

11 SEP 2019

Andy Hooley  
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Ref: H201907481

Dear Mr Hooley

### Response to your request for official information

Thank you for your request for information under the Official Information Act 1982 (the Act) on 19 August 2019:

*"Please can you provide all sources of information citing studies, dates and names of researchers, their qualifications and conflicts of interest that the government have used to determine that 5G wireless technology using advanced 4G and newer 5G mm waveforms will be absolutely 100% safe for each of the following categories when it is deployed in the current environment containing 2G, 3G, and 4G frequencies.*

- a) A lady who lives in a townhouse 50 meters from a telecommunications base station transmitting 3G and 4G frequencies that is pregnant with a developing fetus approximately 100 days old.*
- b) An 8 year old female child who is walking down Lambton Quay in Wellington.*
- c) 23 school children in a classroom each with a wireless device connected at the same time.*
- d) A teacher in a classroom using WiFi that has 23 students all connecting to the wireless network at the same time.*
- d) A 68 year old female with breast cancer living in a Wellington CBD apartment.*
- e) A 73 year old male with Parkinsons disease living in a rest home 100 meters from a telecommunications base station emitting 700Mhz, 1800Mhz and 2100Mhz frequencies prior to 5G being installed."*

The Ministry of Health (the Ministry) has not undertaken individual risk assessments for the scenarios you have described. Your request is refused under section 18(e) of the Act, as the information does not exist.

The Ministry is continuing to monitor new research on 5G. It is important to remember that 5G is just a new application of radio technology, and that existing research on the possible health effects of radiofrequency fields research applies equally to 5G.

The balance of research evidence suggests the radiofrequency fields produced by transmitters that comply with international guidelines do not cause adverse health effects to people of any age, including children, and in any state of health. This includes radiofrequency fields produced by 5G. You can find web links for many of the significant review papers that guide policy and advice on the Ministry's website: <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. 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/>

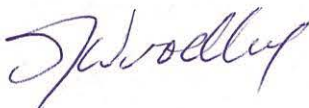
The Ministry also convenes an expert advisory committee, known as the Interagency Committee on the Health Effects of Non-Ionising Fields, to review new research. The Committee meets every six months, and its terms of reference require that should there be reasonable suspicion of health hazards, or other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

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/>

Under section 28(3) of the Act you have the right to ask the Ombudsman to review any decisions made under this request.

Please note that this response, with your personal details removed, may be published on the Ministry website.

Yours sincerely



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