



29 September 2023

Ref: DOIA 2324-0247

Wendy Pond

Email: [fyi-request-23714-48110850@requests.fyi.org.nz](mailto:fyi-request-23714-48110850@requests.fyi.org.nz)

Tēnā koe Wendy Pond

Thank you for your email of 5 August 2023 to the Ministry of Business, Innovation & Employment (MBIE) requesting, under the Official Information Act 1982 (the Act), the following information:

*Q 1. This is a question regarding the public health and safety of households who have had a 4G — 5G cell tower erected beside their home.*

*(i.) Please identify and quote the legislation that states the limit for safe public long term exposure to radio frequency electric fields transmitted from telecommunication cell towers. Note that the AS/NZS 2772.2:2016 standard permitting 3kHz — 300 GHz in the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016, s55(6) does not describe the limit for safe public exposure to electro magnetic radiation. 3kHz — 300 GHz is a band width, not a residential exposure limit.*

*(ii.) Please identify which Act of parliament gives effect to the regulation, code, rule or whatever it is that states the limit for public exposure.*

*(iii.) Please provide the original source of this exposure limit. (e.g., is it ICNIRP)*

*Q 2. The New Zealand limit for public exposure, 41.25 V/m for a field of 900 MHz, is listed in the WHO Global Health Observatory Data Repository by Country. (i.) Please state where this limit appears in New Zealand legislation. (ii.) Please confirm that cell towers transmitting 4G and 5G are required to observe this limit.*

*Q 3. Please state which entity is the monitoring authority for cell tower emissions.*

*Q 4. Please state which entity is responsible for issuing licenses for transmission of 4G and 5G, and state how I go about obtaining copies of the licences.*

On 30 August 2023, MBIE advised that your request was being extended by an additional 20 working days, to allow for necessary consultations. I am now in a position to respond.

Please see MBIE's responses to your questions below.

**Q 1. This is a question regarding the public health and safety of households who have had a 4G — 5G cell tower erected beside their home.**

**(i.) Please identify and quote the legislation that states the limit for safe public long term exposure to radio frequency electric fields transmitted from telecommunication cell towers. Note that the AS/NZS 2772.2:2016 standard permitting 3kHz — 300 GHz in the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016, s55(6) does not describe the limit for safe public exposure to electromagnetic radiation. 3kHz — 300 GHz is a band width, not a residential exposure limit.**

The limits for radiofrequency field exposures are set out in the New Zealand Standard NZS 2772.1:1999. This Standard provides limits for public exposure to radiofrequency radiation produced by radio transmitters, including cell towers. It sets limits for radiofrequency fields in the frequency range 3 kHz – 300 GHz.

A standard has to be incorporated by reference in legislation or delegated legislation in order for it to be mandatory. Once referenced, the standard becomes part of the technical regulation framework. The New Zealand Standard is incorporated into the regulation framework by way of the Resource Management (National Environmental Standards for Telecommunication Facilities or NESTF) Regulations 2016.

More information about the relationship between standards and New Zealand's regulation framework can be found here: <https://www.standards.govt.nz/about/explaining-standards/regulations-and-standards/>. Further reading about 5G technology and safety information can be found in MBIE's 5G information pack here: <https://www.mbie.govt.nz/dmsdocument/7483-5g-information-pack-pdf>.

**(ii.) Please identify which Act of parliament gives effect to the regulation, code, rule or whatever it is that states the limit for public exposure.**

As set out above, the Resource Management (NESTF) Regulations 2016 incorporate the New Zealand Standard that sets the limits on the exposures to radiofrequency fields produced by cell sites and other transmitters.

The main government agencies involved in regulating telecommunications industry activities and monitoring health issues in New Zealand are the following:

- MBIE is responsible for establishing the telecommunications regulatory environment, including setting the rules within which telecommunications companies operate. MBIE is also responsible for making frequency bands available for new uses and users.
- The Ministry for the Environment is responsible for regulatory controls under the Resource Management Act (RMA) 1991, including national environmental standards.
- The Ministry of Health is responsible for expert advice on health effects from electromagnetic fields and closely monitors the research in this area, including the frequencies expected to be used for 5G technologies.

**(iii) Please provide the original source of this exposure limit. (e.g., is it ICNIRP)**

The Exposure Standard's limits are recommended by the International Commission on Non-Ionizing Radiation Protection, which the World Health Organization recognises for its independence and expertise in this area. The limits are set at levels 50 times below those at which health effects might occur. More information about the Standard is available at: <https://www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/radiofrequency-field-exposure-standard>.

The ICNIRP Guidelines on Limiting Exposure to Electromagnetic Fields were updated in March 2020, and can be found here: <https://www.icnirp.org/en/activities/news/news-article/rf-guidelines-2020-published.html>.

The Ministry of Health convenes a technical advisory committee (the Interagency Committee on the Health Effects of Non-Ionising Fields) to review new research and information on radiofrequency fields. The committee meets every six months to determine whether new research might require changes to current policies and recommendations on exposures to radiofrequency fields. The committee also prepares a report to Ministers every few years: the most recent version was published in 2022 and is available at: <https://www.health.govt.nz/publication/interagency-committee-health-effects-non-ionising-fields-report-ministers-2022>.

**Question 2: The New Zealand limit for public exposure, 41.25 V/m for a field of 900 MHz, is listed in the WHO Global Health Observatory Data Repository by Country.**

**(i.) Please state where this limit appears in New Zealand legislation.**

As set out above, the New Zealand limit for public exposure is set out in the New Zealand Standard, reflected in the Resource Management (NESTF) Regulations 2016.

**(ii.) Please confirm that cell towers transmitting 4G and 5G are required to observe this limit.**

The Resource Management (NESTF) Regulations 2016 require that all facility operators, regardless of the technology used (e.g., including 4G and 5G), comply with those limits.

**Question 3: Please state which entity is the monitoring authority for cell tower emissions.**

As mentioned above, there are regulations in place under the RMA 1991 that require regulated facility operators (e.g., mobile network operators such as Spark, 2Degrees and One New Zealand) to ensure that exposures near cell sites comply with the limits in the New Zealand Exposure Standard. These regulations are the Resource Management Regulations 2016 (the NESTF).

Before a cell tower site is constructed, the site operator is required to submit a report to the local authority predicting whether exposures in areas around the site that are reasonably accessible to the public will comply with the public limit in the New Zealand Exposure Standard. This report must take into account exposures from existing sites nearby.

The NESTF do not require routine monitoring of exposures from all cell tower sites. If exposure levels from a site are predicted to exceed 25 per cent of the public limit in the New Zealand Exposure Standard (but still be less than the public limit), once the site is operating the site operator must submit evidence (normally in the form of a measurement report) to the local authority where the site is located within three months of commencing operation to confirm that exposures do comply with the public limit. You can view the applicable regulations here:

<https://www.legislation.govt.nz/regulation/public/2016/0281/30.0/DLM6986006.html>.

Some mobile phone network operators commission independent monitoring of exposures to radiofrequency fields in public areas near their cell towers. This monitoring finds that exposures are typically less than one per cent of (one hundred times lower than) the limit set for the public in the New Zealand Standard. Results from independent monitoring of sites is available at:

<https://www.tewhatauora.govt.nz/our-health-system/environmental-health/non-ionising-radiation/independent-cellsite-monitoring/>.

**Question 4: Please state which entity is responsible for issuing licenses for transmission of 4G and 5G, and state how I go about obtaining copies of the licences.**

Spectrum licences are granted by the owner of a management right. Management rights can be owned by the Crown or private entities. The management rights for the frequency bands used for 4G and 5G transmissions are owned by the mobile network operators (e.g. Spark, 2degrees, One New Zealand). Spectrum licences under these management rights are recorded in the register of radio frequencies (RRF). The RRF holds information regarding assigned frequency use, including licence details and the time period for which the licence has been allocated. The RRF can be found here [rrf.rsm.govt.nz/ui?state=1](http://rrf.rsm.govt.nz/ui?state=1). More information about licensing in New Zealand can be found here: [www.rsm.govt.nz/licensing/licensing-in-new-zealand/](http://www.rsm.govt.nz/licensing/licensing-in-new-zealand/).

MBIE has a dedicated Radio Spectrum Management unit that periodically audits compliance with licences, for radio spectrum and interference management purposes, including whether they are operating within the conditions and specifications of their licences.

I trust you find this information useful. If you wish to discuss any aspect of your request or this response, or if you require any further assistance, please contact [OIA@mbie.govt.nz](mailto:OIA@mbie.govt.nz).

You have the right to seek an investigation and review by the Ombudsman of this decision. Information about how to make a complaint is available at [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz) or freephone 0800 802 602.

Nāku noa, nā



Daniel O'Grady  
**Manager Radio Spectrum Management Policy and Planning**  
Digital, Communications & Transformation