

Before the Gisborne District Council

In the matter of the Resource Management Act 1991

And

In the matter of An application by NZHG Gisborne Limited to construct twelve dwellings and create a twelve-lot fee simple subdivision of the property at 99A Stanley Road, Gisborne and pursuant to Regulation 10 of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

**STATEMENT OF EVIDENCE OF JON FARREN
FOR NZHG GISBORNE LIMITED**

Dated 6 September 2024

INTRODUCTION

- 1 My name is Jon Farren.

- 2 I am the Manager and Principal of the Christchurch office of Marshall Day Acoustics (**MDA**).

- 3 I hold a Bachelor of Engineering with Honours in Electroacoustics from the University of Salford in the United Kingdom. I hold full Membership of the Institute of Acoustics (UK). A requirement of membership is that I am active in the field of professional acoustics and satisfy the Institute's requirements regarding level of qualifications and experience.

- 4 I have been employed as an Acoustic Consultant for over 30 years, approximately 25 of which have been with MDA. I have considerable experience in the areas of planning regarding noise, the assessment of noise and vibration, and noise control in relation to both environmental noise and building acoustics.

- 5 Of specific relevance to this proposal, I have assessed noise effects at numerous land use activities that potentially impact adjacent residential areas.
- 6 My role in this proposal is to provide expert opinion on concerns raised by Council and submitters relating to the potential noise effects of the proposal.
- 7 In preparing my evidence, I have read:
- 7.1 The application;
 - 7.2 The Section 42A Report; and
 - 7.3 The submissions mentioning noise.

CODE OF CONDUCT

- 8 I confirm that I have read and agree to comply with the 'Expert Witnesses Code of Conduct' contained in the Environment Court of New Zealand Practice Note 2023. My evidence has been prepared in compliance with that Code in the same way as if I was giving evidence in the Environment Court. In particular, unless I state otherwise, this evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

PURPOSE AND SCOPE OF EVIDENCE

- 9 In my evidence I will:
- 9.1 Provide an overview of the application with respect to noise generation, specifically construction noise and noise from residential activity;
 - 9.2 Respond to matters raised in the Section 42A Report; and
 - 9.3 Respond to matters raised by submitters.

SUMMARY

- 10 In summary I consider there will be a negligible difference in noise effect for the proposed activity compared to a permitted baseline development.
- 11 My evidence provides a noise assessment for the proposed activity. My worst-case calculations shows that traffic and mechanical plant (heat pump) noise emissions from the site will effectively comply with the most stringent District Plan permitted activity noise limits of 40 and 45 dB L_{A10} that apply at night.
- 12 In my opinion human activity noise is a reasonable expectation in a residential area. Whilst I understand the perception that increased noise will occur from residential “intensification”, my analysis is this is unlikely to occur. In my assessment, human activity noise effects will not be significantly different from what could occur in either the existing situation or for a permitted baseline development.

NOISE ASSESSMENT

- 13 Whilst a noise assessment was not submitted with the Application, this evidence addresses the noise concerns raised by neighbours and the reporting officer.
- 14 As I describe below, the proposed dwellings on site represent a positive noise control measure as they will act as an effective noise barrier. Not only will they serve to reduce noise transmission across the site but will also reduce traffic noise from the adjoining streets.
- 15 I will address noise from all potential noise generating aspects of the proposal including on-site vehicle movements, noise from mechanical plant (e.g. external heat pump units) and human activity.

Permitted Activity Noise Limits

- 16 Rule C11.2.15.1 of the TRMP provides the applicable noise limits from on-site activities within the Residential Zone. These limits apply at or within the boundary of any site zoned residential. The noise limits are summarised in Table 1.

- 17 With the exception of 507A Childers Road, all the adjacent residential sites front either Stanley Road or Childers Road. Therefore, the most stringent noise limit for most adjacent sites is 45 dB L_{A10} and this applies at night between 2200 and 0700 hrs, and from 1800hrs on Sundays and public holidays. For 507A Childers Road, the most stringent noise limit is 40 dB L_{A10} between 2200 and 0700 hours.

Table 1: General residential activity noise limits

| Site orientation | Time Period | Monday to Saturday | | Sundays and Public Holidays | |
|---|-----------------------|--------------------|------------|-----------------------------|------------|
| | | L_{A10} | L_{Amax} | L_{A10} | L_{Amax} |
| Front sites adjacent to Stanley Road and Childers Roads (principal roads) | Day 07:00 – 18:00 | 55 dB | | 50 dB | |
| | Evening 18:00 – 22:00 | 50 dB | | 45 dB | |
| | Night 22:00 – 07:00 | 45 dB | | 45 dB | |
| | | & | | & | |
| | | 70 dB | | 70 dB | |
| All other sites | Day 07:00 – 18:00 | 55 dB | | 45 dB | |
| | Evening 18:00 – 22:00 | 45 dB | | 45 dB | |
| | Night 22:00 – 07:00 | 40 dB | | 40 dB | |
| | | & | | & | |
| | | 65 dB | | 65 dB | |

- 18 Rule C11.2.15.2 of the TRMP provides the applicable construction noise limits within the Residential Zone. These limits apply at or within the boundary of any site zoned residential. The noise limits are summarised in Table 2. The noise limits are broadly consistent with those in New Zealand Standard NZS 6803: 1999 *Acoustics - Construction Noise* which represents current best practice.

Table 2: Construction noise limits

| Days | Time Period | Construction noise limits | | |
|--------------------|---------------|----------------------------------|-----------|------------|
| | | L_{A95} | L_{A10} | L_{Amax} |
| Monday to Saturday | 07:00 – 18:00 | 60 dB | 75 dB | 90 dB |
| All other times | | Refer to noise limits in Table 1 | | |

Site considerations

- 19 I understand that some existing fences around the site shall be retained, and new fences provided where appropriate. To provide effective noise reduction, fences should be 1.8 m high and have close boarded palings unless an alternative is agreed through discussions with the adjoining property owner.

Noise from on-site vehicle movements

- 20 I consider it unlikely that vehicle movements associated with the proposed dwellings will occur at the same time. Nonetheless, I have considered a worst-case scenario whereby one vehicle from each property enters or exits the site within a 15 minute time period during night-time. My calculations are based on a vehicle sound level of 86 dB L_{WA} (L_{A10} basis).
- 21 My calculations conclude that worst-case on-site traffic movements would comply with the night-time noise limits. I have identified a technical non-compliance with the night-time noise limit of 45 dB L_{A10} at 99 Stanley Road for the eastern-most section of the boundary where the fence height reduces to 1.2 metres – the noise level will be 48 dB L_{A10} at this location.
- 22 To clarify, this scenario—where all vehicles leave the site simultaneously at night—is not expected to occur in practice. I present it here to demonstrate that even the proposal's maximum potential noise impact would remain within acceptable limits. The predicted non-compliance does not result in an adverse effect, as the dwelling is located further to the west on the site, where the boundary noise level is 42 dB L_{A10} , which complies with the 45 dB L_{A10} noise limit. This same level of activity during the day will comfortably comply with the applicable daytime limits. Vehicle noise effects will be acceptable in the context of the permitted activity standards for the zone.
- 23 Table 3 summarises my calculated vehicle movement noise levels at each neighbouring residential property compared to the 40 and 45 dB L_{A10} night-time limit. Noise levels will be lower at sites beyond those listed.

Table 3: Calculated vehicle movements noise levels

| Receiving property | Calculated noise level L_{A10} | Most stringent noise limit L_{A10} |
|--------------------|-------------------------------------|---|
| 495 Childers Road | 30 | 45 |
| 497 Childers Road | 30 | 45 |
| 499 Childers Road | < 30 | 45 |
| 501 Childers Road | < 30 | 45 |
| 507 Childers Road | 39 | 45 |
| 507A Childers Road | 36 | 40 |
| 97 Stanley Road | 36 | 45 |
| 99 Stanley Road | 42 (48*) | 45 |

* Indicates the boundary noise level adjacent to the 1.2 metre high section of fence. Refer to Paragraph 21

Noise from external mechanical plant

- 24 While not indicated on the current drawings, I have assumed that each dwelling will have one outdoor unit associated with a heat pump system and that they will be located within the services area of each Lot. The typical sound power level for a residential outdoor unit is 70 dB L_{WA} (L_{A10} basis).
- 25 Conservatively, I have assumed that all heat pumps will be operating at the same time and during the night when the lowest noise limits of 40 and 45 dB L_{A10} applies. I consider this to be an unlikely situation in practice. In any event, my calculations in Table 4 at the closest residential dwellings show that mechanical plant noise will comply with the most stringent night-time noise limit. Noise levels will be lower at sites beyond those listed.

Table 4: Calculated external mechanical plant noise levels

| Receiving property | Calculated noise level L_{A10} | Most stringent noise limit L_{A10} |
|--------------------|-------------------------------------|---|
| 495 Childers Road | 37 | 45 |
| 497 Childers Road | 41 | 45 |
| 499 Childers Road | 40 | 45 |
| 501 Childers Road | 39 | 45 |
| 507 Childers Road | 31 | 45 |
| 507A Childers Road | 37 | 40 |
| 97 Stanley Road | 37 | 45 |
| 99 Stanley Road | 33 | 45 |

Noise from human activity

- 26 Comments from the reporting officer and submitters suggest that there could be greater noise generation from human activity associated with the increased number of units compared to the existing situation or permitted baseline.
- 27 In my opinion, it is reasonable to expect noise from human activity in a residential area which can include a wide range of activities from lawn mowing to barbecues. These activities can occur as-of-right on both the existing site and adjacent residential properties. I consider that human activity associated with the proposed development would not result in a significant change in noise at surrounding sites compared with the permitted baseline.
- 28 To illustrate, I will discuss the potential human activity noise that could occur when future residents use outside living areas such as the patio or lawn. Outdoor dining is a common activity in a residential zone and can be reasonably anticipated in my opinion. I note that several of the existing neighbouring dwellings adjacent to the proposed site have outdoor areas that could be used for this purpose.
- 29 The smaller outdoor areas associated with the proposed development will likely result in low numbers of people congregating outdoors. In my

opinion, this is more likely to be used by a family or a small group. Arguably, the existing larger outdoor areas on the neighbouring sites could generate more noise, for example, during a summer barbeque as there is more space for people to be outside.

- 30 If outdoor dining were to occur, the general layout and height of the proposed units means that noise will be mitigated across the site much more readily compared to the existing single dwelling which is located on a larger section. For example, noise from human activity at the proposed patios will be substantially reduced to surrounding properties as a result of the acoustical screening provided by the intervening units and fences. In other words, neighbouring properties to the site may only experience outdoor noise from one or two adjacent units. In my opinion, this does not present any significant risk of “intensification” of noise exposure to adjacent sites and is not dissimilar to the situation that exists at the smaller residential lots at 485, 497, 499 and 501 Childers Road.
- 31 Furthermore, I understand the permitted baseline for this site would allow for up to four primary and three minor dwellings - my Appendix A shows an indicative layout. In comparison to the current proposal, there is a negligible difference in the potential noise effects compared to the permitted baseline layout - noise received would be indistinguishable at neighbouring properties.

Noise from construction

- 32 The proposed dwellings will use conventional construction techniques and will generate similar noise levels when compared to those associated with the construction of another dwelling on the site or what could be anticipated by the permitted baseline.
- 33 I expect that construction noise will comply with the applicable noise limits set out in Paragraph 18. I understand the applicant is proposing a Construction Management Plan and that construction activities will be carried out in accordance with New Zealand Standard NZS 6803: 1999 *Acoustics - Construction Noise*. I agree this is an appropriate approach to minimise construction noise effects as far as reasonably practical.

RESPONSE TO MATTERS RAISED IN THE SECTION 42A REPORT

- 34 I have reviewed the Section 42A Report issued on 30 August 2024 by Sarah Exley. I appreciate that Ms. Exley did not have the benefit of a noise assessment report when making her comments.
- 35 My paragraphs 26 to 31 address Ms Exley’s comments in her paragraphs, 83, 134, 135 and 144 regarding “intensity” of the development. In my opinion, there is unlikely to be any distinguishable difference in noise effect between the proposal and the permitted baseline.
- 36 Similarly, Ms Exley’s Paragraph 105 appears to suggest that the proposal’s reduced site sizes mean people are forced to be closer together which, in turn, may result in increased noise effects. Whilst I understand this perception, this is unlikely to occur in my opinion and unlikely to generate any significant adverse noise effects for future occupants. With reference to the analysis I have already discussed, outdoor areas that are directly adjacent are a common and anticipated feature of many residential environments, including several of the existing properties adjacent to the proposed site. 495 to 501 Childers Road is a relevant example.
- 37 I am unsure if Ms Exley’s paragraphs 122 and 138 are suggesting that planting assists with acoustical privacy? In any event, I confirm that the proposed plantings will not offer any appreciable acoustical privacy. Plantings need to be tall and many tens of metres deep to provide even small noise level reductions.
- 38 My evidence confirms Ms Exley’s expectation in her paragraphs 142 and 200 that operational and construction noise can comply with the permitted activity noise limits for the zone.

RESPONSE TO MATTERS RAISED IN SUBMISSIONS

- 39 I have read the submissions received from neighbours in response to this application. Only one submitter specifically raised concerns about noise with regards to increased site intensity (human activity) and the extent of hard outdoor surfaces and lack of perceived absorptive features, such as lawns and trees. The other submitters, while not specifically listing noise,

were also concerned with the increased site intensity, which presumably encompassed noise-related issues as part of their overall apprehension.

40 I consider that my evidence largely responds to these concerns, but to reiterate:

40.1 Noise generated by traffic and mechanical plant is expected to comply with the applicable district plan noise limits; and

40.2 Human activity noise is unlikely to result in any greater noise effect compared to the permitted baseline.

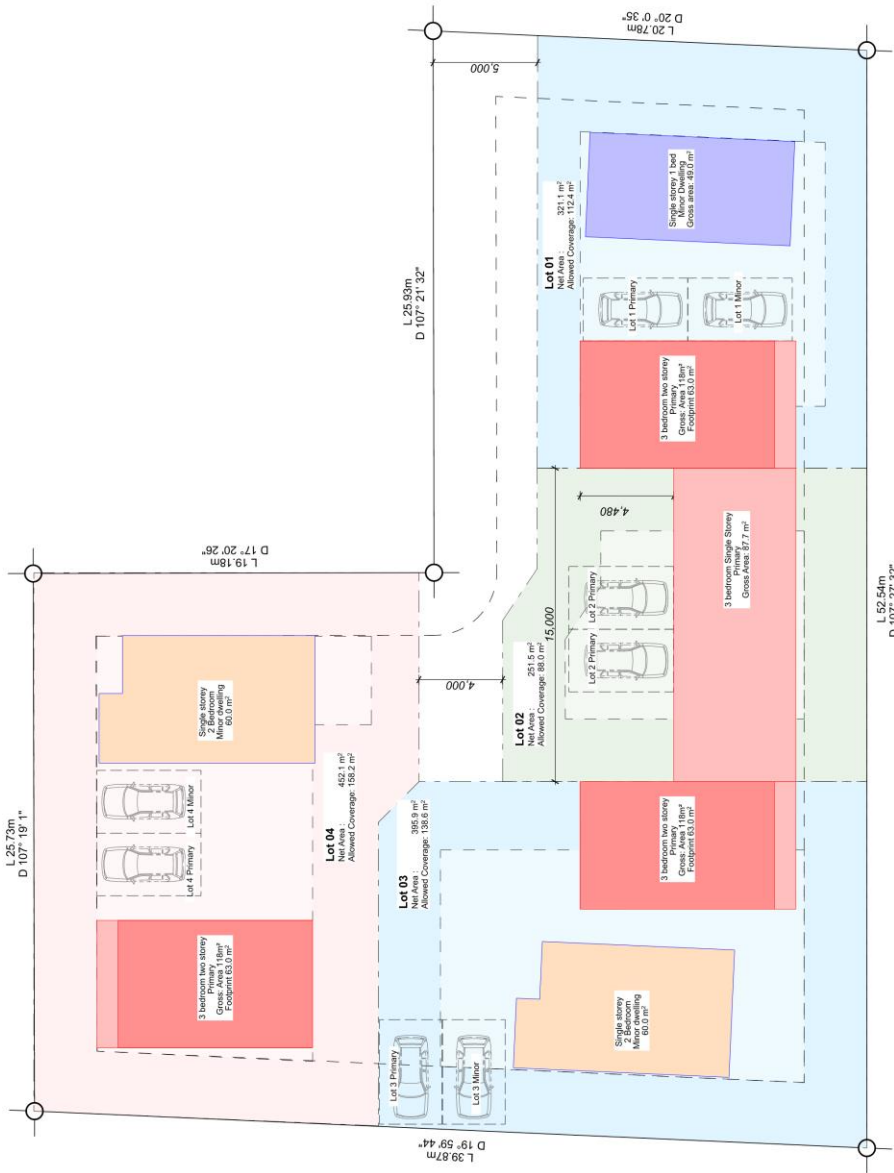
RECOMMENDATIONS

41 Based on my assessment, I recommend that existing fencing is retained, or new fencing installed, to maximise acoustic privacy. To be effective, perimeter fencing should be solid and free of any gaps or cracks such as a close-boarded timber fence.



Jon Farren

APPENDIX A- Permitted baseline



| Rev. | Revision | Date |
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Permitted Baseline

Resource Consent
 NZHG Stanley Road
 99a Stanley Road
 Revision:
 Scale at A3:
 Date issued: 6/08/2024
 e: sol@atkinsonharwood.co.nz
 p: 027 465 9236