

Porirua proposed District Plan and Variation 1

Further comments by Martin Gledhill

1. Following our submissions of evidence, Steve White and I discussed the details of RNZ's EMF safety assessment and how it was produced and prepared our joint witness statement (JWS).
2. One of the key elements in that JWS was the determination of building or temporary structure heights at or below which there was reasonable certainty of exposures to electromagnetic fields (EMFs) complying with the public limits in NZS 2772.1:1999. I have graphed these heights, as a function of distance from the RNZ mast, in figure 1 below.

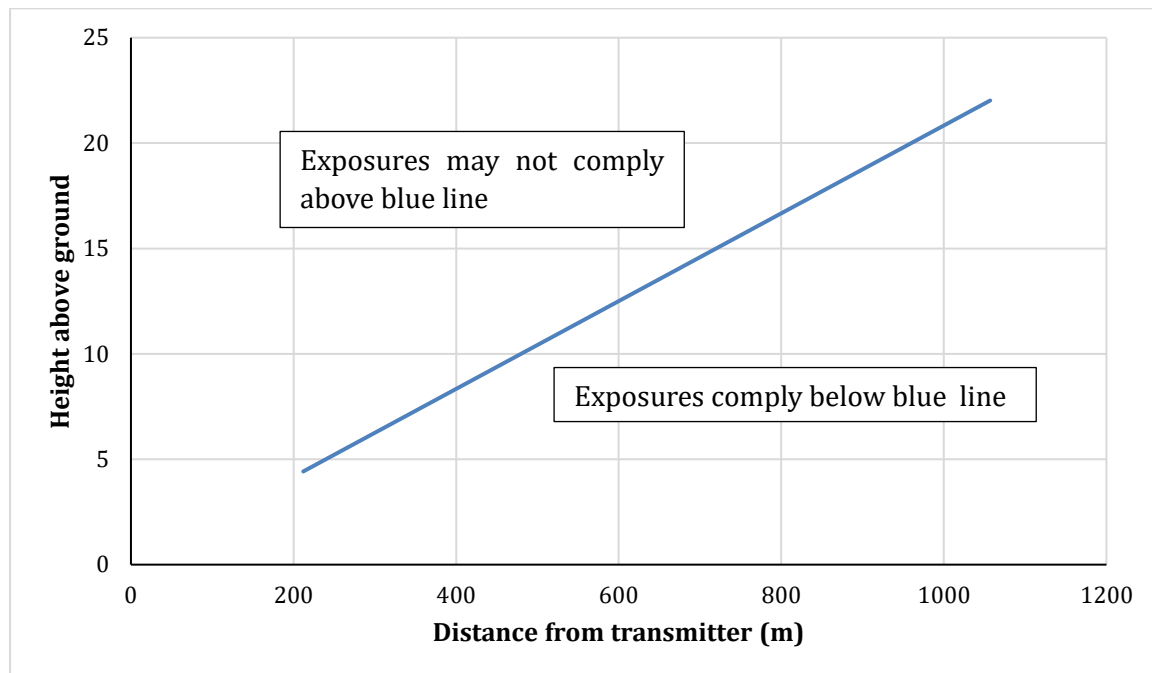


Fig 1. Heights above which EMF exposures may not comply with public limits in NZS 2772.1 as a function of distance from the RNZ Titahi Bay mast.

3. I would like to emphasise that this is a conservative evaluation. The calculations are based on worst-case assumptions, and the limits in NZS 2772.1 are also based on worst-case assumptions.
4. In the JWS we noted that an EMF assessment would only be required if building heights exceed the limiting height shown by the blue line in figure 1. Similarly, an EMF safety plan would only be needed if the height of construction equipment exceeded that limiting height.
5. Mr Smeaton's revised rules have only taken this into account at distances less than 528 m from the mast (Radio Transmission Height Control Area A (RTHCA-A)). At distances from 528 m to 1057 m (RTHCA-B) he proposes that an EMF assessment is required for proposed buildings taller than 11 m.
6. In addition, an EMF assessment is also required for temporary structures taller than 11 m in RTHCA-B.
7. I have plotted these revised rules in figure 2. Any building or temporary structure whose height is above the red line would require an EMF assessment.

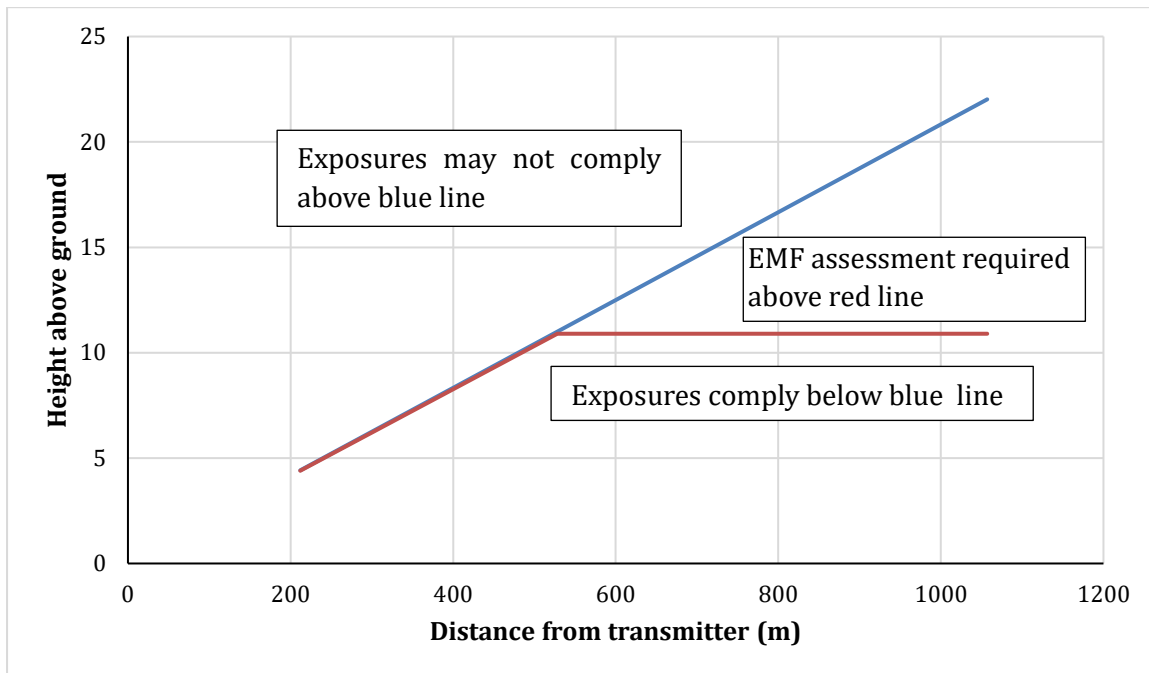


Fig 2. Heights above which EMF exposures may not comply with public limits in NZS 2772.1 as a function of distance from the RNZ Titahi Bay mast (blue line), and heights at which it is proposed that EMF assessment is required (red line).

8. In my opinion, there is no value in requiring an EMF assessment at heights below the blue line, because the conservative EMF analysis shows that exposures would comply with public limits. It would be preferable to simply have one RTHCA that extends out to 1057 m, and have the scope of AAP16 also extend out to 1057 m.
9. I note that Karen Williams for Kainga Ora has proposed an alternative rule that provides a closer approximation to the blue line but which may be easier for users of the Plan to use. I have plotted this as the green line in figure 3.

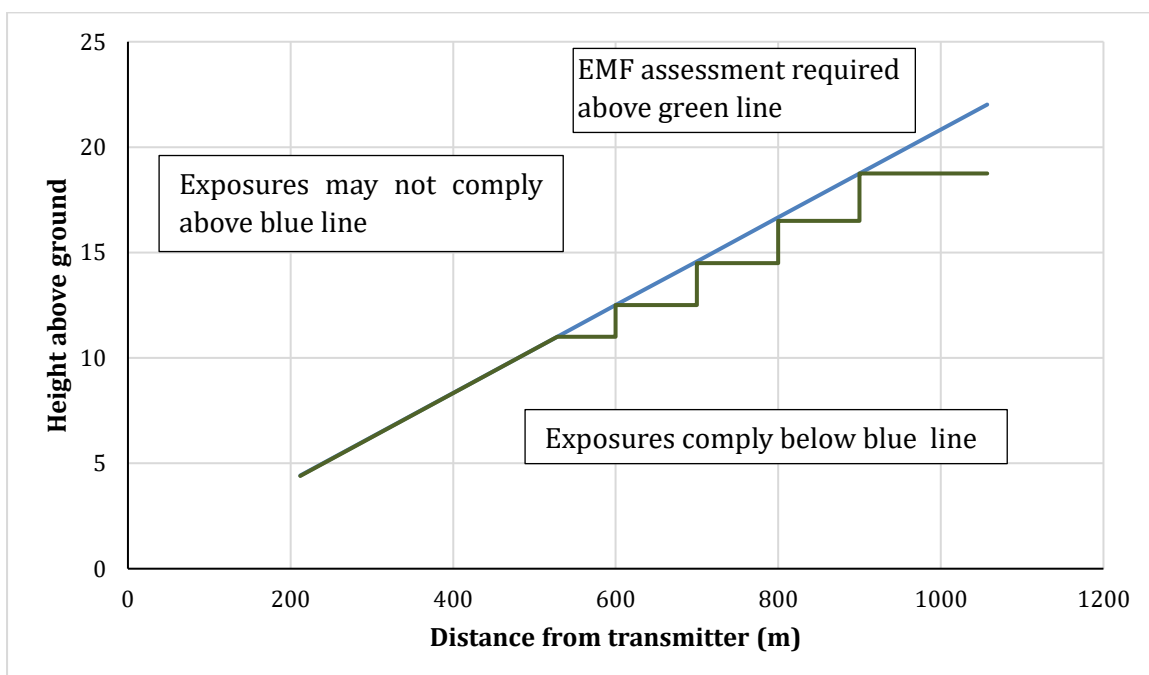


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10. In my opinion the rule proposed by Kainga Ora is preferable to that proposed by Mr Smeaton, and would result in far fewer unnecessary EMF assessments.