



15 June 2020

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Re: Harbord Community Kindergarten – 31 Lawrence Street, Freshwater

Enquiry about EMF levels associated with proximity to Harbord zone substation

Electric and magnetic fields (EMF) are part of the natural environment being present in the Earth's core and atmosphere. EMF is also produced wherever electricity or electrical equipment is in use. Power lines, electrical wiring, household appliances and electrical equipment all produce EMF.

Research on EMF and possible health effects has been conducted for over 40 years. This includes over 2,900 studies at a cost of more than \$490 million. All of the research is extensively reviewed by Australian and international inquiries and expert panels established for the purpose of trying to determine whether or not human exposure to EMF is related to adverse health effects.

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), is a Federal Government agency charged with responsibility for protecting the health and safety of people, and the environment, from EMF.

On this issue, ARPANSA advises that:

"The scientific evidence does not establish that exposure to the electric and magnetic fields found around the home, the office or near power lines causes health effects."

The World Health Organization (WHO) advises that:

"Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."

Ausgrid's position on EMF aligns with that of the Energy Networks Association (ENA). It has been adopted in the light of authoritative reviews having concluded that no adverse health effects from exposure to low level EMF have been established and recognising that there is, within the community, some concern about the issue which must be addressed. This position involves providing balanced and accurate information, operating our electrical power system prudently within relevant health guidelines, and closely monitoring scientific research on the EMF health issue.

In 2010, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) issued exposure guidelines for established health effects. The public exposure limit in these guidelines is 2,000milliGauss.

ARPANSA advise that "The ICNIRP EMF guidelines are consistent with ARPANSA's understanding of the scientific basis for the protection of people from exposure to ELF EMF".

Proposed relocation of Kindergarten

Harbord Community Kindergarten is proposing to move from its current premises into the adjacent Girl Guides Hall (Lot 1 / DP864459). This property and its building is closer to Ausgrid's Harbord zone substation and the Kindergarten has requested a report on EMF levels in the vicinity of the proposed venue – and in particular, in the pedestrian/vehicle access way between the substation and the Hall.

There is a barrier that separates the pedestrian access that runs parallel and adjacent to Lot 1 from the vehicle access, which is closer to the substation perimeter fence.

On Wednesday, 10 June an Ausgrid Community Engagement Officer visited the site and took readings with an Emdex Snap Field Meter.

The Emdex meter provides measurements of any magnetic field in milliGauss (mG). The meter was held at approximately one metre from the ground for the purposes of taking measurements.

The highest readings observed were along the southern boundaries of the substation property and Lot 1. These readings were between 11.7mG near the corner of the substation building and 8.9mG at the SW corner of lot 1. Both of these locations are beneath one of the incoming 33kV power lines that supplies the substation.

The reading at the substation fence, adjacent to the corner of the building on Lot 1, was 3.3mG.

Readings along the pedestrian side of the walkway, closest to the hall proposed for use as the preschool were between 2.4mG and 2mG.

Across the rear fence line of the building on Lot 1 readings ranged from 2.4 to 1.2mG

The reading at the pedestrian entrance gate to Lot 1 – on the southern boundary - was 6.4mG.

The attached plan view shows the levels recorded.

The yard area around the hall is fenced and locked. Access was not available for readings to be taken inside the building.

All EMF readings observed during the site visit are well below the recommended 2000mG guideline for public exposure.

Regards

A handwritten signature in blue ink, appearing to read 'Mike Hamonet', with a stylized flourish extending to the right.

Mike Hamonet

Ausgrid





Readings were taken along the boundary fences on both sides of the paved area.

Along the fence of Lot 1 readings ranged from 8.9mG to 2.0mG. Adjacent to the double door access to the hall (the area covered by the awning) the reading was 2.0mG.

Along the fence at the rear of the hall building the readings ranged from 2.4mG nearest the pedestrian pathway to 1.2mG at the intersection of the fence on the boundary of the existing Kindergarten facility.

