

Before the Independent Hearing Commissioners at Porirua

---

*under:* the Resource Management Act 1991

*in the matter of:* submissions and further submissions in relation to  
Variation 1 to the proposed Porirua District Plan

*and:* **Radio New Zealand Limited**  
*Submitter 73*

Legal submissions on behalf of Radio New Zealand Limited

---

Dated: 9 March 2023

---

Reference: Ben Williams (ben.williams@chapmantripp.com)  
Hadleigh Pedler (hadleigh.pedler@chapmantripp.com)

chapmantripp.com  
T +64 3 353 4130  
F +64 3 365 4587

PO Box 2510  
Christchurch 8140  
New Zealand

Auckland  
Wellington  
Christchurch



## LEGAL SUBMISSIONS ON BEHALF OF RADIO NEW ZEALAND LIMITED

### INTRODUCTION

- 1 These legal submissions are presented on behalf of Radio New Zealand Limited (*RNZ*). *RNZ* lodged submissions (*Submitter 73*) and further submissions on Variation 1 to the proposed Porirua District Plan (*Variation 1*).
- 2 At the outset it is noted that at the time of preparing these submissions:
  - 2.1 the Panel had released *Minute 59 – Stream 7 Conferencing* directing caucusing inter alia between **Mr Steve White** (called by *RNZ*) and **Mr Martin Gledhill** (called by Kāinga Ora) on transmission/electromagnetic radiation issues;
  - 2.2 it is understood that Mr White and Gledhill (who had already been discussing the issues) have been working constructively on a draft joint witness statement, but the outcomes of such caucusing are not finalised; and
  - 2.3 following finalisation of any joint witness statement *RNZ* hopes to engage with Kāinga Ora and the Council’s s42A Officer to endeavour to reach agreement on appropriate planning provisions for the hearing panel to consider.
- 3 Given the above, these submissions do not propose any specific drafting at this time but *RNZ* intends to provide the Panel with draft provisions (either agreed or not as the case might be) for the Panel’s consideration before *RNZ*’s scheduled oral submissions on 20 March 2023.
- 4 In terms of the approach in these submissions, if a joint witness statement is forthcoming and agreement can be reached on plan provisions, then *RNZ* recognises that the hearing panel may not be particularly assisted by further detailed legal submissions on the issues.
- 5 Nevertheless, given where things are at (and the possibility of matters not being agreed), these submissions on a ‘belts and braces’ basis, set out the key aspects of *RNZ*’s submissions on Variation 1:
  - 5.1 the health and safety risks which *RNZ* seeks to protect against;
  - 5.2 *RNZ*’s submission and requested relief, as sought at this time; and

5.3 the applicable statutory framework.

- 6 RNZ will endeavour to advise the hearing panel as soon as possible should there be any changes to its approach and the position set out as a result of discussions with Kāinga Ora and the Council's s42A Officer.

### **SUMMARY**

- 7 RNZ seeks that Variation 1 include a new qualifying matter to address health and safety risks associated with the construction of new structures near RNZ's transmitter at Titahi Bay (*RNZ's Facilities*). The need for the changes sought by RNZ are largely accepted by Council's Section 42A Officer.<sup>1</sup>
- 8 In short, RNZ considers the risks associated with electromagnetic radiation from RNZ's Facilities require planning provisions that, at a minimum:
- 8.1 Prevent any new structure being constructed that are taller than 10m, within 528m of RNZ's Facilities; and
- 8.2 Only allow new structures taller than 10m, between 528m and 1057m of RNZ's Facilities, to be constructed where a technical assessment has confirmed the structure can be constructed safely.
- 9 The only further submitter in opposition to RNZ's relief was Kāinga Ora (*Submitter 76*). Kāinga Ora filed a brief of evidence of Mr Gledhill relating to electromagnetic field safety. Specifically, Mr Gledhill was concerned that RNZ had not provided sufficient technical information to support the relief sought.<sup>2</sup>

### **EFFECTS REQUIRED TO BE ADDRESSED**

#### **Health and safety effects: electromagnetic radiation**

- 10 Electromagnetic radiation (*EMR*) from RNZ's transmitters is a health and safety risk which is not well appreciated across New Zealand.
- 11 RNZ manage the very high EMR levels close to its masts in line with current and international radiation standards. However, structures

---

<sup>1</sup> *Officer's Report: Part B – FENZ and RNZ* prepared by Mr Rory Smeaton dated 10 February 2023 at [170] Overall, I agree in principle with the introduction of a qualifying matter addressing the height of buildings and structures within a defined radius of the radio transmission mast, as sought by RNZ.

<sup>2</sup> RNZ notes that the underlying calculations are highly technical and include proprietary information about RNZ's equipment and operations that RNZ prefers is not made public. However, RNZ is willing to share this information where this would assist.

outside RNZ's immediate control, but nevertheless in close proximity to the mast, also need to be carefully managed.

- 12 There is a risk that developers of adjacent properties unknowingly design and build structures which do not meet EMR regulations. This increases the risk to construction staff and occupants of those structures.
- 13 EMR is a common issue with cranes and 'Elevated Work Platforms' (EWP). In some cases people can receive contact burns from metallic objects or can work at heights that expose them to EMR levels above general public limits. Unfortunately, RNZ is generally only alerted to health effects when people start receiving burns.
- 14 As traversed Mr White's evidence, the risk of EMR is related to a number of factors, including how far away a structure is from the mast, the vertical height of the structure, the strength of the transmission signal. Mr White's evidence indicates that:
  - 14.1 Structures greater than 10 metres in height at 528 metres from the mast will be exposed to EMR levels close to 100 percent of the applicable standards. This raises a risk of shocks and/or burns from contact with large metallic objects, including temporary structures such as cranes.
  - 14.2 Structures closer than 528m from the mast will be exposed to higher EMR levels at lower heights.
  - 14.3 Structures greater than 10m in height between 528 metres and 1,057 metres from the mast could be exposed to EMR levels above 100 percent of the applicable standards, depending on the location and height of the structure. This creates the same health and safety risk.
  - 14.4 The risk to very tall structures still exists beyond 1,057m, but is reduced, and developers of taller structures are generally more aware of the risks of EMR.
- 15 Mr White's calculations were prepared with conservative assumptions, and accordingly represent a 'reasonable worst case scenario'. This approach is appropriate given the purpose is to assess risks to public safety.

## **RNZ'S SUBMISSION AND REQUESTED RELIEF**

### **RNZ's submission**

- 16 RNZ is primarily concerned to ensure that the health and safety effects outlined above are recognised through Variation 1.

17 The Medium Density Residential Standards (*MDRS*) prescribed in the Enabling Housing Act allow buildings up to 11 metres in height as a permitted activity in relevant residential zones. This is inappropriate in close proximity to RNZ's Facilities primarily as a matter of health and safety. RNZ effectively seeks that the current built form around RNZ's Facilities, of primarily one and two storey buildings, is retained. RNZ therefore seeks that its facilities at Porirua are recognised as a qualifying matter in Variation 1, and considers that then minimum viable method of ensuring the nearby built form is retained, and public safety protected would be provisions that ensure:

17.1 Within 528 metres of the RNZ's Facilities, there should be no structures above 10 metres in height;<sup>3</sup> and

17.2 Within 1,057 metres of the RNZ's Facilities, the design of any structure above 10 metres in height must include a site-specific and construction materials-specific EMR assessment.

***10 metre height limit***

18 The 10 metre height limit sought is consistent with the operative (and proposed) Porirua District Plan (but not the *MDRS*). As explained by Mr White, this limit generally precludes three storey buildings within 528 metres of the mast – noting that one or two storey homes will typically be from 4.5 to 7 metres in height.

19 RNZ is not aware of any current EMR issues and so has not sought to reduce the height limit that currently applies.

20 RNZ holds a designation over the land up to approximately 210 metres from the transmitter, and so has control over the nature and height of any structures within this area.

21 RNZ would strongly prefer graduated height limits between 210 and 528 metres; the closer a structure is to the transmitter the lower the height limit required to meet safe exposure limits. The 10 metre height limit, which will still preclude three storey buildings in practice, is the minimum sufficient restriction from RNZ's perspective.

***Requirement for detailed EMR assessments***

22 Between 528 and 1057 metres from the mast the risks associated with constructing a 10 metre and above building are likely to be reduced, provided the construction methods and materials used are appropriate. The primary concern here is the use of higher

---

<sup>3</sup> An 11m high structure at 528 metres from the transmitter is almost at the limit for safe public exposure.

structures for the construction phase, which are usually taller than the building they are used to construct.

- 23 The site-specific EMR assessments requested by RNZ between 528 and 1,057 metres from the mast would require specialist knowledge and experience. RNZ has the tools and resources to conduct these assessments but does not have the resources to carry out a large volume of assessments. However there are likely to be other companies / software packages available and RNZ would be happy to provide technical information about the operation of its facilities to allow the appropriate calculations to be made. Mr White has suggested that RNZ could work with larger developers to enable these assessments in the first instance. After the first 10 metre and above build designs are approved, RNZ considers the process could be significantly streamlined.

#### **Radio Transmission Control Areas A and B**

- 24 Council's Section 42A Officer accepts, at a high level, that Variation 1 must include a qualifying matter for radiocommunication transmission in order to address the potential adverse effects.<sup>4</sup>
- 25 Mr Smeaton recommends two control areas as overlays on the planning maps. He also suggests a new related policy in the Energy and Infrastructure chapter.<sup>5</sup>
- 26 RNZ supports the policy framework and control areas proposed in principle, including their inclusion on the proposed plan maps. However, RNZ maintains its position as set out in its submission on the specific restrictions that apply in each control area.

#### **Radio Transmission Control Area A**

- 27 Mr Smeaton recommends a restricted discretionary activity for buildings and structures exceeding 10 metres within 528m of RNZ's Facilities. The Officer considers this will enable inappropriate buildings or structures to be refused consent, while still being a relatively enabling and targeted activity status.<sup>6</sup>
- 28 With respect to the Officer's consideration, RNZ consider a restricted discretionary activity status is not sufficient to safeguard against the potential risks to health in Radio Transmission Control Area A.
- 29 RNZ's considers the technical analysis demonstrates that within 528 metres of RNZ's Facilities there should be no new buildings or structures that exceed 10m in height. There are no circumstances in

---

<sup>4</sup> *Officer's Report: Part B – FENZ and RNZ* at [176].

<sup>5</sup> At [183].

<sup>6</sup> At [182].

which taller structures are appropriate, from a health and safety perspective, within this radius.

**Radio Transmission Control Area B**

- 30 Mr Smeaton recommends a controlled activity for buildings and structures that exceed 10 metres in height between 528 and 1,057 metres from RNZ's Facilities.<sup>7</sup> The Officer considers this will enable appropriate consideration of proposed developments consistent with the outcome sought by RNZ, while having minimal administrative costs for consent applicants.<sup>8</sup>
- 31 A controlled activity status (bearing in mind an application will normally be made with reference to a specific building design that may or may not be appropriate) does not provide the Council with appropriate guidance or degree of control required to manage risks in the proposed Radio Transmission Control Area B. RNZ considers the Council must have the ability to decline applications for consent in this area if they are not appropriately designed or constructed, and the relevant planning provisions must provide clear guidance on appropriate assessment and safety measures.

**New rules in MRZ and NCZ chapters**

- 32 Although RNZ's submissions sought a qualifying matter over all relevant residential zones within 1,057 metres of RNZ's Facilities, the relief sought did not explicitly refer to rules in the MRZ, NCZ and Temporary Activities chapters as these formed a relatively small portion of the affected land.<sup>9</sup>
- 33 The Section 42A Officer considers changes are required to areas and rules to ensure consistency and clarity in the plan.<sup>10</sup> RNZ agrees with the Officer's recommendation to apply rules and controls consistently across the MRZ, NCZ and Temporary activity chapters.
- 34 RNZ agrees with the Officer's Report that the Panel can extend the application of rules and controls in this way, even though this was not sought in RNZ's submission, in reliance on clause 99(2)(b) of Schedule 1.

**LEGAL FRAMEWORK**

**Resource Management (Enabling Housing and Other Matters) Amendment Act 2021**

- 35 The Resource Management (Enabling Housing and Other Matters) Amendment Act 2021 (*Enabling Housing Act*) requires Council to

---

<sup>7</sup> At [179].

<sup>8</sup> At [181].

<sup>9</sup> At [184].

<sup>10</sup> At [187].

apply Medium Density Residential Standards (*MDRS*) to relevant residential zones, except that it may make the standards less enabling of development in a particular area if necessary to accommodate a qualifying matter.

- 36 Radiocommunication facilities are not listed in the National Policy Statement on Urban Development 2020 (*NPS-UD*) as “nationally significant infrastructure”, so are not an ‘automatic’ qualifying matter under section 77I of the Resource Management Act (*RMA*).
- 37 However, Council is able to identify as a qualifying matter “any other matter that makes high density, as provided for by the *MDRS* or policy 3, inappropriate in an area” provided the additional statutory tests requiring evaluation of the qualifying matter are met (sections 77J and 77L *RMA*). RNZ’s submissions step through these tests in full. We observe that Council’s Section 42A Officer has also considered the legislative requirements before forming the view that RNZ’s Facilities should be recognised as a qualifying matter in Variation 1. We note in brief that:
- 37.1 Although some development capacity will be limited by height limits within 528 metres of RNZ’s Facilities, most of these sites are currently single dwellings and many could be increased to two story dwellings without issue.
- 37.2 Within 1,057 metres of RNZ’s Facilities, development to *MDRS* may still be appropriate, subject to appropriate safety measures. It is submitted that, overall, the impact of the proposed qualifying matter on development capacity will be at least minor.<sup>11</sup>
- 37.3 The additional compliance costs for structures exceeding height limits is likely to be small in most cases, and in any case are a justified measure to ensure public safety.<sup>12</sup> RNZ is happy to work with developers to streamline EMR assessments and implementation as much as possible.
- 37.4 There is the potential for significant costs if the sought height limits are not imposed in Variation 1. For example mitigation of EMR issues in buildings, after construction is completed, could be complex and some issues may not even be solvable.
- 37.5 Section 77L requires consideration of the *NPS-UD* objectives. Importantly, Objective 1 includes people and communities being enabled to provide for their health and safety.<sup>13</sup> The need to increase urban development must be balanced

---

<sup>11</sup> Thus satisfying s 77J(3)(b).

<sup>12</sup> Section 77J(3)(c).

<sup>13</sup> As acknowledged in the *Officer’s Report: Part B – FENZ and RNZ* at [153].

against safety risk to achieve well-functioning and safe communities.

- 38 RNZ notes that it does not seek any other modifications to density standards other than the height limit. Furthermore, height limits within the operative (and proposed) Porirua District Plan are already limited to the same 10 metres sought by RNZ in this process, so the impact on current activities and development plans could be expected to be minor.
- 39 RNZ's considers the proposed height limits and controls achieve the greatest MDRS densities possible without compromising health and safety.<sup>14</sup> The evidence of Mr White and Mr Gledhill has established that there is a real risk from EMR fields associated with higher structures. The only way to manage this risk is with height limits.

**Proposed relief satisfies statutory tests**

- 40 As identified by Council's s42A Officer, provisions of the Enabling Act and the NPS-UD must be considered alongside the objectives and policies of the Regional Policy Statement. Here RNZ notes the importance of Policies 7 and 8 which require the benefits from renewable energy and regionally significant infrastructure to be recognised and for regionally significant infrastructure to be protected in regional and district plans.
- 41 Further, RNZ notes Policy INF-P1 in the Proposed District Plan requires the social, economic, environmental and cultural benefits of Regionally Significant Infrastructure<sup>15</sup> be recognised, including effective, reliable and future-proofed communications networks and services, that gives people access to telecommunication and radiocommunication services (INF-P1).

**REVERSE SENSITIVITY EFFECTS**

- 42 While these submissions and RNZ's evidence have focused on health and safety effects, RNZ notes that its transmitters across New Zealand are also particularly susceptible to reverse sensitivity effects. Mr White's rebuttal evidence accounts the expense RNZ was put to as a result of an isolated complaint about wind noise.
- 43 RNZ seek to avoid reverse sensitivity effects where possible as they have the ability to significantly restrain RNZ's operations. RNZ is a lifeline utility and its facilities perform a vital role in, among other things, providing news and information to the public and performing a civil defence role. The recent communication problems caused by

---

<sup>14</sup> Section 77L(c)(iii).

<sup>15</sup> RNZ's Facilities at Titahi Bay are identified as regionally significant infrastructure.

Cyclone Gabrielle emphasise the importance of preserving New Zealand's radio network, and particularly AM transmission facilities.

- 44 An increase in building heights within 528 metres of the mast significantly increases the risk of issues arising as new people move into the area. The risk is higher if they move into higher buildings, which will be exposed to higher field strengths than those experienced by existing residents.
- 45 This is a last resort for RNZ and is extremely disruptive and costly, particularly as there are no alternative sites which would be able to replicate the existing coverage and sites suitable for radio transmission infrastructure are difficult to secure.
- 46 RNZ notes that a limit on further development near the transmitter to within the current building envelope would also give effect to:
- 46.1 Objective 10 and Policy 8 of the Wellington RPS - Protecting regionally significant infrastructure – regional and district plans; and
- 46.2 Objective INF-O2 of the Proposed District Plan - The function and operation of Regionally Significant Infrastructure is protected from the adverse effects, including reverse sensitivity effects, of subdivision, use and development.

### **CONCLUSION**

- 47 Height limits and the split control regime proposed are the most appropriate approach (balancing all considerations) to protect people from unsafe EMR levels.<sup>16</sup> In RNZ's view, this does not significantly or unreasonably impact the provision for development capacity. Accordingly, RNZ's Facilities should be recognised as a qualifying matter under the Enabling Housing Act and Variation 1.

9 March 2023

Ben Williams / Hadleigh Pedler

---

<sup>16</sup> *Officer's Report: Part B – FENZ and RNZ* at [153] which agrees that there are no other viable middle-ground alternatives.