated by the activity measured at or within the boundary of any site within a Residential or Tourist Service Zone, or at or within the notional boundary of any dwelling in the Rural, Rural Residential or Papakainga Zone, does not exceed:*

	Day	Night
L_{eq}	55dBA	40 dBA
L_{max}		70 dBA

N.B. Day = 7.00 am to 9.00 pm Monday to Friday inclusive of 7.00 am to 6.00 pm Saturday (but excluding public holidays).

Night = All other times, including public holidays.

2.2 Existing noise levels

William Reeve of AES visited the site at 1100 and 1800 hours on the 12th of September 2018 to observe the existing noise levels. During our visit, the traffic flow was observed to be intermittent on Main Road Hope (1 – 11 cars and 4 heavy vehicles per minute).

Noise sources audible in the area included:

- Traffic on Main Road Hope and visiting the adjacent Caltex petrol station
- A tractor idling in the adjacent vineyard
- Birds and other noise associated with the natural environment

Noise measurements were taken around the site and in the vicinity of the closest dwellings. Noise levels of 67 – 69 dB L_{Aeq} were recorded in the petrol station at a similar distance to the road as the closest single-storey flat at 82 Main Road Hope. Noise levels of 56 – 57 dB L_{Aeq} were recorded along the driveway at a similar distance to the road as the adjacent two-storey dwelling at 82 Main Road Hope. Lower noise levels of 49 – 53 dB L_{Aeq} were recorded near the rear of 82 Main Road Hope and at the rear of the applicant site. The dominant noise source at all these locations was traffic on Main Road Hope.

2.3 New Zealand Standard 6802

NZS 6802:2008 *Acoustics – Environmental noise* outlines a guideline daytime limit of 55 dB $L_{Aeq(15\text{ min})}$ and a night-time noise limit of 45 dB $L_{Aeq(15\text{ min})}$ for “the reasonable protection of health and amenity associated with the use of land for residential purposes”.

We note that the Standard provides guidelines in section 8.3 regarding ‘daytime’ and ‘night-time’ for use in situations where these are not specified. The timeframe recommended is 0700 to 2200 hours daytime, and 2200 hours to 0700 hours the following day for night-time.

2.3 World Health Organisation

*Guidelines for Community Noise*¹, a document produced by the World Health Organisation based on extensive international research recommends a guideline limit of 55 dB L_{Aeq} (16 hours) to ensure few people are seriously annoyed in residential situations. A guideline limit of 50 dB L_{Aeq} is recommended to prevent moderate annoyance. A guideline night-time limit of 45 dB L_{Aeq} is recommended to allow occupants to sleep with windows open.

2.4 Discussion regarding appropriate noise limits

Based on the above, we observe that the Tasman Resource Management Plan noise limits outlined in Schedule 17.5A are the same as noise limits for the Rural 1 zone and more stringent than the guidelines recommended by WHO and NZS 6802:2008 especially in terms of the early commencement of the 'night time' period. Daytime noise levels from traffic on Main Road Hope also exceed 55 dB L_{Aeq} at the location of the closest dwellings.

We therefore consider that compliance with the Tasman Resource Management Plan noise limits outlined in Schedule 17.5A at the notional boundary of any dwelling will be appropriate to ensure noise emissions are reasonable, and that effects on neighbouring residential properties are acceptable.

3.0 NOISE GENERATED BY THE ACTIVITY OVER THE PROPOSED SITE

We understand that if the Schedule is extended, the following uses will be a controlled activity if they meet the noise rules outlined in 2.1.2 above and operate between 7:00 am and 7:00 pm Monday to Saturday as outlined in Schedule 17.5A, as follow:

- The storage of goods
- Offices
- Light manufacturing activities
- Trade workshops
- The retail sale of goods which are either manufactured or serviced on the site, provided that the retail display area does not exceed 100 square metres
- Laboratories
- Transport depots

Considering the similar expected noise levels from the above sources, we can confirm that the noise limits required by Schedule 17.5A are achievable and realistic; however, physical and managerial noise mitigation would be required for louder noise sources, for example heavy vehicles on the access, workshops and the like.

A suitably qualified acoustic engineer should work with the applicant through any consent process and produce a report demonstrating how compliance with this rule will be achieved.

Please do not hesitate to contact us to discuss further as required.

¹ Edited by Berglund, B *et al.* *Guidelines for community noise*. World Health Organization 1999.

Kind Regards,



Aaron Zhao
ME (Mech)
Acoustic Engineer

Acoustic Engineering Services

12 October 2018