

Before the Hearings Commissioners

Under the Resource Management Act 1991 (the **RMA**)

In the matter of a submission by KiwiRail Holdings Limited (submitter
DPC56/188 and DPC56/F20) on Plan Change 56

and in the matter of City of Lower Hutt District Plan

**Primary statement of evidence of Catherine Lynda Heppelthwaite for
KiwiRail Holdings Limited regarding Plan Change 56 on the City of
Lower Hutt District Plan**

Dated 29 March 2023

1 INTRODUCTION, QUALIFICATIONS AND EXPERIENCE

- 1.0 My full name is Catherine Lynda Heppelthwaite. I am a principal planner for Eclipse Group Limited. I am presenting this planning evidence on behalf of KiwiRail Holdings Limited (**KiwiRail**).
- 1.1 I hold a Bachelor Degree in Resource Studies obtained from Lincoln University in 1993. I am a full member of the New Zealand Planning Institute, a member of the Resource Management Law Association and the Acoustical Society of New Zealand. I have more than 25 years' experience within the planning and resource management field which has included work for local authorities, central government agencies, private companies and private individuals. Currently, I am practicing as an independent consultant planner and have done so for the past 18 years.
- 1.2 I have extensive experience with preparing submissions and assessing district plans provisions in relation to noise and vibration, most recently in relation to the New Plymouth, Porirua and Whangarei District Plans where I assisted Waka Kotahi by providing specialist planning evidence on similar issues (noise and vibration).

2 CODE OF CONDUCT

- 2.0 I have read the Environment Court's Code of Conduct for Expert Witnesses (2023) and I agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my areas of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

3 SCOPE OF EVIDENCE

- 3.0 My evidence will address the following:
- a. The statutory and higher order planning framework; and
 - b. KiwiRail submissions and further submissions in relation to building setbacks along with noise and vibration submissions;
 - c. Council's s42A recommendations; and
 - d. Further amendments required.

3.1 In preparing my evidence, I have considered the following Section 42A Hearings Report¹ prepared conjointly by Stephen Davis, Hamish Wesney, Erica Wheatley and Bronte Linkhorn (**the s42A Authors**).

4 THE STATUTORY AND HIGHER ORDER PLANNING FRAMEWORK

4.0 In preparing this evidence I have specifically considered the following:

- a. The purpose and principles of the RMA (sections 5-8);
- b. Provisions of the RMA relevant to plan-making and consenting;
- c. National Policy Statement on Urban Development 2020;
- d. Wellington Regional Policy Statement (**RPS**) with specific reference to:
 - i. Chapter 3.3 Introductory Text:
 - Recognising rail as a significant physical resource²;
 - *The efficient use and development of such infrastructure can be adversely affected by development. For example, **land development can encroach on infrastructure or interfere with its efficient use**. Infrastructure can also have an adverse effect on the surrounding environment. For example, the operation or use of **infrastructure can create noise which may adversely impact surrounding communities**. These effects need to be balanced to determine what is appropriate for the individual circumstances³.*[bold added]
 - ii. Objective 10: *The social, economic, cultural and environmental, benefits of regionally significant infrastructure are recognised and protected⁴.*
 - iii. Policy 8: *Protecting regionally significant infrastructure – regional and district plans⁵. District and regional plans **shall include policies and rules that protect regionally significant infrastructure from***

¹ Dated 7 March 2023.

² RPS Introductory text, 3.3 Energy, infrastructure and waste, page 44(b) *Infrastructure*.

³ RPS Introductory text, 3.3 Energy, infrastructure and waste, page 44(b) *Infrastructure*.

⁴ RPS Table 3: Energy, infrastructure and waste objectives and titles of policies and methods to achieve the objectives

⁵ RPS Table 3: Energy, infrastructure and waste objectives and titles of policies and methods to achieve the objectives

*incompatible new subdivision, use and development occurring under, over, or adjacent to the infrastructure*⁶. [bold added]

- iv. Policy 8 Explanation: *Incompatible subdivisions, land uses or activities are those which **adversely affect the efficient operation of infrastructure**, its ability to give full effect to any consent or other authorisation, restrict its ability to be maintained, or restrict the ability to upgrade where the effects of the upgrade are the same or similar in character, intensity, and scale. **It may also include new land uses that are sensitive to activities associated with infrastructure.***

*Protecting regionally significant infrastructure **does not mean that all land uses or activities under, over, or adjacent are prevented.** The Wellington Regional Council and city and district councils will need to ensure that **activities provided for in a district or regional plan are compatible** with the efficient operation, maintenance, and upgrading (where effects are the same or similar in character, intensity, and scale) of the infrastructure and any effects that may be associated with that infrastructure. Competing considerations need to be weighed on a case by case basis to determine what is appropriate in the circumstances*⁷. [bold added]

- v. Method 1 (for Policy 8) identifies District plans as an implementation method⁸.

- 4.1 Council has described the relevant statutory documents in Appendix 2 of the *Section 32 Evaluation Report*⁹, with which I generally agree and will not repeat here.
- 4.2 The Emissions Reduction Plan¹⁰ is a matter to be had regard to by Council; of particular relevance within the Emissions Reduction Plan (for rail) is *Action 10.3.1: Support the decarbonisation of freight* which includes as a key initiative:

⁶ RPS Page 96.

⁷ RPS Page 96.

⁸ Table 3: Energy, infrastructure and waste objectives and titles of policies and methods to achieve the objectives

⁹ Volume 2 of 2 Section 32 Evaluation and Attachments prepared by Hutt City.

¹⁰ Section 3.2.3

- *Continue to implement the New Zealand Rail Plan and support coastal shipping.*

4.3 For completeness, the New Zealand Rail Plan (NZRP) lists as strategic investment priorities¹¹ :

- *Investing in the national rail network to restore rail freight and provide a platform for future investments for growth; and*
- *Investing in metropolitan rail to support growth and productivity in our largest cities.*

4.4 While the Emissions Reduction Plan is *to be had regard to*, its support for the NZRP (among other things) illustrates a strategic forward plan to generally improve and increase train services over time.

5 KIWIRAIL SUBMISSIONS AND FURTHER SUBMISSIONS

5.0 In summary, KiwiRail's primary submission seeks:

- a. that rail be identified as a qualifying matter¹² pursuant to s77I(e) and s77O(e) of the RMA;
- b. a 5m setback being provided for buildings and structures in
 - i. the Medium Residential Activity Area (**MRAA**)¹³,
 - ii. High Density Residential Activity Area (**HDRAA**)¹⁴,
 - iii. Suburban Mixed Use Activity Area (**SMUAA**)¹⁵ for sites adjoining the rail corridor and a new matter of discretion for the same¹⁶; and
- c. a 5m setback be required for buildings and structures in General Business Area (**GBAA**)¹⁷ for sites adjoining the rail corridor; non-compliance with the 5m setback in the GBAA be assessed as a restricted discretionary activity and a new matter of discretion for the same¹⁸;

¹¹ The New Zealand Rail Plan, Part B, pages 25 and 38 for key details.

¹² Primary submission paragraph 3, not numbered in Council summary.

¹³ Submission 188.1.

¹⁴ Submission 188.3 and 188.5.

¹⁵ Submission 188.6

¹⁶ Submission 188.2, 188.4 and 188.7.

¹⁷ Submission 188.8 and 188.9.

¹⁸ Submission 188.10.

- d. amendments to the acoustic standards so they apply to noise sensitive activities within 60m (vibration) and 100m (noise) of the rail corridor boundary¹⁹; and
- e. amendments to the definition of Noise Sensitive Activity to ensure that all relevant sensitive land uses are covered by the definition²⁰.

5.1 KiwiRail has also made a number of further submissions which generally support its primary submissions and a range of submissions by Transpower²¹ regarding qualifying matters.

6 SECTION 42A ASSESSMENT

6.0 The 42A Authors make the following recommendations:

- a. Changes to MDRAA Rules 4F and 4G²²; SMUAA Rule 5E²³; HDRAA Rule 4G; and GBAA Rule 6A²⁴ to provide for a 5m setback with corresponding matters of discretion are not supported. The 42A Authors question whether the relief is within the scope of the plan change as proposed as the relief is not consequential on any provision proposed in the plan.²⁵ However, in discussing the merits the 42A Authors consider that any additional land should be designated to add to the width of the rail corridor²⁶, be fenced to prevent trespass or trespass managed by prosecution²⁷.
- b. Submissions requesting changes to Chapter 14 (including new and amended noise and vibration provisions respectively) are out of scope²⁸; and
- c. The request to modify the “noise sensitive activity” definition is outside the scope of the plan change²⁹.

6.1 I will address these matters (including Chapter 14 and the definition of *noise sensitive activity*). I will briefly address the comments on Qualifying Matters.

¹⁹ Submission 188.11 and 188.12.

²⁰ Submission 188.13.

²¹ FS 20.6, 20.8 and FS20.9.

²² S42A Report, paragraph 469.

²³ S42A Report, paragraphs 765 to 768.

²⁴ S42A Report, paragraphs 803 to 807.

²⁵ S42A Report, paragraph 803

²⁶ S42A Report, paragraph 469.

²⁷ S42A Report, paragraph 767.

²⁸ S42A Report, Table following paragraph 115, page 31.

²⁹ S42A Report, paragraph 212.

Legal submissions that will be submitted on behalf of KiwiRail which will establish scope for the relief sought by KiwiRail and address matters to ensure the safe and efficient operation of the rail network as a Qualifying Matter.

7 QUALIFYING MATTERS

7.0 Council, may, introduce Qualifying Matters (defined under 77I and 77O) to be less enabling than that required by the MDRS or Policy 3 of the National Policy Statement for Urban Development (**NPS UD**). Sections 77I(e) and 77O(e) specifically refer to a matter required for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure. The NPS UD defines "nationally significant infrastructure as including (f) the New Zealand rail network (including light rail)". As will be described further by Mr Brown and summarised in my paragraph 8.0 below, a 5m setback is required to assist with providing a safe network and safety, consequently, contributes to an efficient network.

7.1 It is also worth underlining that other intensification planning instruments have recognised the rail corridor as qualifying matters, for example, Selwyn and Porirua.

8 BUILDING SETBACK MDRAA, SMUAA; HDRAA AND GBAA

8.0 I rely on Mr Brown's evidence³⁰ which:

- a. describes why a 5m metric setback is necessary (relative to a 12m³¹ building within the MDRAA and up to 22m³² building in the HDRAA, SMUAA³³ and GBAA³⁴).
- b. describes the risk to persons both accessing the rail corridor (to undertake adjoining property maintenance) and rail corridor users (train operators and passengers);
- c. outlines why fencing of the rail corridor is not a realistic proposition; and

³⁰ Evidence of Mr Michael Brown, 29 March 2023.

³¹ S42A Report Appendix 1, Officers recommended amendments, Rule 4F 4.2.2 (a)(ii), Page 58.

³² S42A Report Appendix 1, Officers recommended amendments, Rule 4G 4.2.3 (a)(ii), Page 88.

³³ S42A Report Appendix 1, Officers recommended amendments, 5E 4.2.1 Building Height (b) (ii), page 255. For example, up to 22m adjacent to rail designation eg 499 Hutt Road.

³⁴ Plan Change 56 zone Maps applying variable height limits up to 22m across the General Business zone adjacent to the rail designation. For Example 483 Hutt Road.

- d. concludes that corridor access requests are not a reliable method of managing network access.
- 8.1 In addition to Mr Brown's evidence, it is not uncommon for District Plans to include provisions which limit uses of land to protect the operation of infrastructure beyond the designation boundary and also to provide safe and healthy environments for people.
- 8.2 For example, Transpower has included in a range district plans³⁵ a national grid corridor overlay which restricts activities within a specified spatial extent of its network (around both pylons and lines). Airports and ports are another common infrastructure type which restricts activities and/or require mitigation for certain activities on surrounding private land³⁶.
- 8.3 The 42A Authors indicate that it would be open to KiwiRail to alter its designation if it needs additional protection for its infrastructure beyond its designation.³⁷ For completeness, I have considered other methods (no setback and extending existing designation widths) to provide for building maintenance and safety of adjoining occupants. This is assessed in the format of Section 32AA and included as Attachment B. I conclude that a setback is the most efficient outcome as it retains land development potential (by way of resource consent) in the setback.
- 8.4 In relation to the S42A Report for the 5m setback in relation to the SMUAA, the Author concludes that the *practical impact of this requested rule [5m setback] is minimal*³⁸. I agree this is the case for the Waterloo Station however not for the Western Hutt Station where SMUAA zoned land (22m height limit) is immediately adjacent to the 'live' rail track (Figure 1).

³⁵ For example, Chapter D26 of the Auckland Unitary Plan.

³⁶ For example, Chapters D24 Aircraft Noise Overlay and D25 City Centre Port Noise Overlay of the Auckland Unitary Plan.

³⁷ S42A Report, paragraphs 469, 768 and 806.

³⁸ S42A Report, paragraph 766.

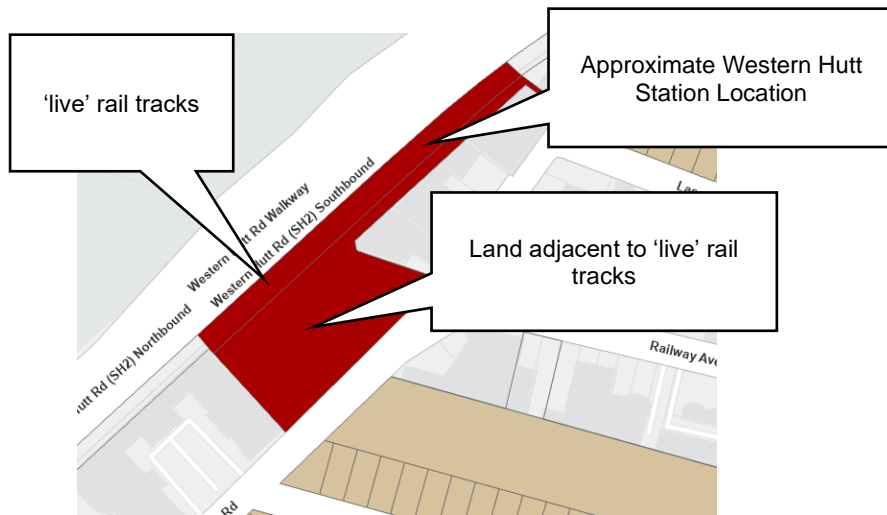


Figure 1: Western Hutt Station (Red Colour = Proposed SMUAA)

9 NOISE AND VIBRATION

9.0 Dr Chiles³⁹ has provided evidence which I accept and summarise the key findings as:

- a. Research confirms that noise and vibration have adverse health and amenity effects on people⁴⁰;
- b. Based on his analysis, Dr Chiles' concludes the appropriate provisions to manage noise and vibration effects apply from the edge of the designation boundary and are:
 - i. 100m for noise, a setback of 40m (for noise) is not sufficient to manage the most significant effects of noise from rail lines⁴¹; and
 - ii. 60m for vibration effects to manage health and amenity effects. The control (60m) is designed to capture the worst of those likely effects, not all effects. Dr Chiles balances the variability of vibration effects and his preference for 100m control⁴².

9.1 The RPS framework accepts there will be effects from infrastructure (beyond its boundaries) and provides a policy framework in which to manage (balance) these (being Objective 10, Policy 8). The RPS does not require that all effects

³⁹ Statement of Dr Stephen Chiles, 29 March 2023.

⁴⁰ Statement of Dr Stephen Chiles, 29 March 2023, paragraphs 4.1 to 4.6.

⁴¹ Statement of Dr Stephen Chiles, 29 March 2023, paragraph 6.5.

⁴² Statement of Dr Stephen Chiles, 29 March 2023, paragraph 6.8 to 6.10.

of infrastructure are internalised. The explanatory text in Chapter 3.3 gives a clear explanation:

*The efficient use and development of such infrastructure can be adversely affected by development. For example, land development can encroach on infrastructure or interfere with its efficient use. **Infrastructure can also have an adverse effect on the surrounding environment. For example, the operation or use of infrastructure can create noise which may adversely impact surrounding communities. These effects need to be balanced to determine what is appropriate** for the individual circumstances⁴³. [bold added]*

- 9.2 The RPS also directs (by the use of the term “shall” within Policy 8 and its methods) district councils to include policies and rules that *protect regionally significant infrastructure from incompatible new subdivision, use and development occurring under, over, or adjacent to the infrastructure*. This is a very strong directive; the Hutt City Plan provides a good objective and policy framework which would support the proposed noise provisions. For example:

Issue 14A 2.3

Noise sensitive activities can have reverse sensitivity effects on the transport network, potentially affecting the construction, operation and maintenance of the network.

Objective 14A 3.2

Adverse effects from the construction, maintenance and development of the transport network on the adjacent environment are managed.

Policy 14A 4.4 Land use, subdivision or development containing noise sensitive activities should be designed and located to avoid, remedy or mitigate adverse effects which may arise from the transport network

- 9.3 In the advent of increased intensification of sensitive activities around significant infrastructure, Dr Chiles has provided technical evidence which

⁴³ RPS Introductory text, 3.3 Energy, infrastructure and waste, page 44(b) *Infrastructure*.

demonstrates health and amenity effects will occur as a result of noise and vibration and therefore it is appropriate to include updated noise and new vibration control provisions.

- 9.4 In relation to the detail of the provision changes sought within Rule 14A 5 Standard 6, adoption of KiwiRail's submission would consequently require the removal of the *Rail Corridor Buffer Overlay (RCBO)* from the planning maps as proposed amendments to Standards 6 specify numeric setbacks (60m vibration/100m noise) rather than reliance on the mapped RCBO.
- 9.5 On further consideration, I consider a mapped RCBO is a more effective way of alerting plan users to the additional controls; particularly as planning maps are usually the 'first stop' for identifying site characteristics and are often appended to LIMs. In this regard, KiwiRail has confirmed that it will provide GIS layers showing the proposed 60m vibration and 100m noise RCBO (as two separate layers). My proposed amendments in to Chapter 14 5 Standard 6 reflect this approach.
- 9.6 An amendment to the definition of *noise sensitive activity* is also proposed to capture the actual range of activities sensitive to noise; the existing definition is limited in its extent and would leave some vulnerable uses (child care, education, papakainga housing) potentially exposed to health impacts of noise. This amended definition aligns generally with definitions in district plans around the country⁴⁴, and ensures that the vulnerable uses that have been omitted from the current definition are afforded the same benefits of the noise and vibration provisions. The amendment to the definition is part of the package of noise and vibration provisions proposed by KiwiRail.
- 9.7 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 setback and noise and vibration 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.
- 9.8 I have considered other methods (limited noise control and no vibration control) to address health, amenity and reverse sensitivity effects. This is

⁴⁴ For example Christchurch District Plan *sensitive activities* definition and Hamilton District Plan *noise sensitive activities*.

assessed in the format of Section 32AA and included as Attachment C and I conclude that a 'permitted activity' setback for noise and vibration is the most efficient outcome to provide for health and amenity along with consequentially reducing potential reverse sensitivity effects.

10 CONCLUSION

10.0 In conclusion:

- a. **Building Setback:** A building setback is considered to be a Qualifying Matter as it is required to enable the nationally significant infrastructure to operate in a safe and efficient manner.
- b. A 5m setback is considered to be an appropriate distance to ensure safe building maintenance within the MDRAA, SMUAA, HDRAA and GBAA zones. Alternatives (eg. increased designation width or fencing) are not considered to be the most efficient or effective outcomes.
- c. **Matter of discretion:** A matter of discretion in the MDRAA, SMUAA; HDRAA and GBAA zones is proposed to support the 5m setback provision.
- d. **Chapter 14: Noise and Vibration:** Amended noise controls to extend to 100m and new vibration controls within 60m are proposed to reflect RPS Policy 8. It also includes updating the range of noise sensitive activities within Standard 6. These changes will recognise effects of infrastructure and also providing opportunities for intensification / sensitive activities where appropriate mitigation is provided.
- e. **Definition:** An amendment to the definition of *noise sensitive activity* is proposed to ensure a wider range of activities sensitive to noise are provided with protection from health impact of noise exposure and to align with changes to Rule 14A Standard 6.

Cath Heppelthwaite
29 March 2023

Attachment A: Proposed Changes

Base text is taken from Appendix A – Planners recommendation with changes accepted. All changes are in red text. New text is underlined and proposed deletions in ~~strike through~~.

High Density Residential Activity Area

Rule 4G 4.2.5 Setbacks

(a) Construction or alteration of a building is a permitted activity if:

- (i) Buildings are set back from the relevant boundary by the minimum depth listed below
Front yard: 1.5m
Side yard: 1m
Rear yard: 1m

Rail Designation Boundary yard: 5m

This standard does not apply to site boundaries where there is an existing common wall between 2 buildings on adjacent sites or where a common wall is proposed. Eaves may encroach into any yard by up to 0.6m.

(b) Construction or alteration of a building that does not meet the setback requirements is a restricted discretionary activity.

Discretion is restricted to:

- (i) The planned urban built character for the High Density Residential Activity Area, including the requirements to enable buildings of at least six storeys within the High Density Residential Activity Area.
- (ii) The effects on the privacy of adjoining sites.
- (iii) The effects on the amenity of the surrounding residential area, the streetscape and adjoining public space.
- (iv) The effect from any building bulk and its proximity to the main internal and external living areas of adjoining residential properties
- (v) The effects on the amenity of the surrounding residential area, the streetscape and adjoining public space.
- (vi) The following design elements:
 1. Building height
 2. Recession planes
 3. End / side wall treatment
 4. Privacy and safety

(vii) For the Rail Designation boundary yard, the location and design of the building as it relates to the ability to safely use, access and maintain buildings without requiring access on, above or over the rail corridor.

Note: When addressing or assessing potential effects in relation to matters (i) and ~~(vi)~~ (vii) above, applicants and the Council can be informed by the relevant outcomes identified in the Medium Density Design Guide. Public notification is precluded for resource consent applications under Rule 4G 4.2.5(b)

Medium Density Residential Activity Area

Rule 4F 4.2.4 Setbacks

(a) Construction or alteration of a building is a permitted activity if

- (i) Buildings are set back from the relevant boundary by the minimum depth listed below
Front yard: 1.5m
Side yard: 1m
Rear yard: 1m

Rail Designation Boundary yard: 5m

This standard does not apply to site boundaries where there is an existing common wall between 2 buildings on adjacent sites or where a common wall is proposed. Eaves may encroach into any yard by up to 0.6m.

(b) Construction or alteration of a building that does not meet the yard setback requirements is a restricted discretionary activity. Discretion is restricted to:

(iaa) The planned urban built character for the Medium Density Residential Activity Area.

(i) The effects on the privacy of adjoining sites.

(ii) The effects on the amenity of the surrounding residential area, the streetscape and adjoining public space.

(iii) The effect from any building bulk and its proximity to the main internal and external living areas of adjoining residential properties.

(iv) The following design elements:

1. Building height
2. Recession Planes
3. End / side wall treatment
4. Privacy and safety

(vii) For the Rail Designation boundary yard, the location and design of the building as it relates to the ability to safely use, access and maintain buildings without requiring access on, above or over the rail corridor.

Note: When addressing or assessing potential effects in relation to matters (i) and (ii) (iaa) to ~~(iv)~~ (vii) above, applicants and the Council can be informed by the relevant outcomes identified in the Medium Density Design Guide. Public notification is precluded for resource consent applications under Rule 4F 4.2.4(b).

Suburban Mixed Use Activity Area

Rule 5E 4.2.3 Yards

(a) Construction or alteration of a building is a permitted activity if the following yard requirements are being met:

(i) For sites adjoining a residential activity area the building is not located within the following yard setbacks:

Side yards: 1m along the shared side boundary

Rear yards: 1m along the shared side boundary

Rail Designation Boundary yard: 5m

No yard requirements apply along road boundaries, boundaries within the Suburban Mixed Use Activity Area and existing or proposed internal boundaries within a site.

(b) Construction or alteration of a building that does not meet the yard requirements is a restricted discretionary activity.

Discretion is restricted to:

(i) The effects on the amenity of adjoining residential sites.

(ii) The effects on the privacy of adjoining residential sites.

(vii) For the Rail Designation boundary yard, the location and design of the building as it relates to the ability to safely use, access and maintain buildings without requiring access on, above or over the rail corridor.

Note: When addressing or assessing potential effects in relation to matters (i) and (ii) above, applicants and the Council can be informed by the relevant outcomes identified in the Medium Density Design Guide.

General Business Activity Area

Rule 6A 2.1.1(b)

(b) Setback Requirements:

Buildings and structures abutting an urupa shall have a minimum setback of 3m.
All new buildings and structures or additions in the Primary or Secondary River Corridor with a gross floor area of 20m² or less and with a setback of 20m or more from a flood protection structure.

Buildings and structures abutting a rail designation boundary shall have a minimum setback of 5m.

Rule 6A 2.3

Restricted Discretionary Activities

(a) any activity which involves vehicle

[...]

(k) Any building or structure within 5m of a rail designation boundary.

Definitions

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;

(d) congregation within any place of worship; and

(e) activity at a Marae.

Rule 14A 5

Standard 6 - Development within the State Highway and Railway Corridor Buffer Overlays

Standard 6

Within the 40-metre wide State Highway and 60-metre vibration and 100-metre noise Railway Corridor Buffer Overlays, all new buildings containing noise sensitive activities, or existing buildings with new noise sensitive activities*, must be designed, constructed and maintained (at the level of installation) to meet the following standards:

(a) Vibration Buildings within the 40m wide State Highway Overlay or 60m wide Railway Corridor Buffer Overlay must comply with class C of Norwegian Standard 8176:~~E~~:2017~~05~~ (Vibration and Shock - Measurement of Vibration in Buildings from Landbased Transport and Guidance to Evaluation of Its Effect on Human Beings).

(b) Noise

(i) [...]

(ii) Indoor design noise level as a result of noise from rail traffic must not exceed the following levels:

~~Residential Activities, Visitor Accommodation, Boarding Houses or other premises providing residential accommodation for five or more travellers:~~

~~Bedrooms: 35dB_{-LAeq(1h)}~~
~~Other habitable spaces: 40dB_{-LAeq(1h)}~~
Childcare Facility:
 All spaces: 40dB_{-LAeq(1h)}

<u>Building type</u>	<u>Occupancy / activity</u>	<u>Maximum railway noise level L_{Aeq(1h)}</u>
<u>Residential</u>	<u>Sleeping spaces</u>	<u>35 dB</u>
	<u>All other habitable rooms</u>	<u>40 dB</u>
<u>Education</u>	<u>Lecture rooms / theatres, music studios, assembly halls</u>	<u>35 dB</u>
	<u>Teaching areas, conference rooms, drama studios, sleeping areas</u>	<u>40 dB</u>
	<u>Library</u>	<u>45 dB</u>
<u>Health</u>	<u>Overnight medical care, wards</u>	<u>40 dB</u>
	<u>Clinics, consulting rooms, theatres, nurses' stations</u>	<u>45 dB</u>
<u>Cultural</u>	<u>Places of worship, marae</u>	<u>35 dB</u>

Rule 14A 5.1

(a) [...]

(b) Any activity that does not comply with the standards listed in Appendix Transport 1 is a **Restricted Discretionary Activity**.

Discretion is restricted to:

- (i) The effects generated by the standard(s) not being met; and
- (ii) Any activity that does not comply with Appendix Transport 1, Standard 6
 - (i) the effects generated by the standard(s) not being met.
 - (ii) location of the building;
 - (iii) special topographical, building features or ground conditions which will mitigate vibration impacts;
 - (vi) the outcome of any consultation with KiwiRail.

Attachment B: S32AA Assessment of Building Setback

Having regard to section 32AA, the following is noted:

Effectiveness and efficiency

- The proposed changes will be more efficient and effective than other methods (such as designating a wider corridor to provide setback) as it provides flexibility of use by resource consent allowing for situations where building within the setback is acceptable. Applying a wider designation means land will not be available for use at all, the setback yard by contrast could enable future use by way of resource consent. This fits RPS Objective 10 and Policy 8 in providing development which can be, with mitigation, compatible within reasonably close proximity to infrastructure.
- Providing no setback will not support an efficient outcome generally as incursions can lead to disruption to the rail network/ inefficient operation and endanger safety.

Costs/Benefits

- The recommended amendments will limit building in some locations (cost). However, the impact on overall development capacity is marginal and resource consent can be sought to infringe the setback standard.
- The benefits are providing for a safer and more efficient rail network which supports passenger transport (being itself a significant supporting factor for residential intensification).
- The changes will enable greater certainty, and safety, for home owners and occupiers to undertake maintenance to their dwellings.

Risk of acting or not acting

- Evidence has been provided of the risks to public safety and network efficiency if no action is taken. Not acting could result in an inefficient operation of nationally significant infrastructure due to unexpected shutdowns. Not acting increases the risk to the health and safety of adjoining residents.

Decision about most appropriate option

- The recommended amendments as set out in my evidence are therefore considered to be more appropriate in achieving the purpose of the RMA rather than the notified provisions.

Attachment C: S32AA Assessment of Noise and Vibration Controls

Having regard to section 32AA, the following is noted:

Effectiveness and efficiency

- The proposed changes will be more efficient and effective at balancing infrastructure and health and amenity resulting from intensification than other methods (such as existing 40m controls). This fits RPS Objective 10 and Policy 8 as it provides development which can be, with mitigation, compatible where close to infrastructure.
- Retaining the 40m noise and vibration controls will not support an efficient outcome as effects on health and amenity for those residents within 40m to 100m (noise) and 40m to 60m *vibration will not be addressed and new reverse sensitivity effects could arise (which could lead to inefficient operation of nationally significant infrastructure), in particular arising from the greater intensification of the area.
- Option adopts a 'prevention is better than cure approach'.

Costs/Benefits

- The recommended amendments require additional assessments for some buildings and activities in some locations. • Where standards are infringed, there will be costs to applicants in seeking resource consent. In practice, this is generally not anticipated or experienced elsewhere as there are standard engineering solutions that can be implemented to achieve compliance. However, where there is an infringement, the extent of those costs will vary depending on whether a developer already requires consent for subdivision or to infringe other standards in the plan.

the benefits are however improved health and amenity and reduced risk of reverse sensitivity effects (benefits). The rail network provides passenger transport which is a significant supporting factor for residential intensification proposed.

Where standards cannot be met, there is a consenting pathway for development of noise sensitive activities.

- The changes will enable greater certainty for home owners as to their ability to live comfortably and free from the most significant health and amenity impacts when in close proximity to infrastructure (benefits).
- Dr Chiles' evidence is that rail vibration can routinely be experienced at over 100m from the railway corridor. In applying the provisions only out to 60m (due to the volume of traffic on the line), the provisions are a pragmatic response in that they address health and amenity effects at sites most affected by rail vibration.
- The provisions are an integrated response to planning in that it allows development of sensitive activities to occur near the rail corridor in a way that appropriately manages the effects of, and on, the ongoing use and operation of the rail corridor.
- The noise and vibration provisions do not apply to existing activities so there are no additional constraints on developed sites where redevelopment is not anticipated.

Risk of acting or not acting

- Health and amenity effects will occur if no action is taken.
- Potential for reverse sensitivity effects on the operation of the rail network

Decision about most appropriate option

- Based on the evidence of Dr Chiles, the recommended amendments as set out in my evidence are therefore considered to be more appropriate in achieving the purpose of the RMA rather than the notified provisions.