

# Sue Grey LLB(Hons), BSc

## Lawyer

28 February 2014

The Principal and All Members of the School Board of Trustees  
Te Horo School  
By email: [principal@th.school.nz](mailto:principal@th.school.nz)  
School Road  
Te Horo 5581  
**OTAKI**

Dear Principal and Board

### **SCHOOL BOARD OBLIGATIONS RE WIFI AND BYOD**

I write on behalf of Damon and Jo Wyman to:

- a) Formally record concerns raised with you in recent meetings, conversations and correspondence about health and safety risks of wifi and BYOD (Bring Your Own Devices) to students, staff and others at Te Horo School;
- b) Congratulate you for your decision to remove (and in future not install) wifi from the junior school;
- c) Urge you to reflect on your decision to retain wifi in the senior school to recognise the strong preference of parents to replace wifi with hard-wired Ethernet (which parents have offered to fund at no cost to the school); and
- d) To ensure you are aware of your legal obligations to remove, isolate or minimize exposure to all occupational health as safety hazards. A preliminary step would be to update and strengthen the school's wifi policy to recognize the many health and safety concerns raised by Mr Wyman and various experts, in the context of the school's Occupational Health and Safety obligations to staff and students, the Ministry of Education policy requirement to ensure a safe learning environment, and clause 10(d) of the NZStandard 2772:1 1999 which requires precaution and the minimisation of exposure which is unnecessary to achieve service objectives or process requirements.

#### **Background summary:**

- 1 From 2013, Mr Wyman and other parents raised concerns about the safety of wifi and identified alternatives to reduce exposure of staff and students, such as turning off the wifi and hard wiring your school (at no expense to the school).
- 2 Your school was provided with considerable advice from various international experts to help you understand and assess the issues in the context of NZ Health and Safety laws and education policy, which require that schools be kept safe. Schedule A, summarising information previously provided, and Schedule B summarizing other relevant information are

attached.

- 3 You agreed to take advice on these concerns, to poll parents and to adopt their preferences. Although my clients have not been privy to the details of voting, it is clear from parents direct communication that the majority of parents want wifi removed from the school.
- 4 As part of this process you also received some pro-forma advice from the Ministry of Health and you commissioned Mr Martin Gledhill to measure wifi exposure at various locations in your teaching area.
- 5 Mr Gledhill, in his December 2013 report, has identified steps that can be taken to reduce exposure to wifi. The school must take these steps to ensure compliance with NZS2772:1 1999.
- 6 It is understood that the school is currently reviewing its wifi policy, to ensure it meets Mr Gledhill's recommendations and the requirements of NZS2772:1.
- 7 Whilst compliance with the precautionary parts of NZS2772:1 1999 is necessary, it is important to understand that this standard (developed in 1999 largely by pro-industry resources) was designed to protect only against the universally accepted "heating" effects of RF EMR. It offers no protection against "biological effects". Further NZS2772:1 1999 explicitly excludes any protection for people with pacemakers or other electrical body parts, and it implicitly fails to protect the estimated 4% of the population who are electro-sensitive. It assumes that pregnant women, children and those who are immune suppressed will receive adequate protection without any supporting research.
- 8 In May 2011 the WHO/IARC changed its classification of RF EMR to Class 2B - possible carcinogen. The formation of cancers is a "biological effect".
- 9 Other biological effects from low levels of RF EMR that have been recognised since at least 1974 include: headaches, skin rashes, irregular heart beat and other stress type responses, changes to DNA replication, changes to cell membrane function, hormonal and mental health changes.
- 10 NZS2772:1 1999 provides no protection against any of these biological effects.
- 11 Expert advice is that biological effects can occur with very low exposures of RF EMR and that exposure limits should be in the order of 1000 times lower than the limits for heating effects. The Bioinitiative Report (which led to the EU significantly strengthening its recommendations for RF EMR) sets recommendations for biological exposure as follows: not to exceed 0.1uW/cm<sup>2</sup> in any short term exposure with the average over an hour not to exceed .01uW/cm<sup>2</sup>.
- 12 In his report Mr Gledhill recorded levels for Te Horo school at an average of 0.31uW/cm<sup>2</sup> with 3.4uW/cm<sup>2</sup> maximum instantaneous exposure (spikes). These average readings were **30 times in excess of the** Bioinitiative limit for average exposure, and the spikes at your school were **30 times over** the instantaneous/maximum limits.

- 13 Further, Mr Gledhill took and recorded only a selection of samples and his results show considerable variation. Some of these variations were clearly unexpected and could not be explained by Mt Gledhill. It is unclear from Mr Gledhill's report if students were actively uploading or downloading using wifi when the monitoring was undertaken, and how exposures may change during the day and in different classrooms. What is clear is that all children in classrooms, whether actively using wifi or not, were being exposed to unsafe levels of RF EMR. Some exposures will inevitably be even higher than the levels recorded by Mr Gledhill and that much of this exposure is completely unnecessary and accordingly in breach of both clause 10(d) of the NZS2772:1 and the school's occupational health and safety obligations to remove, isolate or mitigate hazards.
- 14 To avoid further non-compliance with NZS2772:1 1999 and health and safety legislation it is essential that the school immediately update its wifi policy to ensure all reasonable steps are taken to identify and avoid unnecessary exposure. This includes requiring teachers to turn off wifi when it is not in use, which is an obvious and simple step that can be undertaken immediately and at no cost.

#### **Comments on the Ministry of Health advice**

- 15 The date on the pro-forma Ministry of Health advice was recent, but that advice fails to address or reflect the WHO/IARC decision in May 2011 change in classification of RF EMR. Further the author of that advice has no recognized expertise in electromagnetic radiation, or bio-electrics, and they have disregarded not only the considerable body of international research on RF EMR but also the occupational requirement for precaution, and to identify and then remove, isolate or mitigate all hazards.
- 16 In contrast many European and other states, (who have access to considerably more qualified and well briefed expert advisors), have adopted a far more precautionary approach towards RF EMR. For example Belgium now prohibits the sale of cellphones targeted at children and requires emissions ratings on all new phones, the French Parliament has recently passed legislation to remove wifi from all schools, in 2013 the Supreme Court of India upheld a lower court decision banning cell towers from within 100m of schools and hospitals and many European states now warn parents to keep children's use of cellphone and other RF EMR technology to a minimum.

#### **Comments on Mr Gledhill's report**

- 17 Mr Gledhill undertook various monitoring around your school. He provided a report dated 30 December 2013 assessing exposure in the school against NZS2772:1 1999 and identifying steps that could be taken to avoid unnecessary exposure as required by clause 10(d) of NZS2772:1 1999. This included recommendations to relocate access points to corridors so they are further from staff and students, and investigating the duty cycle of 0.1 in room 6 to see if this can be reduced. No doubt other problems exist in rooms that he did not specifically monitor. A more effective response would be to introduce an immediate policy to turn off all wifi when it is not in use.

- 18 Mr Gledhill's report is concerning as it is incomplete and lacks detail about exactly what he did monitor and what he did not. Despite his claimed expertise, he did not know schools were using equipment that emitted 5Ghz and his equipment was incapable of measuring this frequency. Neither Mr Gledhill, nor Norcomm (who were present all day) could offer information to account for why the duty cycle was so regular when no downloading was happening. Mr Gledhill failed to recommend a safety factor to protect against the many inaccuracies and uncertainties in his methodology and results.
- 19 Having established some systemic concerns it is important that all classrooms be thoroughly checked as a matter of urgency so that the full exposure of students can be documented and assessed. This assessment must measure all cumulative sources of RF EMR, including from reflection and other sources, including those discounted by Mr Gledhill.
- 20 Because NZS2772:1 is both outdated and very limited in its scope, the focus should be on identifying and avoiding all unnecessary exposure.

### **Summary**

My clients acknowledge the steps taken by your school to remove all Wifi from the junior school in recognition of overwhelming preference of parents, and in seeking various advice on the health and safety hazards from RF EMR.

However clearly the board has not yet gone nearly far enough to meet its legal obligations, under Health and Safety legislation or Ministry of Education policy of ensuring classrooms are safe.

It is essential that follow up work be undertaken to identify all wifi and other RF EMR exposure that is not necessary and to adopt a policy requiring this to be avoided.

Please feel free to contact me if you wish to discuss any of the matters raised in this letter.

Yours faithfully

*S J Grey*

Sue Grey LLB(Hons), BSc (Microbiology and Biochemistry), RSHDipPHI  
Principal

CC: To the Trustees Craig Vidulich, Steve Joss, Mike Neville, Paula Cull, Marc Simpson, Brett Mudgway and Gail McMyler

## **SCHEDULE A: SUMMARY OF EXPERT ADVICE AND INFORMATION PREVIOUSLY PROVIDED TO TE HORO SCHOOL BOARD**

### **- PERSONAL RECOMMENDATIONS FROM:**

Lennart Hardell MD, PhD, Professor Department of Oncology, University Hospital, Sweden, one of the experts at the IARC (at WHO) meeting on EMF exposure and cancer risk.

Martin Blank, PhD, Special Lecturer, Dept of Physiology, Columbia University, USA

Cindy Sage, MA, Sage and Associates, Co-Author of the BioInitiative Reports 2007 and 2012

Dr Mary Redmayne, PhD, Adjunct Research Associate, Victoria University of Wellington, New Zealand (now researching at University of Melbourne)

### **OTHER**

- Many other recommendations from Health Professionals, and Experts internationally and nationally

- Letters from concerned parents at Te Horo School

- Letters from concerned parents both nationally and internationally that are seeing negative health effects in children

- An awareness of Te Horo School students with headaches possibly attributed to WIFI

- Links to websites and videos in regards to health effects from EMF

- Links to overseas Governments and Government Departments that are advocating for the removal of WIFI

- Links to schools that have removed WIFI because of health issues

- The BioInitiative Report 2012

## **SCHEDULE B: Other relevant reports and background information**

\* The American Academy of Pediatrics recommendation, which includes 60,000 members including neurosurgeons, dated 29 August 2013, which urges standards that protect children from cellphones or other wireless devices.

[apps.fcc.gov/ecfs/document/view?id=7520941318](http://apps.fcc.gov/ecfs/document/view?id=7520941318)

\* This is a link to the American Academy of Environmental Medicine, November 2013 recommendation [aaemonline.org/docs/WiredSchools.pdf](http://aaemonline.org/docs/WiredSchools.pdf), that clearly outlines the correlation between RF exposure and neurological cardiac and pulmonary disease as well as reproductive and developmental disorders, immune dysfunction, cancer and other health conditions. The evidence is irrefutable.

\* The Former Microsoft Canada President Frank Clegg has left his job of 14 years to launch Citizens 4 Safe Technology (C4ST) with the number one goal being to remove wifi from schools.

<http://www.c4st.org/news/category/wifi-in-schools/>

\* Earlier in 2014, Belgium passed and implemented legislation banning children's cellphones and requiring all cellphones sold to list a SAR rating on them and provide a warning to customers to choose a phone with a lower SAR rating.

\* Some of the IARC committee members who advise the WHO on cancer are now recommending that as the result of research and new findings since 2011 that RF-EMF should be classified as either a 2A probable carcinogen or a class 1 carcinogen.

\* Two weeks ago, the IARC predicted that cancer rates would rise 70% in the next 20 years. This was based on the 2008 - 2012 cancer incidence increase.

\* In Israel, the MOE has been taken to the Supreme Court in regards to wifi health concerns and misinformation

\* Both France and Germany have been slowly removing wifi from schools and are now putting legislation into place for the removal of wifi from schools to be replaced with hardwire. In France there will be a complete ban on wifi in kindergartens and cellphones and tablets advertising will be banned from children under 14.

\* We are aware of around 20 schools in New Zealand whose Board members will be approached in regards to removing wifi.

\* In both Australia and the UK there have been teachers who have been awarded compensation for being unable to work in a classroom which have industrial access points.

\* At least one parent at Te Horo School has contacted the board in regards to their child's headaches and believes it could be attributed to the wifi. We know of two other children at school whose parents don't want to be named, who think their children's ill health could be attributed to the wifi.

\* There have been a number of schools around the world who have removed wifi since Christmas. (in addition to the numerous schools in Germany and France)

\*Last week the Dom Post published a story stating "Major study confirms cellphone use is safe". This study was actually completed in 2012 but hidden until now. The header of the article is seriously misleading as the report covers only two cancer studies, with just one of these involving children. In fact, three out of the five recommendations in the report asks for future research in regards to children. Half of the report was paid for by the industry. The WHO upgrade of the 2b possible carcinogen which was based on brain tumour gliomas was simply ignored. This article and the report it is based on has been seriously criticized by

various international experts and is the subject of at least one complaint to the Press Council. The recommendation that cellphones are safe for children goes against Australia, Canada, UK and many other countries whose governments strongly recommend avoiding necessary exposure of children to cellphones. Cellphones use the same radiofrequency electromagnetic radiation technology as wifi and wifi devices.

\* Governments and organisations that ban or warn against wireless technology  
[http://www.cellphonetaskforce.org/?page\\_id=128](http://www.cellphonetaskforce.org/?page_id=128)