

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER OF a submission by KiwiRail Holdings Ltd ("**KiwiRail**")
(submitter 188) on Proposed Plan Change 56 to the
Operative Hutt City District Plan ("**PC56**")

**MEMORANDUM OF COUNSEL ON BEHALF OF KIWIRAIL HOLDINGS LIMITED
PROVIDING FURTHER INFORMATION FOLLOWING HEARING**

4 MAY 2023

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MAY IT PLEASE THE HEARING PANEL:

1. This memorandum of counsel responds to further information requested by the Panel at the hearing of KiwiRail's submission on 26 April 2023 as recorded in notes circulated by the Hearing Administrator on 1 May 2023 as follows:
 - (a) Detailed description of the landscape of the rail corridor in Lower Hutt, including distances between property boundaries and rail lines, influence of topography, approximate frontage to the rail corridor of properties in the HDZ and MDZ.
 - (b) Information on where other areas in NZ have landed regarding rail setbacks, noise and vibration rules / standards and controls.
 - (c) Information regarding the status of Featherston line which has recently come back on-line – in order for the Panel to ascertain the potential for increase patronage and therefore potential for higher usage of the rail corridor.
 - (d) Consent order agreed by KiwiRail and other parties on the Whangārei District Plan, also consent orders for the Marlborough District Plan and the Christchurch District Plan decisions. These are attached as **Appendix A** to this memorandum. Note that consent orders have only been agreed for setbacks in Marlborough. The noise and vibration provisions are still the subject of ongoing mediation between the parties.
 - (e) Information regarding night time freight train details including – length, weight, duration, diesel engine/s, type of locomotive, frequency.
 - (f) Information regarding whether decks and eaves can intrude into setback requirements and what effect that may have. This information is contained within a supplementary statement of evidence of Catherine Heppelthwaite dated 4 May 2023 attached as **Appendix B** to this memorandum.
 - (g) The policy framework basis for the proposed building setback changes. This information is contained within a supplementary statement of evidence Catherine Heppelthwaite dated 4 May 2023 attached as **Appendix B** to this memorandum.
 - (h) A GIS overlay for proposed vibration controls. This contained within **Appendix C** to this memorandum.
 - (i) Information regarding the percentage construction cost increases involved with complying with noise and vibration requirements, so the Panel can better understand the implications of KiwiRail's request for the rail corridor to be a qualifying matter.

2. KiwiRail's response to the Panel's request is set out below or in the relevant appendices.

Landscape of the rail corridor in Lower Hutt

3. Mr Brown has reviewed the rail frontage along the rail corridor in Lower Hutt and has provided the following data:

	HDZ	MDZ	SMZ (suburban mixed)
Melling Line	430m	0m	260m
Gracefield Line	1,360m	500m	0m
Wairarapa Line	6,085m	565m	0m

4. These numbers exclude land that does not directly adjoin the corridor, such as land that is separated from the rail corridor by a reserve or road.

The approximate range of distances between rail tracks and adjacent residential property boundaries within Hutt City

5. Mr Brown has also taken a sample of distances between the rail tracks¹ and adjacent residential property boundaries along the rail corridor and has provided the following data:
- (a) In Melling, the distance from the rail line to the nearest property boundary is a consistent 10 to 12 metres.
 - (b) On the Gracefield line, distance from the rail line to the nearest property boundary is at 12 metres, but narrows quickly to 3 - 5 metres distance from the rail line to the nearest property boundary which is where it remains for 80% of the line.
 - (c) On the Wairarapa Line, the distance from the rail line to the nearest property boundary is about 15 metres, with shortest distance being 4.5 metres distance from the rail line to the nearest property boundary. The average distance from the rail line to the nearest property boundary is around 7 – 8 metres.

Setbacks to the rail corridor provided for in other recently finalised District Plans

6. The below table sets out other District Plan provisions that provide for setbacks from the rail corridor.

¹ These distances are measured from rail centreline.

7. A number of these setback provisions were agreed by consent orders and in a different context from the MDRS provisions, which enable much higher buildings as a permitted activity.
8. As set out in the evidence of Mr Brown, setbacks are particularly important in areas where buildings are taller, as buildings become more difficult to maintain and require additional equipment like scaffolding for maintenance, which often enter the railway corridor.²
9. There are also a range of other factors which differ depending on location, including whether or not the line is electrified. As set out in Mr Brown's evidence, where rail lines are electrified, the severity of the consequence increases the importance of the setback.³

Plan	Distance
Auckland Unitary Plan – Drury Centre (I450.6.15) and Waihohoe (I452.6.11) Precincts	5 metres
Christchurch District Plan - Rule 14.4.2.7	4 metres
Proposed Second Generation Dunedin City District Plan – Rule 6.7.4	4 metres
Marlborough Environment Plan – Rule 5.2.1.20	3 metres
Proposed New Plymouth District Plan – TRAN R7	5 metres (included by Council in notified plan; hearings completed, decision expected imminently)
Whangārei District Plan Operative in Part – TRA R10	Minimum of 2 metres – 2.5 metres "mapped" setback accepted through the appeals process depending on zone or existing buffers (eg cycle path alongside rail corridor)

Vibration provisions

10. Vibration provisions have been included in other District Plans around the country. For example:

Plan	Distance
Auckland Unitary Plan – Drury Centre (I450.10.6)	Rail Vibration Alert Notation

² Evidence of Michael Brown dated 29 March 2023 at [5.13].

³ Evidence of Michael Brown dated 29 March 2023 at [5.4].

Plan	Distance
Drury Centre: Precinct plan 6 – Rail Vibration) and Waihoehoe (1452.10.4 Waihoehoe: Precinct Plan 4 - Rail Vibration Plan) Precincts	
Hamilton ODP – 25.8.3.12	20 metres
Invercargill – ODP – NOISE – R13	40 metres
Porirua PDP – NOISE-S4	New noise-sensitive activities and places of worship near a State Highway or North Island Main Trunk railway line (included by Council in notified plan, hearings completed)
Rangitikei – ODP – B1.7-9	40 metres
Selwyn PDP – NOISE-R3	60 metres (included by Council in notified plan; hearings completed)
Whakatane – PDP – 11.2.14	60 metres
Whangārei District Plan Operative in Part - NAV.6.5A	Vibration overlay layer

Noise provisions

11. Noise provisions included in other District Plans are set out below. Dr Chiles' evidence provides the technical basis for the 100 metres sought and explains that rail noise exposures above 55 dB $L_{Aeq(1h)}$ (and 50 dB $L_{Aeq(1h)}$) (set by Standard 6) occur for a significant distance beyond 40 metres from the rail corridor.⁴
12. As such, his opinion is that this represents a contradiction in the operative Standard 6, that it includes indoor noise criteria but it does not apply to substantial areas where the criteria are likely to be exceeded. His evidence is that the application of Standard 6 to all areas within 100 metres of the rail corridor would at least cover most areas likely to be exposed above 55 dB $L_{Aeq(1h)}$. Dr Chiles' evidence is that this is necessary to manage potential adverse health effects on people in new and altered buildings.⁵
13. It is also important to keep in mind that the rail lines in Hutt City are some of the busiest in the country. In the recent Whangārei District Plan consent order, a modelled contour of up to 100 metres was accepted by the parties

⁴ Statement of evidence of Dr Stephen Chiles dated 29 March 2023 at [6.4] and [6.5].

⁵ Statement of evidence of Dr Stephen Chiles dated 29 March 2023 at [6.4] and [6.5].

in relation to the "busy" rail lines in Whangārei, while a rail noise alert layer was accepted as appropriate for the "quiet" lines.

Plan	Distance
Auckland Unitary Plan - Drury Centre (I450.6.9) Waihoehoe Precincts (I452.6.11)	60 metres
Christchurch District Plan - Rule 6.1.7.2.1	80 metres
Christchurch Plan Change 5E – Rule 6.1.7.2.1	100 metres (included by Council in notified plan; hearings completed)
Proposed Second Generation Dunedin City District Plan – Rule 9.3.1.4(k) and Rule 15.5.1.7	70 metres
Hamilton ODP – Rule 25.8.3.10(d)	40 metres
Invercargill DP - NOISE-R12	40 metres
New Plymouth PDP - NOISE-S3	60 metres (included by Council in notified plan; hearings completed, decision expected imminently)
Selwyn ODP – Rule C4 LZ 4.9.45	80 metres
Whakatane DP – Rule 11.2.11	100 metres
Whangārei District Plan Operative in Part – NAV 6.5.3	Modelled noise contour prepared for entire district, with cap at 100m

Noise sensitive activities

14. KiwiRail is seeking the following amendments to the definition of noise sensitive activity to ensure that it sufficiently captures all vulnerable uses.

Noise Sensitive Activity means any lawfully established:

- (a) residential activity;
- (b) visitor accommodation or Retirement Village, boarding houses, residential Visitor Accommodation and Papakāinga Housing or other premises where residential accommodation for five or more travellers is offered at a daily tariff or other specified time;
- or**
- (c) childcare facility;
- (d) educational activity;
- (e) Health Care Services, including hospitals;
- (f) congregation within any place of worship; and
- (g) activity at a Marae.

15. Definitions of noise sensitive activities included in other District Plan provisions are set out in the table below.

Plan	Distance
Auckland Unitary Plan – Chapter J Definitions	Activities sensitive to noise Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centres, lecture theatres in tertiary education facilities, classrooms in education facilities and healthcare facilities with an overnight stay facility.
Christchurch District Plan – Chapter 2 Definitions	Sensitive activities means: (a) residential activities, unless specified below; (b) care facilities; (c) education activities and preschools, unless specified below; (d) guest visitor accommodation, unless specified below; (e) health care facilities which include accommodation for overnight care; (f) hospitals; and (g) custodial and/or supervised living accommodation where the residents are detained on the site; but excludes in relation to airport noise: (h) any residential activities, in conjunction with rural activities that comply with the rules in the relevant district plans as at 23 August 2008; (i) flight training or other trade and industry training activities located on land zoned or legally used for commercial activities or industrial activities, including the Specific Purpose (Airport) Zone; and (j) commercial film or video production activities; and (k) guest visitor accommodation which is designed, constructed and operated to a standard to mitigate the effects of aircraft noise on occupants.
Proposed Second Generation Dunedin City District Plan – 1.4.1 Definitions	Noise Sensitive Activities Activities where people are more likely to be sensitive to a high level of noise because they are sleeping, studying, seeking medical treatment, or engaged in religious activity. These consist of:

Plan	Distance
	residential activities hospital campus schools early childhood education registered health practitioners visitor accommodation; and the following community and leisure activities: libraries, marae-related activities, activities that involve the provision of care for babies and pre-school children and places of worship.
Hamilton ODP – Volume 2, Appendix 1, 1.1	Noise sensitive activities Means residential activities (including residential accommodation in buildings which predominantly have other uses such as commercial or industrial premises), marae, spaces within buildings used for overnight patient medical care, and teaching areas and sleeping rooms in buildings used as educational facilities. For the purpose of this definition educational facilities includes tertiary institutions and schools, and premises licensed under the Education (Early Childhood Services) Regulations, and playgrounds which are part of such facilities and located within 20m of buildings used for teaching purposes.
New Plymouth PDP – Part 1 Interpretation	Sensitive activities means the use of land and/or buildings for: living activities; educational facilities; community facilities; major healthcare activities; and/or visitor accommodation.
Selwyn PDP – Part 1 Interpretation	Noise sensitive activity Residential activity Educational facility Visitor accommodation Hospital or health care facility
Whangārei District Plan Operative in Part – Part 1 Definitions	Noise Sensitive Activities means those activities that involve habitation of people within which concentration (of thoughts) is required and includes residential activities, marae, hospitals and education facilities, excluding Airport staff and aviation training facilities or aero clubs (other than airport staff training facilities).

Information regarding status of Featherston line

16. Mr Brown has advised that the article referred to by the Commissioner referred to works undertaken around Featherston rail station that required daytime passengers to shuttle (via road) to other stations to catch the Metlink rail service. The train service was still running on the rail line, however Featherston is not a daytime stop for approximately 2 years while these works occur. Mr Brown understands that the peak hour services were still stopping at Featherston (for the Wellington commuters).

Night time freight train details

17. Mr Brown has advised that there is currently one return weekday service carrying logs at present. This travels north mid-afternoon empty (approximately 750m long and 700 tonnes) and back to Wellington leaving Masterton at 9pm arriving in Wellington at midnight (again approximately 750m long but at max loading of 2100 tonnes). This train travels through Hutt City at approximately 11.40pm.
18. It is important to note that this can change with very little notice depending on the freight market at the time in the Wairarapa. At present logs are the dominant product on the line, however container and box freight services have been frequent customers of the railway line and are likely to do so again in the future. Particularly as requirements for lower carbon freight movement gain more importance to both freight forwarders and consumers alike.

Construction cost increases involved with complying with noise and vibration requirements

19. The further information request from the Panel framed the reason behind this request as being so the Panel "can better understand the implications of KiwiRail's request for [the] rail corridor to be a qualifying matter".
20. KiwiRail considers that the extension of the noise and vibration controls proposed by KiwiRail, and the amendment to the definition of noise sensitive activities are necessary to ensure the safe or efficient operation of the railway network, and as such reflect the intention of the IPI process to provide for such matters. However, rather than being directly applied as a qualifying matter (given they do not make the MDRS less enabling of development) KiwiRail considers that the controls sought are best categorised as related provisions that support or are consequential to the MDRS and policy 3 of the National Policy Statement on Urban Development under s80E of the Resource Management Act 1991.⁶ The

⁶ The implementation of the MDRS and policies 3 and 4 of the NPS-UD will result in more people living near the rail corridor in Hutt City. As a consequence, provisions to mitigate the effects of intensification (such as the controls sought by KiwiRail) are necessary and appropriate to support the implementation of the MDRS and NPS-UD, as well as being consequential to the implementation of greater intensification.

requirement to undertake an evaluation report under s77J does not apply to related provisions included under s80E. The Panel is not therefore required to undertake an assessment of the impact of the provisions on "limiting development capacity, building height or density". In any case, KiwiRail says the same level of development capacity, height and density can be achieved under the implementation of the controls (albeit at potentially a different cost).

21. The Panel is still required to consider the provisions as against the s32 evaluation report requirements for new planning provisions. These require evaluation of the effectiveness and efficiency of the provisions and the relative costs and benefits they would provide.
22. Ms Heppelthwaite's primary statement of evidence dated 29 March 2023 included a section 32AA evaluation of both setback (refer Attachment B) and noise and vibration controls (refer Attachment C).
23. Regardless of KiwiRail's position that the s77J test does not apply to the noise and vibration controls sought, KiwiRail provides the following comments to respond to the Panel's request regarding construction costs, to the extent these may be helpful for its s32 assessment:
 - (a) Construction costs potentially involve installing upgraded glazing, mechanical ventilation, and other mitigation features.
 - (b) It is difficult to provide reliable generalised estimates of these because they are context specific. For example, the nature and cost of mitigation works will differ with distance from the rail network and the extent of mitigation required can be dependent on localised factors such as topography and on whether there are buildings or other structures providing a screening effect in between the building and the rail corridor.
 - (c) A developer may also choose to take a practical approach to locate only ancillary spaces not subject to the controls such as garages and bathrooms on the side of the building facing the railway. This may reduce or completely avoid the need for mitigation measures.
 - (d) The true additional cost of complying with these provisions will also depend on the extent to which such measures would have been included in the building design anyway (either due to building code requirements and / or because the developer voluntarily chose to adopt them).
 - (e) A recent estimate of likely costs was provided by AES for Christchurch City Council,⁷ which suggested that the cost of complying with noise controls (note that this was in the context of

⁷ Acoustic Engineering Services - Cost of traffic noise mitigation measures – Memorandum to Waka Kotahi dated 12 June 2020.

road noise) may be about 1 to 2% of construction costs. Thus, the expense for a dwelling that costs \$300,000 to build may be \$3,000 to \$4,000, while the cost for a \$500,000 dwelling would be around \$5,000 to \$10,000. Again, it should be emphasised that the true cost of complying with the provisions depends fundamentally on the extent to which such design features or building elements would have been provided anyway.

- (f) It is also important to acknowledge that these costs will be offset by potential energy savings over time. They are also likely to be capitalised in the value of the property, given the increased amenity they provide. All other things being equal, houses with double glazing and / or heat pumps are generally worth more than those without. Thus, while this option imposes upfront costs on homeowners, these will not be lost and instead could be better described as investments in the quality and future marketability of properties.
- (g) With respect to vibration costs, Dr Chiles has advised there is little data available for NZ case studies (while he notes that these measures are commonly incorporated in builds close to railways overseas). Vibration mitigation costs are difficult to assess as there is much greater variability, the mitigation required will be specific to location and proposed development. Because treatment costs are generally higher than that for noise insulation, in Dr Chiles' experience developers generally have chosen to avoid vibration effects through site / building layout design.

24. Section 32(2)(b) provides that the quantification of costs and benefits are only required "if practicable". The above comments indicate the impracticability of estimating an exact "cost" of the implementation of the controls. KiwiRail considers the information set out in Ms Hepplethwaite's evidence and the above further commentary is sufficient to meet the assessment requirements under s 32.

Conclusion

25. We trust this responds to the Panel's requests for information. KiwiRail would be very happy to provide any further information if that would assist.

K L Gunnell

Counsel for KiwiRail Holdings Limited

Appendices:

- **Appendix A** - Consent order agreed by KiwiRail and other parties on the Whangārei District Plan, also consent orders for the Marlborough District Plan and the Christchurch District Plan decisions.
- **Appendix B** - Supplementary statement of evidence Catherine Heppelthwaite dated 4 May 2023.
- **Appendix C** - GIS overlay for proposed vibration controls.