

# Submission Help Doc

## Section 2, Part 2.5 - CLOSE 27 JULY 2025

The Ministry for the Environment is currently seeking public comment on requests from the telecommunication industry for legislation permitting larger antennae, taller masts, and more cell towers. All of these increase the amount of electro-magnetic radiation (EMR).

The harmful effects of EMR have been reported worldwide and ignored by the Telco's and the NZ government. The real concern is that our electromagnetic environment has changed significantly in the last twenty years to levels that are increasingly harmful to people and the environment. The harmful effects will worsen as the current proposals aim to 'ease' the already loose restrictions on antenna installations.

There is no concern or protection for people's well-being in the proposed amendments to the legislation. By answering the six questions, we can demonstrate that there is public opposition to untested high-risk technology. The submission link is found below:

<https://consult.environment.govt.nz/resource-management/infrastructure-development-primary-sector-nd/consultation/>

Scroll down and you will see a table like this:

	Page	Response
<b>1) Enter your details</b>	<a href="#">Submitter details</a> (Required)	0 of 5 questions answered
<b>2) Complete the consent to release questions</b>	<a href="#">Consent to release your submission</a> (Required)	0 of 2 questions answered
<b>3) [Optional] attach a pdf and make comments</b>	<a href="#">Provide general feedback</a>	0 of 2 questions answered
<b>Infrastructure – section 2 part 2.5: National Environmental Standards for Telecommunication Facilities</b>	<a href="#">Infrastructure and development – section 1: Introduction</a> <a href="#">National Environmental Standards for Electricity Transmission Activities</a>	This page has no questions 0 of 18 questions answered
<b>4) Answer 6 Questions for the submission</b>	<a href="#">Infrastructure – section 2 part 2.5: National Environmental Standards for Telecommunication Facilities</a>	0 of 6 questions answered

The boxes in **RED** indicate what sections you need to complete

Alternatively: Email submission to: [info@mfe.govt.nz](mailto:info@mfe.govt.nz) OR Post your submissions to the National Direction Consultation, MfE, PO Box 10362, Wellington 6143.

**The next pages will help answer each of the 6 questions.**

# Overall background

## Standards

The main adverse effect – allowable electromagnetic exposure limits - is outside the scope of this review.

The New Zealand Standard (NZS 2772.1:1999) which sets the maximum allowable exposure of humans to EMR, is based on the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines. These were not meant to be used as safety standards and only consider short term thermal effects<sup>1</sup>, ignoring all other effects, and excluding those with metal implants. These guidelines are the least protective in the world, [most continues have adopted lower limits](#), Russia and China set the limit 100 times lower!

The [ICNIRP guidelines do not protect human health](#) from cumulative long-term exposure, and were never intended for 5G frequencies. Subsequent updates to ICNIRP guidelines have only increased the maximum allowable frequency and reduced the testing time. Effects of 5G frequencies on children, frail elders, people with implants, electro-sensitive members, and pets have not been tested. However, harmful effects from other radio frequencies such as [Wi-Fi and 4G are well-documented](#) in peer-reviewed science literature.

The New Zealand Standard (NZS 2772.1:1999) was written for 2G (3G introduced in 2006) based on the ICNIRP guidelines [despite heavy criticism from Dr Neil Cherry](#). We could never imagine then the level of electromagnetic waves that now permeate the air just 25 years later, but the NZS 2772.1:1999 has not been changed.

### **New Zealand Standard (NZS 2772.1:1999) facts:**

- Maximum exposure limit is 100 times greater than the majority of other countries.
- Tests are short term (6 minute and 30 minute) exposure. No provisions for long term exposure.
- Averages the peaks over time and reports only the average but essentially the peaks do the damage.
- Assumes thermal (heating) damage is the only effect.
- Originally written for 2G in 1999.
- Does not account for the cumulative action of multiple EMR sources that are present in the modern environment.

In 2008 the National Environmental Standard for Telecommunication Facilities (NES-TF 2008) was written to ease the processes of Telecommunications companies getting resource consent to install equipment. Revision of the maximum exposure limits were excluded from the scope.

In 2016 the NES-TF 2008 was revised to loosen restrictions for Telecommunications companies to get resource consent and install equipment (the original standard did not

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<sup>1</sup> Short term - 6 minutes exposure is set on the basis that human tissue will reach maximum heat by then. It is assumed that thermal damage (e.g. a burn from hot water) is the only mechanism that can cause effects.

foresee the amount of infrastructure required with 4G which rolled out in 2015/16). Once again the maximum exposure limits were excluded from revision.

Now in 2025 a third revision is proposed, another loosening of restrictions, by making the installation of telecommunication facilities (cell towers) a 'permitted activity' so no resource consent is needed.

*"Greater numbers of residential buildings exceed the height of telecommunication poles, which increases the likelihood of black spots and 'connectivity disruptions'. To work around the NES-TF, providers must either build more, smaller poles to maintain coverage, pursue lease arrangements to place antennas on buildings, or obtain resource consents for telecommunications facilities that do not meet activity standards. The telecommunication sector has told the Government this situation is becoming uneconomic, expressing a need for changes to the permitted heights of telecommunication poles."* – page 44, [Package 1: Infrastructure and development – Discussion document](#)

The proposal to permit larger antennas and cabinets and higher cell towers is to bring in the next generation of millimeter beam forming technology. This will generate a massive increase in high-frequency electromagnetic radiation that the public is constantly exposed to. There is enough scientific evidence that existing [3G, 4G and WiFi are causing harm](#). 5G has not been safety tested before being deployed. There are a growing number of [studies of 5G](#) (it is early days) that show a harmful trend similar to other pulsed microwaves.

The Ministry's proposal should be using a precautionary approach rather than a permissive approach.

## **The Need?**

The necessity for the intensification of the telecommunications infrastructure is not clear, claiming to 'meet the connectivity needs of New Zealanders'. What exactly are the 'connectivity needs'? – Emergency phone service? High speed 5G for smooth virtual reality gaming and high resolution mobile streaming?

The 5G rollout means the shutting down of the 3G network in 2026 which will disconnect Kiwis' from emergency phone service and many machines that rely on the 3G service. Some phones which claim to be [4G compatible may not work](#) for emergency services. 3G is more suited for rural communication as demonstrated in [Australia's recent 3G shutdown](#) where the coverage degraded significantly despite having '4G' phones.

There is no general public necessity for this technology as [5G adoption is low](#).

*"Uptake of 5G fixed wireless remains limited, with residential connections increasing only slightly – from 5,500 to 7,600."* Page 9, [Telecommunications-Monitoring-Report-30-June-2025](#)

Furthermore the [majority \(87%\)](#) of New Zealanders have access to fibre for high speed connectivity. This 'need' and 'demand' for connectivity is an illusion. It is necessary for the internet of things and smart cities where millions of sensors and cameras talk to each other in real time. It is not necessary for Kiwis' connectivity. The existing 3G and 4G is more than adequate.

## Provide general feedback (optional)

You can provide general comments on this consultation, and upload one PDF to support your submission in this section

### Any general feedback on the consultation

Add your comments, ideas, and feedback here

***Pick an idea and explain in your own words (optional).***


- How will we know if our responses will be fairly considered?
- The scope of the questions is very narrow.
- Precautionary principle should be applied instead of easing restrictions.
- The most important issue is not open for comment. It is the absence of a Standard that is based on the technology proposed, and has as its purpose to protect public health.

### Upload any additional supporting documentation (optional)

To make sure your response can be read, please upload in a .pdf format.

Upload documentation

Please make sure your file is under 25MB

 Choose file

No file chosen

## Infrastructure – section 2 part 2.5: National Environmental Standards for Telecommunication Facilities

**51. Do the proposed provisions sufficiently enable the roll-out or upgrade of telecommunication facilities to meet the connectivity needs of New Zealanders?**

- ☐ Yes
- ☐ Yes, with changes
- ☒ No
- ☐ Unsure

**Explain your answer here (optional):**

### Background on the issue

The necessity of the intensification of the telecommunications infrastructure is not clear, claiming to 'meet the connectivity needs of New Zealanders'. What exactly are the



‘connectivity needs’? – Emergency phone service? Or high speed 5G for virtually reality gaming and high resolution mobile streaming?

The 5G rollout means the shutting down of the 3G network in 2026 which will disconnect Kiwis’ from emergency phone service and many machines that rely on the 3G service. Some phones which claim to be [4G compatible may not work](#) for emergency services. 3G is more suited for rural communication as demonstrated in [Australia’s recent 3G shutdown](#) where the coverage degraded significantly despite having ‘4G’ phones.

There is no general public necessity for this technology and [5G adoption is low](#).

*"Uptake of 5G fixed wireless remains limited, with residential connections increasing only slightly – from 5,500 to 7,600." Page 9, [Telecommunications-Monitoring-Report-30-June-2025](#)*

Furthermore the majority (87%) of urban New Zealanders have access to fibre for high speed connectivity. A rural fibre rollout should be seen as a far safer method of connection instead of the high power high frequency 5G spectrum.

This ‘need’ and ‘demand’ for connectivity is an illusion. It is necessary for the internet of things and smart cities where millions of sensors and cameras talk to each other in real time. It is not necessary for Kiwis’ connectivity. The existing 3G and 4G is more than adequate.

***Pick an idea and explain in your own words (optional).***

- [Majority \(87%\)](#) of New Zealanders have access to fast reliable internet by fibre-optic cable. Having fibre optic cable is more valuable to most kiwis than having 5G.
- With the 5G rollout, [3G is being shut down](#). This will disconnect many New Zealanders from emergency phone service.

“We can see up to 200,000 to 300,000 3G phones and tablets out there in use” – Anonymous Telco

- [3G is being shut down](#) to make room for 5G. This will affect mobile phones, vehicle/fleet tracking devices, SOS devices, EFTPOS machines, medical alert devices, security systems, farm equipment, emergency phones in lifts etc.
- Some phones which claim to be [4G compatible may not work](#) for emergency services.
- 3G is better for rural areas as demonstrated by [Australia’s experiment](#).
- Rural new Zealander’s are not being provided with fibre, this is an equity issue.
- Are the improvements to connectivity a ‘need’ or a ‘commercial promotion’?
- People cannot meet basic needs while government is allied with an industry fabricating demand for ‘connectivity’.
- What exactly are the ‘connectivity needs’? – Emergency phone service with 3G? Millions of small business EFTPOS transactions currently relying on 3G? High speed 5G for smooth virtual reality gaming and high resolution mobile streaming?
- Who determined the ‘connectivity needs’? Is it from the public needing this proposed technology, or is it a commercial push not to be left out of the bandwagon.

## 52. Which option for proposed amendments to permitted activity standards for telecommunication facilities do you support?

Which options do you support:

	I support option 1	I support option 2	I don't support either option
Maximum pole heights	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Limits on headframes on poles in the road reserve	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Antennas on buildings	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Do you support the proposed amendments to the activity standards:

For lines customer connection lines to a heritage building non-compliance with the

	Yes	No	Unsure
Cabinets in the road reserve	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Antennas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

proposed standard should be a:

- ☐ Controlled activity
- ☒ Restricted discretionary activity

Explain all your answers here:

### Background on the issue

*“Greater numbers of residential buildings exceed the height of telecommunication poles, which increases the likelihood of black spots and ‘connectivity disruptions’. To work around the NES-TF, providers must either build more, smaller poles to maintain coverage, pursue lease arrangements to place antennas on buildings, or obtain resource consents for telecommunications facilities that do not meet activity standards. The telecommunication sector has told the Government this situation is becoming uneconomic, expressing a need for changes to the permitted heights of telecommunication poles.”* – page 44 [Package 1: Infrastructure and development – Discussion document](#)

The purpose of permitting larger antennas and cabinets and higher cell towers is to bring in the next generation of millimeter beam forming technology. This will generate a massive increase in high-frequency electromagnetic radiation. [There is enough scientific evidence that existing 3G, 4G and WiFi are causing harm](#). There are a growing number of [studies of 5G](#) after installation (it is early days) and they show a similar trend to other pulsed microwaves. The proposals will lead to an increase in the level of electromagnetic radiation that the public is constantly exposed to.

***Pick an idea and explain in your own words (optional).***

- There is no Environmental Safety Standard for the new 5G technology. Therefore the precautionary principle should be applied.
- The proposals increase the sizes of masts and antennas.
- This is a commercial favour by the government to reduce costs for the telcos. “The telecommunication sector has told the Government this situation is becoming uneconomic, expressing a need for changes to the permitted heights of telecommunication poles.”
- There is no setback (minimum distance) for antenna from homes and schools. In the [UK there is a principal of 500 meters](#) setback from homes, hospitals and education centres.
- Allowing cell towers on private buildings opens the risk of accidental exposure above the maximum allowable exposure limit if the owners go onto the roof.
- Allowing cell towers on private buildings exposes nearby occupants to high levels of electromagnetic radiation.
- Permitted activity’ means local community members have no say, even when they are directly affected. The proposals take away democracy.
- Heritage is protected for a reason, perhaps the historical value is more important than fast internet?

**53. Do the proposed provisions appropriately manage any adverse effects (such as environmental, visual or cultural effects)?**

- ☐ Yes
- ☒ No
- ☐ Unsure

**Explain your answer here (optional):**

**Background on the issue**

The main adverse effect – allowable electromagnetic exposure limits - is outside the scope of this review.

The New Zealand Standard (NZS 2772.1:1999) which sets the maximum allowable exposure of humans to EMR, is based on the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines. These were [not meant to be used as safety standards and only consider short term thermal effects](#)<sup>2</sup>, ignoring all other effects, and excluding people with metal implants. Further, more any one with implants including pacemakers were excluded from consideration when setting the exposure limits.

Effects of 5G frequencies on children, frail elders, people with implants, electro-sensitive members, and pets have not been tested. However, harmful effects from other radio frequencies such as [Wi-Fi and 4G](#) are well-documented in peer-reviewed science literature. There are a growing number of [studies of 5G after installation](#) (it is early days) that show a harmful trend similar to other pulsed microwaves.

The New Zealand Standard (NZS 2772.1:1999) was written for 2G (3G introduced in 2006) based on the ICNIRP guidelines [despite heavy criticism from Dr Neil Cherry](#). We could never imagine then the level of electromagnetic waves that now permeate the air just 25 years later, but the Standard has not been changed.

In 2008 the National Environmental Standard for Telecommunication Facilities (NES-TF 2008) was written to ease the processes of Telco's getting resource consent to install equipment (the original standard did not foresee the amount of equipment needed for 3G). New Zealand Standard (NZS 2772.1:1999) maximum exposure limits remained unchanged.

In 2016 the NES-TF 2008 was revised to loosen restrictions for Telco's to get resource consent and install equipment (the original standard did not foresee the amount of infrastructure required with 4G which rolled out in 2015/16). Once again the maximum exposure limits were excluded from the scope of the regulations.

Now in 2025 a third revision, another loosening of restrictions, is making the installation of telecommunication facilities (cell towers) a 'permitted activity' so no resource consent is needed. We believe the precautionary principle should be applied instead of easing restrictions.

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<sup>2</sup> Short term - 6 minutes exposure are set on the basis will reach its maximum heat by then. It is assumed that thermal damage (e.g. a burn from hot water) is the only mechanism that can cause effects.

***Pick an idea and explain in your own words (optional).***

- The precautionary principle should be applied instead of easing restrictions.
- By loosening restrictions the proposed changes will significantly increase adverse effects on human health and environment.

**Health**

- The main adverse effect – allowable electromagnetic exposure limits - is out of the scope of this review. This should be the primary concern and subject to review.
- Precautionary principle should be applied instead of easing restrictions.
- The New Zealand Standard (NZS2772.1:1999):
  - Is based on recommendations from 1998, is being used to set the safety limit for modern wireless technology.
  - Was not written for 5G.
  - Has no protection for long term cumulative exposure.
  - Has no protection for the effects of EMR on the environment.
- 5G has not been tested for safety and the proposal does not address this.
- 5G has not been tested for long term chronic exposure.

**Visual**

- 5G has low transmissibility, and needs antennas every 100 meters.
- The proposal encourages the intensification of installing towers and cabinets. The current infrastructure is already highly noticeable throughout NZ.

**Cultural**

- The proposed changes presume rather than demonstrate the need for 'connectivity',
- Counter to current efforts to reduce overuse of cell phones, particularly among young people.

**Environmental.**

- Will the proposed provisions put people's health and our environment at risk, as the new technology has not been tested?
- Fibre is more environmentally friendly than wireless (Wireless uses lots of energy!)
- Cell towers use a lot of rare earth minerals to manufacture, an unseen cost.
- 5G requires 3 to 4 times the amount of power used by 4G LTE.
- Four more hydro dams has been foreseen, leading to greater loss of wildlife habitat.
- [Biologists have warned](#) that bird life will be harmed by reducing safe nesting habitat, mating and fledging, and interference with migration.
- [EMR may be a factor in Insect decline](#) including [bees](#).
- Previous standard tied back to the local environment (e.g. existing pole size).

**54. Do the proposed provisions place adequate limits on the size of telecommunication facilities in different zones?**

- ☐ Yes
- ☒ No
- ☐ Unsure

**Explain your answer here (optional):**

**Background on the issue**

Larger equipment = more radiation.

If size didn't matter you would not see cell towers because they would make them small.  
To radiate more power you need bigger equipment.

***Pick an idea and explain in your own words (optional).***

- The proposal increases the allowable size of telecommunication facilities instead of placing adequate limits on them.
- In Rural Zones there is a 50 meter setback. This type of policy needs to be introduced to residential, educational, and public zones as well as the size limitation requirement.
- The existing standard and the current proposal do not put distance limits (setback) on how close cell masts can be to people's homes or schools.
- Size limits do not address the quantity and power of EMR emissions.
- No consideration is given to the cumulative effect of existing 4G emissions plus the increasing use of 5G pulsed radiation from larger equipment.

**55. Should a more permissive approach be taken to enabling telecommunication facilities to be inside rather than outside the road reserve?**

**Explain your answer here (optional):**

- ☐ Yes
- ☒ No
- ☐ Unsure

**Explain your answer here (optional):**

## **Background on the issue**

Every revision of the National Environmental Standard for Telecommunication Facilities (NES-TF) has progressively loosened restrictions. This proposal does the same.

***Pick an idea and explain in your own words (optional).***

- There are already too many allowances for poles and cabinets inside and outside the road reserve.
- Distance should be a major health concern.
- Placing antennae close to people is a known health risk.
- The current rural zone the wording is very clear - *"50-metre setback from any building used for residential or educational purposes"*. The proposed wording is obscure *"building used for sensitive activities on a neighbouring property"*. Keep the original wording.
- The existing 50 meters setback in rural zones needs to be amended to 500 meters.
- A setback requirement of 500 meters is needed for all educational zones (school zones).
- A setback requirement of 500 meters for residential zones should be introduced.
- There is no compensation for loss of real estate value when a cell pole is placed in the community.
- Cell towers and cabinets change the visual character of the streets.
- The local community must have a fair voice. Making the approach more permissive takes away the local community say.
- There are warnings signs on cell towers "RF EXPOSURE AREA". Residents living in close proximity have a right to full disclosure of all biological effects and why there is such a sticker. There is no mention of this in the proposal.





**56. Do you support the installation and operation of fewer larger telecommunication facilities to support co-location of multiple facility operators?  
i.e. more than one mobile network operator sharing multiple sets of telecommunication equipment on a cell tower**

- ☐ Yes
- ☒ No
- ☐ Unsure

**Explain your answer here (optional):**

### **Background on the issue**

Each of the telecommunications companies has their own equipment to transmit signals. They do not share antennae/transmitters so each telco needs a set of antennae in each spectrum. This leads us to the situation where there are multiple sets of antennae in the same area. The new proposal will allow for bigger towers to fit multiple sets of antennae for different providers (they share the pole, not the antennae)

***Pick an idea and explain in your own words (optional).***

***Note: This refers only to rural, commercial and industrial sites.***

- This will allow Telecommunications facilities to build larger towers (5m+ height) on the basis that they are 'shared'.
- The total number of cell towers will increase with the role out of 5G. Putting them on one pole will not change this as each provider wants their own network equipment.
- Multiple sets of telecommunication equipment means the radiation in that area will be higher.
- Telcos should share antennae rather than poles to reduce material costs, electricity costs and address the visual aspect.

### **To Finish the Submission**

CLICK CONTINUE,

CLICK FINISH,

CLICK SUBMIT RESPONSE.

Submissions close on **27 July 2025.**