



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

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**WESTERN BOP
DISTRICT COUNCIL**

Dear Miriam Taris,

Community concerns with cell sites and new technologies

We have recently noticed a significant increase in the concerns raised within communities regarding cell sites and new telecommunications technologies such as '5G'. This includes concerns ranging from involvement in resource management processes on siting of telecommunications facilities, to queries about what 5G and future cellular technologies will be able to do, plus the potential health effects of an increase in transmitters and receivers.

The Ministry of Business, Innovation and Employment (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, including bands for the 5G network.

We acknowledge the vital role that local government plays in administering, managing, monitoring and enforcing the Resource Management Act 1991 (RMA). National Environmental Standards (NES) have been developed to ensure a consistent standard for an activity or resource, providing rules that balance the needs of the various parties involved. Councils must put NES into practice through their plans, and then enforce them.

The Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2016 (NESTF 2016) enables network operators to install low impact telecommunications infrastructure without the need to apply for resource consent, provided that they meet specified conditions around size, location and noise. It also sets a national standard for radiofrequency exposure for all telecommunications infrastructure, which is in line with best international advice.

The New Zealand exposure standard, NZS 2772.1¹⁸⁷, is designed to limit public exposures to levels at least 50 times below those at which harm might occur. These limits protect people of all ages, including children. NZS 2772.1's limits are recommended by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which the World Health Organisation (WHO) recognises for its independence and expertise in this area. Compliance with the limits is mandated under the NESTF 2016. The Ministry of Health advises that the New Zealand standard is based on the best available international advice and the Ministry of Health regularly reviews ICNIRP's advice.

¹⁸⁷ NZS 2772.1:1999 *Radiofrequency fields – Maximum exposure levels – 3 kHz to 300 GHz*. See Ministry of Health. 2019. URL: www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/radiofrequency-field-exposure-standard

We are advised that exposures from 5G transmitters will be similar to those from the current technologies. However, if there is high demand in a particular area, more sites will be installed. Because each site will be serving a smaller area, they will operate at lower power which will have the effect of lowering exposures.

Attached is some information that may be of interest to support your work with communities and the telecommunications operators.

We encourage all local authorities to let their local communities know about how they interact with network operators about identifying sites for cell sites, how they enforce the provisions of NESTF, and how communities can access information about cell sites.

Yours sincerely



James Hartley
General Manager
Commerce, Consumers and Communications

cc Hon Kris Faafoi, Minister of Broadcasting, Communications and Digital Media

Attachment 1: Cellular technology - roles and responsibilities

Cellular technologies

Over the last few decades there have been regular releases of mobile phone technology. The first version was called the first 'Generation' or 1G, the one we are currently using is 4G, and the next release will be 5G, or 5th Generation technology. In the coming years, 5G will build on the services we take for granted using 4G, just as 4G enabled sending and receiving of information faster than the previous generations.

Government regulation

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

- the Ministry of Business, Innovation and Employment (MBIE), which is responsible for establishing the telecommunications regulatory environment, including setting the rules within which the telecommunications companies operate. MBIE is also responsible for making frequency bands available for new uses, including bands for the 5G network
- the Ministry for the Environment, which is responsible for regulatory controls under the Resource Management Act 1991 (RMA), including national environmental standards
- the Ministry of Health, which 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.

MBIE

Radio Spectrum Management (RSM) is the group in MBIE responsible for the technical aspects of 5G deployment. MBIE is working with interested parties on technical matters regarding preparing for allocation of the 3.5 GHz band. In March 2018, RSM released the discussion document *Preparing for 5G in New Zealand*, seeking feedback on government's preparations for use of 5G. The full document and submissions are available on the RSM website: www.rsm.govt.nz/projects-and-auctions/consultations/preparing-for-5g-in-new-zealand-technical-consultation/.

The frequencies to be used by 5G cell sites and devices are similar to those that have been used by existing technologies for many years, and are covered by the limits in New Zealand Standard 2772.1.¹⁸⁸ Developing or reviewing a New Zealand Standard involves processes coordinated through Standards New Zealand and include convening expert committees and undertaking public consultation on draft standards.

All radio transmitters in New Zealand must either be licensed by a radio licence, spectrum licence or general user licence, or have an exemption from licensing. Details of individual spectrum licences issued for each radio transmitter are searchable in a public register, the Register of Radio Frequencies at: www.rsf.rsm.govt.nz/smart-web/smart/page/-/smart/WelcomePage.wdk.

Ministry for the Environment

The Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016 (NESTF 2016) require that all cell sites, including those that use 5G technologies, comply with those limits. All network providers rolling out a 5G network are required to comply with the relevant provisions of the NESTF 2016, the RMA and the relevant resource management plans.

¹⁸⁸ NZS 2772.1:1999 *Radiofrequency fields – Maximum exposure levels – 3 kHz to 300 GHz*.

The process to develop National Environmental Standards is governed by the RMA and is led by the Ministry for the Environment. The NESTF was initially introduced in 2007 following public consultation. Following a review in 2013, amendments to the NESTF were proposed and finalised in 2016 and came into force in January 2017.

Information about National Environmental Standards and the NESTF is available on the Ministry for the Environment website: www.mfe.govt.nz/rma/national-direction/national-environmental-standards/national-environmental-standards-0

Ministry of Health

The Ministry of Health is responsible for setting human health exposure limits for non-ionising radiation. The limits set out in NZS 2772.1 are based on international exposure limits issued in guidance by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), an independent advisory board that works in collaboration with the World Health Organisation (WHO). The ICNIRP has reviewed and reaffirmed these limits periodically (most recently in 2017)¹⁸⁹ and it bases any changes to them on the findings of health research, and not the requirements of telecommunications or other industries. Further information can be obtained from the ICNIRP website (www.icnirp.org/) and the WHO International Electric and Magnetic Fields Project website (www.who.int/peh-emf/project/en/).

Existing research on the possible health effects of radiofrequency fields applies as much to 5G as to any other radio system in use. To keep up to date with research, the Ministry of Health convenes an expert advisory committee, known as the Interagency Committee on the Health Effects of Non-Ionising Fields (the Committee). The Committee meets every six months and provides the Director General of Health with high quality, independent scientific and technical advice on this matter. The Committee has considered the issue of 5G deployment and has concluded that there is nothing in the latest research that would indicate there is a need to change current policy settings relating to the health effects of exposure to electromagnetic fields from cellular mobile technology.

Information on exposure levels for specific cell site installations is held by local authorities. More information about national environmental standards and the NESTF are available through the Ministry for the Environment website.

Some independent cell site monitoring reports are also available through the Ministry of Health website at: www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/independent-cellsite-monitoring.

For more information, refer to the Ministry of Health's latest 5G and Health factsheet and information about the work of the interagency committee at: www.health.govt.nz/system/files/documents/topic_sheets/5g-and-health-aug19.pdf; and www.health.govt.nz/our-work/environmental-health/non-ionising-radiation.

Compliance

There is a range of international and Australia/New Zealand standards that industry adheres to. In New Zealand, all electronic products, including 5G equipment, is required to comply with existing equipment standards. A key safety standard is the public exposure limits set in NZS 2772.1. Compliance with NZS 2772.1 is governed via the RMA and then through the NESTF by local authorities.

Checks that radiocommunications equipment comply with the exposure limits in NZ 2772.1 are carried out by cellular network operators in line with joint standard AS/NZS 2772.2:2016

¹⁸⁹ International Commission on Non-Ionizing Radiation Protection. 2017. *Revision of the HF Guidelines*. Munich: International Commission on Non-Ionizing Radiation Protection. URL: www.icnirp.org/en/activities/news/news-article/revision-of-hf-guidelines-2017.html

Radiofrequency fields – Part 2: Principles and methods of measurement and computation – 3kHz to 300 GHz (AS/NZS 2772.2). Both these standards are referenced in the NESTF.

Under the NESTF, a cellular network operator needs to provide a pre-commencement report for a new cell site to the relevant local authority before the facility becomes operational, and must be prepared in accordance with AS/NZS 2772.2. The pre-commencement report predicts whether radiofrequency field levels in areas reasonably accessible to the public will comply with the public limits in NZS 2772.1 and must take into account existing exposures from other telecommunications facilities in the vicinity. If the facility does not comply with the public limits, a resource consent is required and the local authority would consider this as part of its normal RMA consent processes. If the prediction provided in the pre-commencement report is 25 per cent of the maximum level authorised by NZS 2772.1, a post commencement report must also be provided within three months of the facility becoming operational.