



MP for Mana

Minister of Broadcasting, Communications
and Digital Media

Minister for Government Digital Services

Minister of Commerce and Consumer Affairs

Associate Minister of Housing (Public Housing)

OIA 19-98

Lesley Jacobs

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- 9 SEP 2019

Dear Lesley Jacobs

Thank you for your email of 2 August 2019 via the FYI website to the Office of the Prime Minister regarding 5G technology, safety checks, possible health impacts and consultation. This was transferred to my office to respond to on 13 August as my portfolio is responsible for the telecommunications regulatory environment. Your request has been responded to under the Official Information Act 1982 (the Act).

I appreciate that you have concerns about the potential health impacts of transmissions from 5G cell sites. Please be assured New Zealand has a robust regulatory regime in place that is based on international standards to ensure the safety of our communities.

Government regulation

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

- The Ministry of Business, Innovation and Employment (MBIE) 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. MBIE is working with interested parties on technical matters regarding preparing for allocation of the 3.5 GHz band.
- 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.

MBIE

Radio Spectrum Management (RSM) is the group in MBIE responsible for the technical aspects of 5G deployment. In March 2018, RSM released a 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: *NZS 2772.1:1999 Radiofrequency fields – Maximum exposure levels – 3 kHz to 300 GHz*¹. 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.

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 limitsⁱⁱ. All network providers rolling out a 5G network are required to comply with the relevant provisions of the NESTF 2016, the Resource Management Act (RMA) 1991 and the relevant resource management plans.

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.

Ministry of Health: setting exposure limits

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). I am advised that ICNIRP has reviewed and reaffirmed these limits periodically (most recently in 2017)ⁱⁱⁱ; 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 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.

Compliance

As noted, compliance with the New Zealand Standard (NZS 2772.1) is governed via the RMA and then through the NESTF by local authorities (councils).

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 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.

Present safety checks on 5G

You have specifically asked under the Act for details of *all safety testing and studies* conducted with respect to 5G in New Zealand.

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 as referenced in end note ii) below.

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.

In summary, I assure you that the New Zealand exposure standard, NZS 2772.1, 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 ICNIRP, which the WHO recognises for its independence and expertise in this area. Compliance with the limits is mandated under the RMA. The Ministry of Health advises that the New Zealand standard is based on the best available international advice issued by the ICNIRP, and the Ministry of Health regularly reviews ICNIRP's advice.

For more information please 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.

Thank you for writing to me about this issue. Please be assured that I take this matter very seriously.

You have the right to seek an investigation and review by the Ombudsman of this decision. Information is available at www.ombudsman.parliament.nz or freephone 0800 802 802.

Yours sincerely,



Hon Kris Faafoi

Minister of Broadcasting, Communications and Digital Media

ⁱ 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

ⁱⁱ www.mfe.govt.nz/rma/national-direction/national-environmental-standards/national-environmental-standards-0

ⁱⁱⁱ 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