

BEFORE THE HEARINGS COMMISSION FOR THE TASMAN DISTRICT  
COUNCIL

**IN THE MATTER OF** the Resource Management Act 1991

**AND**

**IN THE MATTER OF** an Application for Resource Consent for the Olive

**BY** The Integrity Care Group Limited

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**STATEMENT OF EVIDENCE BY JEREMY WILLIAM TREVATHAN**

10 FEBRUARY 2021

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## **INTRODUCTION**

- 1 My name is Jeremy Trevathan. I am an Acoustic Engineer and Director at Acoustic Engineering Services Limited, an acoustic engineering consultancy based in Christchurch.
- 2 I hold the degrees of Bachelor of Engineering with Honours and Doctor of Philosophy in Mechanical Engineering (Acoustics) from the University of Canterbury. I am an Associate of the New Zealand Planning Institute, and a Member of the Acoustical Society of New Zealand.
- 3 I have more than fourteen years' experience in the field of acoustic engineering consultancy and have been involved in a large number of environmental noise assessment projects throughout New Zealand. I have previously presented evidence at Council and Environment Court Hearings, and before Boards of Inquiry. I have acted on behalf of applicants, submitters, and as a peer reviewer for Councils.
- 4 Whilst this is not an Environment Court hearing, I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

## **BACKGROUND**

- 5 In June 2019, my company was engaged by Integrity Care Group (the Applicant) to provide acoustic engineering advice in relation to a proposal to develop a care home on the Olive Estate Lifestyle Village site, in Richmond, Nelson.
- 6 My company prepared an Assessment of Environmental Noise Effects (AES file reference: AC19155 – 02 – R3), dated the 27<sup>th</sup> of June 2019. We also prepared a letter responding to Council RFI's (AES file reference: AC19155 – 04 – R1), dated the 16<sup>th</sup> of September 2019. These reports accompanied the Resource Consent application submitted to the Tasman District Council.
- 7 Subsequently the layout of the proposed care home was altered in response to concerns from submitters. The key change from an acoustics perspective was the removal of the access from Brenda Lawson Way, with all vehicles accessing the site via Fairose Drive.

**SUMMARY OF ORIGINAL ANALYSIS**

**Acoustic criteria**

8 Based on a review of the Tasman Resource Management Plan (TRMP), and other relevant guidance, I consider that compliance with the noise limits outlined in the Tasman Resource Management Plan will ensure that noise effects are minimal. These limits are:

Except in the Richmond West Development Area, noise generated by the activity, measured at or within the boundary of any site within the zone, other than the site from which the noise is generated, or at or within the notional boundary of a dwelling within any other zone, does not exceed:

	Day	Night
L <sub>eq</sub>	55 dBA	40 dBA
L <sub>max</sub>		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.

9 These limits are in line with current best practice in terms of the Standards referenced, and metrics used. When compared to World Health Organisation Guidance and NZS 6802:2008 recommendations, the Plan limits are however stringent with regard to the extent of the day and night time periods, with a longer night time period, and the fact that the night time limit applies all day on Sundays and public holidays.

10 I note that Affected Parties Approval (APA) has been received from 376 Hill Street, and therefore effects do not need to be considered at this property.

**Expected noise levels**

11 The main noise generating activity on the site is expected to be vehicles, the use of the external dining area, and mechanical plant.

*Vehicles*

12 The previous layout included access to the site provided by two access points – one from Fairrose Drive leading to a 29-space car park and main entrance,

and one to the north leading to a carpark on the lower level of northwest wing, and to a service / loading area adjacent to the central wing. All staff will access the site from Fairrose Drive.

- 13 Based on the predicted light vehicle traffic volumes, full compliance with the TRMP night-time noise limit of 40 dB LAeq was expected at all properties, apart from 376 Hill Street (which had provided APA) and 3 Brenda Lawson Way – where noise level of up to 46 dB LAeq were predicted between 1000 and 1500 hours, and up to 43 dB LAeq outside of these times. While this was an exceedance of the TRMP night-time noise levels, it was expected to occur infrequently, and noise level of less than 40 dB LAeq were expected at the façade of the dwelling itself. I therefore considered the noise effects to be minimal. As discussed below, this access has now been removed.
- 14 I understand goods and services vehicles will only access the site between 0900 and 1700 hours Monday to Saturday, with a peak flow of one truck per hour. With the trucks on the northern driveway, full compliance with the TRMP noise limits was expected at all of the neighbouring property boundaries.

*Dining activities*

- 15 I understand that based on the operators experience, the outdoor deck is not expected to be used frequently for dining. The Applicant has therefore proposed to limit the use of the deck for dining activities, and to keep the sliding doors closed outside of the TRMP 'daytime' noise period.
- 16 Noise levels of up to 48 dB LAeq are expected at the nearest neighbouring property due to use of the deck for outdoor dining. Full compliance with the TRMP noise limits is therefore expected at all neighbouring properties, and I expect the associated noise effects to be minimal.

*Mechanical plant*

- 17 The mechanical plant design is still be developed; however, I understand that the main items of plant will be located centrally on the roof. In this situation, I expect it is realistic for the mechanical plant to fully comply with the TRMP noise limits. A condition of consent has been proposed requiring a review of the plant in due course to ensure that the cumulative noise levels from the site (including mechanical plant) do not exceed the TRMP noise limits. This is common practice.

## RELEVANT CHANGES TO THE APPLICATION

18 Since our original assessment, the overall layout has been altered in response to submitter's concerns. The changes that would be expected to have some influence on the noise levels to our original assessment are as follows:

- The removal of the access road to the service area and residence garages from Brenda Lawson Way, and subsequently the acoustic fence along this boundary.
- Update of the Fairose Drive carpark to have a shared entry/exit point, with an increase in carparks from 28 to 30, and new access ramp to residence garages.
- Reduced the outdoor dining deck area

I have updated our analysis as described below.

### *Vehicles*

19 All vehicles accessing the site will now enter / exit via Fairose Drive. The most concentrated periods of light vehicle activity are expected to occur during staff shift changes. I understand that these will likely occur around the following times:

- 0600 – 0715 hours
- 1400 – 1530 hours (main shift)
- 2200 – 2315 hours

20 Based on advice from the traffic engineer, up to 55 vehicle trips per hour could be expected during the main shift, with less during the other changes.

21 Based on the location of the carpark relative to the neighbouring dwellings, even if half of the worst-case hour traffic volumes occurred during a 15-minute period (i.e. 28 vehicles) noise levels would be less than 40 dB LAeq at all neighbouring properties, apart from at the 376 Hill Street boundary. Therefore, full compliance with the TRMP noise limits is expected at all neighbouring properties at all times, apart from 376 Hill Street, which has provided affected parties approval.

22 It is now proposed that service vehicles enter and exit the site via Fairose Drive. These movements will only occur between 0900 and 1700 hours Monday to Saturday, with a peak flow of one truck visiting the site per hour. Resulting noise levels of less than 55 dB LAeq are expected from this activity

at all neighbouring properties, apart from 376 Hill Street where noise levels of up to 58 dB LAeq are expected.

- 23 With the proposed deck design located further away from Brenda Lawson Way, full compliance with the TRMP daytime noise limit of 55 dB LAeq is still expected at all neighbouring properties, and I would still expect the effects to be minimal.
- 24 I understand that there is concern that the dining area and associated outdoor area will be used for entertainment and group activities. If this was to occur, I would still expect full compliance with the daytime noise limits to be comfortably achieved. However, to provide further assurance that this aspect of the activity is appropriately managed, a Noise Management Plan should be developed for the facility which outlines processes and expectations to ensure appropriate consideration of neighbours.

### **SUBMISSIONS**

- 25 I have reviewed the opposing submissions which mention noise. I note that a number of the submitters were concerned about the service access road onto Brenda Lawson Way, which has since been relocated. A number of other submitters raised issues which have been covered in my evidence above, including:

- Staff parking, particularly the shift changeovers
- Early morning service deliveries
- Dining area being used for entertainment and group activities
- Mechanical plant

I have discussed the remaining issues below.

- 26 Mr Rickerby is concerned about the noise from the dementia unit located in the wing adjoining Hill Street. The properties on the other side of Hill Street are 40 metres from the dementia wing, and the 3 Brenda Lawson Way property boundary is at least 14 metres from the building, with the dwelling more than 20 metres away. I have been involved with other projects where the potential noise from dementia patients was a concern, with similar setbacks to residential neighbours. In reality these areas of the facility are carefully managed, and I am not aware of any situation where this has subsequently been a source of concern. Management processes specific to the dementia unit could be captured in the Noise Management Plan I have recommended above.

- 27 Ms Sullivan at 28 Fawdon Way has expressed concerns about noise from people on the first floor balconies overlooking her property, and the noise from construction. As above, the development will comfortably comply with the TRMP noise limits, and the overarching management structure means that there is less likelihood of occasional nuisance noise than a situation with typical residential neighbours. The Noise Management Plan could however include specific requirements around the considerate use of elevated balconies.
- 28 With regard to construction noise – as discussed below the drafting of a Construction Noise Management Plan and compliance with the noise limits outlined in New Zealand Standard 6803:1999 are best practice for the management of construction noise effects. I expect that given the setbacks available and likely construction methodologies it is realistic for construction work in this case to comply with the limits outlined in NZS6803, and any construction noise effects will be minimal.

#### **COMMENTS ON COUNCIL OFFICERS REPORT**

- 29 Ms Lancashire has produced a section 42A report relating to the application for consent, to assist the Commissioners.
- 30 Ms Lancashire considers that *'the most significant measure that will mitigate the effects of the CFB on the amenity values of the area has been achieved by removing the proposed service lane onto Brenda Lawson Way. This has resolved one of the key matters of contention that was identified in a number of the submissions in opposition to the proposal. It is also assumed that this will have brought the development into compliance with the permitted daytime and night time noise standards of the TRMP (but this needs to be confirmed by the applicant).'*
- 31 As I have described above, with the change in layout, full compliance with the daytime and night time TRMP noise standards are expected at all properties apart from 376 Hill Street which has provided APA.
- 32 Ms Lancashire does not provide a specific discussion of noise effects; however, she concludes that the overall environmental effects of the care facility development are minor and can be appropriately mitigated through appropriate conditions of consent.
- 33 I have reviewed the conditions recommended by Ms Lancashire and have the following minor observations:

- a. Proposed Conditions 22 and 23 relate to the noise limits for the site. Condition 22 relates to the activities from the overall site, whereas Condition 23 only relates to mechanical plant. There is some potential redundancy or confusion between these two noise limit conditions. Condition 22 could be amended to mention mechanical plant if that was considered necessary, and Condition 23 could then be reworded to require the mechanical plant design to be reviewed prior to Building Consent to ensure that it complies with the noise limits outlined in Condition 22.
- b. Currently, the management of noise during construction falls to Condition 24 which requires a Construction Management Plan. As construction noise has been identified as a concern by neighbours, as above it would be in line with good practice to include a requirement for a dedicated Construction Noise Management Plan for the site, ensuring that the construction is undertaken in line with NZS6803:1999.

## **CONCLUSIONS**

- 34 Compliance with the noise limits outlined in the Tasman Resource Management Plan will ensure that the noise effects associated with the proposed facility are minimal.
- 35 I have reviewed the noise likely to be associated with the proposed care facility and concluded that:
  - a. While the mechanical plant design is still be developed it is realistic for the mechanical plant to fully comply with the TRMP noise limits. A condition of consent has been proposed requiring a review of the plant in due course to ensure that the cumulative noise levels from the site comply with the TRMP noise limits.
  - b. Based on the location of the carpark relative to the neighbouring dwellings, even for worst-case traffic volumes noise levels will be less than 40 dB LAeq at all neighbouring properties, apart from at 376 Hill Street (which has provided Affected Persons Approval) boundary.
  - c. Service vehicles will enter and exit the site via Fairrose Drive, and only between 0900 and 1700 hours Monday to Saturday. Resulting noise levels of less than 55 dB LAeq are expected from this activity at all neighbouring properties, apart from 376 Hill Street.



- d. The use of the deck for dining activities will be limited to the TRMP 'daytime' hours, and I expect these activities can fully comply with the TRMP daytime noise limits.
- 36 A Noise Management Plan should be developed for the facility which outlines processes and expectations to ensure appropriate consideration of neighbours. Specific issues which should be covered include the use of any outdoor areas used for entertainment and group activities, management of the dementia unit and noise generated on elevated balconies.
- 37 Construction noise is expected to be able to be managed in line with best practice to ensure compliance with the limit outlined in NZS 6803.
- 38 Based on the above I expect the noise effects of the proposal to be minimal.



Dr Jeremy Trevathan  
*Ph.D. B.E.(Hons.) Assoc. NZPI®*  
Principal Acoustic Engineer  
**Acoustic Engineering Services**