BEFORE THE INDEPENDENT COMMISSIONERS

IN THE MATTER	of the Resource Management Act 1991 ("**RMA**")
AND	
IN THE MATTER	a submission by KiwiRail Holdings Ltd (**"KiwiRail"**) on Plan Change 14 ("**PC14**") to the Christchurch District Plan ("**District Plan**")

STATEMENT OF EVIDENCE OF MICHELLE GRINLINTON-HANCOCK ON BEHALF OF KIWIRAIL HOLDINGS LIMITED

CORPORATE

1. INTRODUCTION

1.1 My name is Michelle Grinlinton-Hancock and I am the RMA Team Leader for KiwiRail.

1.2 I have over 20 years' RMA and planning experience and I am a full member of the New Zealand Planning Institute. I graduated from Massey University in 2000 with a Bachelor of Resource and Environmental Planning (Hons).

1.3 I began my career in planning and resource management in 2000 and have over the course of my career worked as a planner in Council processing applications as well as a consultant where I prepared consent applications and submitted on district and regional plan provisions on behalf of clients. While I was employed at WSP (prior to working for KiwiRail) I was the programme manager for the Ministry for the Environment's Making Good Decisions programme. I am also a certified Commissioner under that same programme.

1.4 I have worked for KiwiRail in the capacity as a Senior RMA Advisor and now as Team Leader for over three years.

2. SCOPE OF EVIDENCE

2.1 This statement has been prepared on behalf of KiwiRail and relates to the matters contained in PC14, which KiwiRail submitted on.

2.2 My evidence will outline:

(a) KiwiRail's infrastructure and activities within the Christchurch District;

(a) the need for a safety setback from the railway corridor; and

(b) the need for noise controls and a vibration alert layer.

3. KIWIRAIL IN THE CHRISTCHURCH DISTRICT

3.1 KiwiRail is a State-Owned Enterprise responsible for the management and operation of the national railway network. The rail network is an asset of national and regional importance. Rail is fundamental to the safe and efficient movement of people and goods throughout New Zealand, and significant investment has been and continues to be made in the maintenance and expansion of the rail network to meet future growth demands and improve transport network efficiency.

3.2 To assist with New Zealand's move towards a low-carbon economy and to meet the needs of New Zealand's growing population, rail services will grow. Recognising that rail produces at least 70 percent less carbon emissions per tonne of freight carried compared with heavy road freight, plans to accommodate more freight on rail are underway with the new (delivery from 2025) Cook Strait ferries able to accommodate 4 times the present rail freight capacity of the route.

3.3 Key rail lines in the Christchurch region include Main South Line, Hornby Industrial Line, and Main North Line. All these lines support the movement of freight and passengers through the country via rail.

3.4 These are all very busy lines, with approximately 336 train movements per week. KiwiRail expects these already busy lines are only going to become busier as demand for rail freight increases.

3.5 These assets form a key part of the KiwiRail network nationally and KiwiRail seeks to protect its ability to operate, maintain and upgrade these assets into the future. These assets are of regional and national importance, supporting the movement of freight and passengers through the country via rail.

4. SAFETY SETBACKS

4.1 The rail corridor is an important physical resource and strategic transport infrastructure. As part of its operations and obligations to its customers, KiwiRail requires the ability to operate trains as required to meet demand. This can result in changes to the timing, frequency, or length of trains passing along the route. It can also result in upgrades to the network that can provide passing opportunities for trains, or other associated rail improvements.

4.2 As an asset of national significance, it is important that the rail corridor can operate safely and efficiently without interference. Any interference with the railway corridor can be incredibly disruptive to rail services creating unnecessary and cascading delays to passengers and freight. KiwiRail therefore seeks building setback from the boundary of the rail corridor development on land adjoining the corridor, which is an efficient and effective means of ensuring that the risk of interference is mitigated.

4.3 For the avoidance of doubt a **safety setback's** primary function is as a safety buffer. It is distinct from a **noise or vibration contour** which is discussed below.

4.4 The notified provisions of PC14 include a 4 metre setback from the rail corridor, with the exception of the High Density Residential Zone which only contains a 1 metre rear yard setback. KiwiRail endorses the inclusion of setback controls in the majority of the zones in PC14 and considers that 4 metres is the minimum setback required in all zones, particularly the High Density Residential Zone. This is because the increased building height and reduced height to boundary controls enabled under the MDRS which increase the risk of potential interference with the rail corridor from maintenance and other activities being undertaken on adjoining sites. A 1 metre setback is simply not sufficient to manage safety.

4.5 While KiwiRail's submission sought 5 metres, in the context of this Plan Change 14 (considering the 4 metre setback already in place in the District Plan), KiwiRail would accept 4 metres in all zones.

Need for safety setbacks

4.6 A safety setback is important to provide enough space within a site adjoining the rail corridor for the homeowner or occupant of that building to maintain and access their own house or building safely – without accessing the rail corridor to do so, or getting too close to trains. Buildings constructed close to the rail corridor do not leave enough space on site for essential maintenance activities.

The lack of space means it is highly likely that these activities can only happen by accessing the rail corridor.

4.7 The rail corridor is not a public domain and it has a very different and high consequence risk profile compared to entering other sites. It is a hazardous environment and entering the rail corridor can result in a material safety issue to both the person accessing the corridor, and to the rail operations being undertaken within the rail corridor.

4.8 Buildings built right up on the boundary (or subject to a minimal setback from the boundary) also significantly increase the risk of inadvertent incursion into the rail corridor from objects falling from open windows or being dropped from scaffolding / platforms that are used for maintenance.

4.9 Any object within the rail corridor becomes a safety issue for rail employees who need to remove the obstruction, not to mention train drivers and passengers on trains if the obstruction is not removed in time. It also becomes a safety issue for residents who seek to retrieve items from the track, due to danger from trains.

4.10 It is frequently suggested by developers that adjoining landowners should simply ask KiwiRail for permission to access the rail corridor to undertake maintenance and other activities. With respect, this is not the answer. This would be disruptive to the network and onerous for landowners / occupiers to have to use each time they wish to undertake maintenance. Enabling third parties (like neighbours) to access the rail corridor can require on-site safety personnel, or the temporary closure of a block of the track. Closing the track – even temporarily – requires around six months to plan, as freight and passenger demands are required to be factored in and alternatives found.

4.11 In my opinion, it would be a poor planning outcome if the options for landowners who need to access their own buildings for maintenance are either to: (a) seek permission from KiwiRail to encroach onto the rail corridor (resulting in delay, cost and safety issues); or (b) not obtain permission and trespass on the rail corridor. The better planning outcome is to provide an adequate safety setback within a landowner's own property for that landowner to access their own building safely.

4.12 A physical setback manages adverse effects on the safety of adjacent occupiers and the operation of the railway corridor, while also providing a level of amenity in terms of safe enjoyment of land use activities adjacent to the corridor.

Matter of discretion

4.13 The setback provisions sought by KiwiRail do not prevent all development in the setback area. Resource consent can be sought where the setback is not complied with, which allows the Council and KiwiRail to assess whether or not safety concerns can be adequately managed. To assist Council officers, KiwiRail's submission sought the inclusion of a matter of discretion relating to setbacks. This has been accepted by the Reporting Planner for the Residential Medium Density Zone (Rule 14.5.2.7)[1] but rejected for the other residential zones and commercial zones.[2]

4.14 The plan provisions include matters of discretion relating to impacts on the safe and efficient operation of the rail network to direct the Council as to the relevant effects. I support the inclusion of the matter of discretion in Rule 14.5.2.7 as recommended by the Reporting Planner. For the matter of discretion in the other residential zones and commercial zones that were rejected by the Reporting Planner, I support the amendments to Rule 15.14.3.10 and the High Density Residential Zone proposed by Ms Heppelthwaite.[3]

Setback distance

4.15 In terms of the need for the setback to be a sufficient size, I have reviewed the WorkSafe Guidelines on Scaffolding in New Zealand.[4] These Guidelines include the following configurations and guidelines for scaffolding design for tower and mobile scaffolds:[5]

(a) The height of the top working platform should be no more than three times the minimum base dimension. For a 3-storey building of around 12 metres in height, this would require a minimum of 4 metres at the base of the scaffolding.

(b) There should be no overhead power lines or other obstructions to be within 4 metres of the line of travel of the scaffolding.

(c) If portable ladders are used to access the scaffolding, these should be pitched at an angle between 1:4 and 1:6 horizontal to vertical and should be clear of the supporting structure at the base.

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1 Statement of Primary Evidence of Hermione Claire Blair on behalf of Christchurch City Council dated 11 August 2023 at [60].

2 Statement of Evidence of Catherine Heppelthwaite dated 20 September 2023 at [6.8].

3 Statement of Evidence of Catherine Heppelthwaite dated 20 September 2023 at [6.10].

4 https://www.worksafe.govt.nz/topic-and-industry/working-at-height/scaffolding-in-new-zealand/#lf-doc-20051.

5 The WorkSafe Guidelines make no recommendation for the area (setback) needed to set up and construct the scaffold, only the final scaffold dimensions.

4.16 While providing room for scaffolding is one of the key elements for the setback distance sought by KiwiRail, it is not the only basis on which KiwiRail seeks these provisions. A setback needs to allow sufficient space for the use of mechanical access equipment required for the maintenance of buildings or land uses, for example:

(a) Equipment required for drainage works, such as the operation of diggers (which require approximately 3 to 5 metres for operation).

(a) Mobile height access equipment such as scissor lifts or cherry pickers. These include support structures which extend out from the main equipment to provide further stability in areas of unstable ground, or moving booms which can swing out from the equipment. A small crane can be nearly 2.5 metres wide (without any outrigger support) and up to 18 metres in height.

4.17 Setback distance should also take into account appropriate support structures for higher scaffolding (such as outriggers) and the necessary space required around scaffolding equipment or machinery. It is not enough to just ensure the equipment itself does not encroach into the rail corridor. KiwiRail is also seeking to ensure that persons operating any equipment do not encroach into the rail corridor, given the safety implications.

4.18 To assist the Panel, I have had prepared a diagram that illustrates the effects that KiwiRail is concerned about (attached as **Appendix A**).

4.19 Although I maintain the position that 5 metres is appropriate to enable the residents of the district to be able to use and maintain buildings on their properties safely, while also protecting rail operations from interference, KiwiRail is willing to accept a 4 metre setback here.

5. NOISE AND VIBRATION STANDARDS

Need for standards

5.1 Acoustic and vibration standards are important controls to ensure the ongoing health and wellbeing of people and are instrumental in ensuring that reverse sensitivity effects on rail are minimised, particularly where intensive residential development is proposed adjacent to the rail corridor.

5.2 KiwiRail is concerned about the potential for reverse sensitivity effects to arise from new or intensified sensitive activities (eg dwellings) developing near the rail corridor. Reverse sensitivity is a well-recognised resource management

concept which refers to the impact that locating new, sensitive activities adjacent to existing lawfully established effects-generating activities has on the ongoing operation of those existing activities.

5.3 New developments, or higher density redevelopment of existing sensitive uses, can result in greater numbers of individuals subject to adverse noise and vibration effects. This can result in increased complaints and resultant operational constraints on the rail network (such as limitations on operating hours) which can constrain the ongoing operation and future development of the rail corridor.

Noise provisions

5.4 Plan Change 5E to the District Plan was recently made operative. This plan change amended Rule 6.1.7.2.1 to improve the clarity and efficiency of the rule. KiwiRail was involved in Plan Change 5E and supports the provisions that were developed through that process. Accordingly, KiwiRail's submission sought the retention of Rule 6.1.7.2.1 (as amended by Plan Change 5E) through PC14.

5.5 KiwiRail endorses the Reporting Planner's statement that the interface with the railway line should be designed to ensure acceptable noise levels for residents.[6] In KiwiRail's view, applying Rule 6.1.7.2.1 (as amended by Plan Change 5E) will appropriately ensure acceptable noise levels for adjoining residents.

Vibration

5.6 KiwiRail's submission also sought an amendment to Rule 6.1.7.2 to include vibration controls within 60 metres of the railway boundary. This was sought to ensure that vibration effects are appropriately addressed. The controls sought by KiwiRail have not been included in the updated PC14 provisions provided by Council, and there does not appear to have been any consideration of the proposed vibration controls by the Reporting Planners or the Council's experts.

5.7 In terms of vibration, Dr Chiles' evidence demonstrates that there is a very real effect on neighbours (with the potential to result in reverse sensitivity effects on KiwiRail) that requires mitigation.[7] These effects will only increase with the

6 Council Officer Report prepared by Mr Ian Bayliss - Future Urban Zone, Outline Development Plan related Qualifying Matters and Subdivision, Development and Earthworks Provisions dated 11 August 2023 at [8.10].

7 Statement of Evidence of Dr Stephen Chiles dated 20 September 2023 at [1.5] – [1.10].

proposed intensification adjacent to the railway corridor. Ms Heppelthwaite also supports vibration controls.[8]

5.8 KiwiRail continues to consider that vibration controls are appropriate having regard to Dr Chiles' and Ms Heppelthwaite's evidence. However, given the practicalities of implementing vibration controls, KiwiRail is prepared to accept the inclusion of a rail vibration "alert layer" as alternative relief through PC14.

5.9 This layer would apply to all properties within 100 metres on either side of the rail corridor designation boundary. Dr Chiles' evidence is that adverse health effects from vibration extend up to 100 metres from the rail corridor.

5.10 A vibration alert layer is an information layer to signal to property owners that higher levels of vibration may be experienced in the area due to its proximity to the rail corridor. There are no rules or other provisions associated with the alert layer. Alert layers still provide some management of vibration effects, as landowners may be prompted when building new dwellings to consider incorporating vibration attenuation measures of their own accord or to locate new buildings outside the alert layer.

5.11 Such a layer has recently been included in the Whangārei District Plan and in the Precinct provisions relating to the Drury area in the Auckland Unitary Plan. Ms Heppelthwaite has included proposed amendments to the District Plan provisions in Attachment A of her evidence that include KiwiRail's proposed rail vibration alert layer.

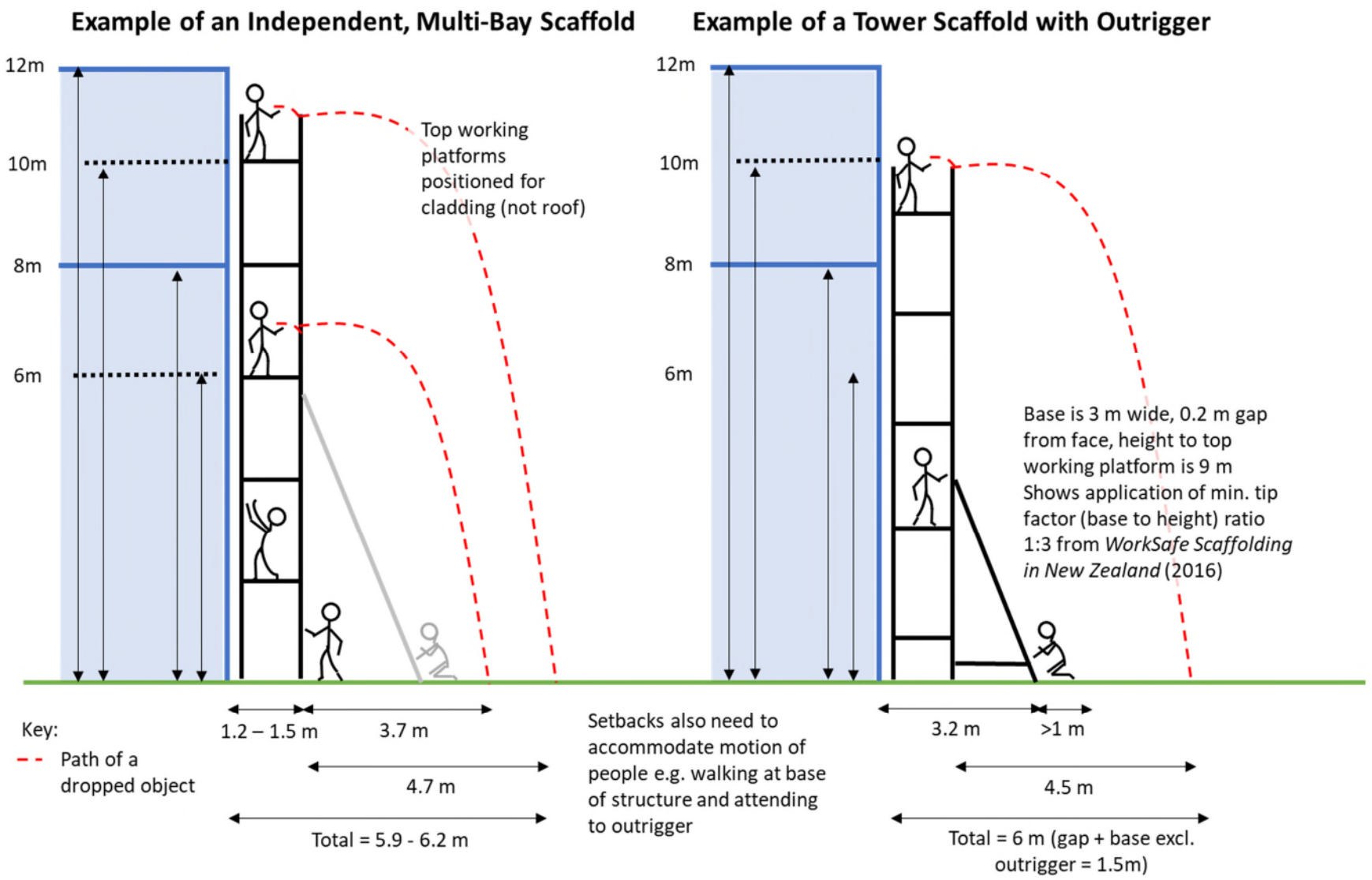
6. CONCLUSION

6.1 For the reasons set out in the evidence of Dr Chiles, Ms Heppelthwaite and above, the setbacks and noise and vibration controls sought by KiwiRail are appropriate and necessary for the safe and efficient operation of the rail network in the Christchurch District.

Michelle Grinlinton-Hancock
20 September 2023

8 Statement of Evidence of Catherine Heppelthwaite dated 20 September 2023 at [6.12].

APPENDIX A


Example of an Independent, Multi-Bay Scaffold
12m
10m
8m
6m
Top working platforms positioned for cladding (not roof)
Key:
Path of a dropped object
1.2 – 1.5 m
3.7 m
4.7 m
Total = 5.9 - 6.2 m
Setbacks also need to accommodate motion of people e.g. walking at base of structure and attending to outrigger
Example of a Tower Scaffold with Outrigger
12m
10m
8m
6m
Base is 3 m wide, 0.2 m gap from face, height to top working platform is 9 m
Shows application of min. tip factor (base to height) ratio 1:3 from *WorkSafe Scaffolding in New Zealand* (2016)
3.2 m
>1 m
4.5 m
Total = 6 m (gap + base excl. outrigger = 1.5m)