

9 April 2019



## Response to your request for official information

I refer to your request made under the Official Information Act 1982 (the Act), transferred from the Office of Hon Julie Anne Genter and received by the Ministry of Health (the Ministry) on 11 March 2019, for:

*"In New Zealand, there are proposals to roll out 5G wireless technology.*

*The 5G system proposed for New Zealand would use RFR in the microwave range which is classified as a possible human carcinogen (Group 2B) by the WHO'S International Agency for Research on Cancer.*

*In addition the 5G system proposed for New Zealand would use frequencies similar to those used by US Army as a "non lethal" weapon for crowd control.*

*5G is of serious concern to human health, to pregnant women, to animals, insects, and to plant life, therefore needs to be addressed by the Department of Broadcasting.*

*Please take a few minutes to watch Dr Sharon Goldberg speaking about 5G in Senate. [https://www.youtube.com/watch?time\\_continue=889&v=CK0AliMe-KA](https://www.youtube.com/watch?time_continue=889&v=CK0AliMe-KA)*

*1) Please provide copies of at least one scientifically peer reviewed study (or more than one study) that shows evidence that 5G technology is 100% safe for human, animal and nature and will cause no biological or environmental risks.*

*I do not require an opinion letter. I do not require this request to be passed onto any other Government Department. I do not require links to other telecommunication websites. I do not require studies done on microwave radiation which measure only the thermal effects.*

*Either provide the documentary evidence that 5G wireless technology has been scientifically tested as 100% safe for human, animal, insect and plant exposure as per my request, or state that there is no evidence."*

The Ministry is unable to respond to your request for "...provide the documentary evidence that 5G wireless technology has been scientifically tested as 100% safe for... animal, insect and plant exposure..." This part of your request is refused under section 18(g) of the Act, as the information requested is not held by the Ministry. We can, however, respond to the part of your request for information regarding human exposure.

The balance of research evidence suggests that exposure to the radiofrequency fields produced by any transmitter, including those that will be used by 5G, do not cause health problems, provided they comply with international guidelines. Research reviews have not found persuasive evidence of any adverse effects of exposures at levels which comply with those guidelines. You can find web links for many of the significant review papers that guide the Ministry's policy and advice on its website at <https://www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/research-non-ionising-radiation>. This page is updated regularly.

The Ministry recommends the use of exposure limits as outlined in New Zealand Standard: *NZS 2772.1:1999 Radiofrequency fields - Maximum exposure levels - 3 kHz to 300 GHz*. More information about this can be found on the Ministry's website by searching 'exposure standards'. This Standard sets limits on exposures to radiofrequency radiation, produced by all types of radio transmitters (including 5G transmitters), for both the workplace and the general public. These limits are consistent with international guidelines. The frequencies to be used by 5G are close to those that have been used by other transmitters for many years. 5G modulation is very similar to that used by 4G, and there is no good evidence that health effects are sensitive to modulation. Note that the term "microwave" is generally applied to any radiofrequency greater than 300 MHz, and so includes the frequencies used by TV transmitters as well as those used by current and future mobile phone systems (2G, 3G, 4G and 5G). The following related web links may be useful to you:

- <https://www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/radiofrequency-field-exposure-standard>
- <https://shop.standards.govt.nz/search/ed?q=radiofrequency+fields>
- <https://www.who.int/peh-emf/standards/en/>
- <https://www.icnirp.org/>

The Ministry also convenes an expert advisory committee, known as the Interagency Committee on the Health Effects of Non-Ionising Fields, to review new research. The Committee meets every six months, and its terms of reference require that should there be reasonable suspicion of health hazards, or other issues of significance, these must be brought to the attention of the Minister of Health. The Committee will continue to monitor new research as and when it becomes available.

In addition, the Ministry participates in a World Health Organization (WHO) project to assess the health effects of electromagnetic fields. Information about this project can be accessed at the following link: <https://www.who.int/peh-emf/project/en/>.

You have the right, under section 28 of the Act, to ask the Ombudsman to review any decisions made under this request.

Please note this response (with your personal details removed) may be published on the Ministry of Health website.

Yours sincerely



Deborah Woodley  
**Deputy Director-General**  
**Population Health and Prevention**