

## **Appendix B – Response to public submissions**

This response summarises the main issues raised during the public exhibition of the subject Development Application. The Carriers have investigated the issues raised and provide the following response.

### **Issues Raised:**

- Background and need for the site;
- Proximity to Community Sensitive Sites and associated health concerns;
- Insufficient consideration of alternative sites;
- Visual Impacts;
- Inadequate community consultation;
- Multiple version of EME Reports with varying levels;
- Impact on property values;
- Future upgrades; and
- Potential Noise Impacts.

### **Background and need for the site**

As you would be aware, the Council has directed Telstra, Optus and Vodafone (the Carriers) to remove all existing telecommunications equipment from the water reservoir. This has resulted in the critical need for a replacement site to ensure the continued delivery of mobile services to the local area. The proposed replacement facility is to be sited within 10 metres of the existing site on top of the water reservoir, which is within the same allotment.

The site on the existing water reservoir has been used by the Carriers since 1995 to provide mobile coverage to the local population (estimated 16,000 persons) and the transient population (estimated 7,000 vehicles per day on the M1) as well as tourists. Without the existing site (or a replacement site), the local area will suffer from degraded mobile services. Pockets of the local area will have no coverage, which in some instances may result in the inability to make emergency calls (approximately 50+ calls per month).

The main radiofrequency objectives of the proposal are to maintain the existing coverage in the area, not degrade the area's coverage, keep or improve the network quality, and futureproof the network in order to avoid future upgrades on the proposed site. The subject proposal satisfies the abovementioned objectives and would have a big enough coverage area to make the need for secondary sites in this area less likely in future.

### **Proximity to Community Sensitive Sites and associated health concerns**

Submitters raised health related concerns about the proximity of the proposal to certain community sensitive locations, namely the Banora Point Primary School, Cherubs Preschool, Aveo Aged Care and residential dwellings within the immediate vicinity of the site. The 500m setback recommended in the NSW Department of Education's policy on the placement of Telecommunications Facilities in relation to schools is also a main area of concern amongst submitters.

It is important to know that the NSW Government Department of Education's Mobile Telecommunications Facilities Policy is an internal procedure and is not a legislative document that governs the way in which mobile phone carriers are to operate. Legislative requirements and regulations set by the Federal Government in relation to EME from mobile phone base stations, known as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) *RPS No.3, Radio Protection Standard for Maximum Exposure Levels to*

*Radiofrequency Fields – 3kHz to 300GHz (The Standards)*, should be relied upon to ensure that new telecommunications facilities' EME levels are safe to the general public.

The relocation of the existing infrastructure from the reservoir onto a freestanding pole will not significantly increase the EME levels that are already present on-site. We have had regard to all possible alternative locations in the vicinity and are confident that the chosen location offers the best solution, given the requirement for the site to be at an appropriate elevation and as close as possible to the existing site.

It is important to note that a site has been located in this locality for approximately 20 years and the planned EME levels from the proposed changes (i.e. moving the antenna from the water reservoir to the new pole) will result in very minor changes in EME. As indicated in the EME Report, the maximum predicted EME level for the proposed site is 2.54%, while the maximum EME level at the Banora Point Public School is 0.69%, which is 145 times below the of the ARPANSA public EME limit. It should be kept in mind that EME levels up to 100% of the standard are considered safe to all members of the public, including children and the elderly, 24 hours a day.

The Australian Government Department of Communications emphasizes the fact that greater separation distances do not necessarily translate into lower EME levels at schools:

*“Because transmitters must operate below the ARPANSA standard, there is no particular advantage locating these away from schools. In fact, poor location of the transmitters can affect the performance of mobile handsets, requiring more power to be emitted from the handset to connect with nearby transmitters. This is potentially of greater concern as handsets are used near the body.”<sup>1</sup>*

As for EME levels in the community, the carriers rely upon the expert advice of national and international health authorities such as the ARPANSA and the World Health Organisation (WHO) for overall assessments of health and safety impacts of workers and the public. Peer reviewed studies of sufficient sample size and scientific rigour underpin this analysis. In doing so, ARPANSA maintains continual oversight of emerging research into the potential health effects of electromagnetic energy (EME) and will take immediate action to rectify the situation if the standards are proved to be unsafe.

### **Insufficient consideration of alternative sites**

A detailed site scoping exercise identified several potential candidates within and around the identified search area. Apart from a few public utility structures / properties and small reserve areas, there are no other non-residential uses which offer acceptable options for siting the facility. Given the limited alternative siting options, the subject site remains the best and only solution for a replacement site that will be able to guarantee continued mobile services to the area. The existing site has been there for 20 years and as a result, the Carriers have all planned their networks around this location and therefore a site at this location is the best possible option to avoid loss of coverage and blackspots.

As demonstrated in the existing sites and alternative candidates summary (attached as **Appendix C**), existing sites in the vicinity cannot be upgraded to compensate for the loss of the subject site as they are too far away. We have also investigated and documented several alternative candidates suggested by the community during the consultation process. Similar to the existing sites in the area, the suggested sites are located too far from the target coverage area and would not provide adequate replacement coverage.

---

<sup>1</sup> [https://www.communications.gov.au/sites/g/files/net301/f/EME\\_Schools\\_FACT\\_SHEET\\_FA2.pdf](https://www.communications.gov.au/sites/g/files/net301/f/EME_Schools_FACT_SHEET_FA2.pdf)

The only solution to ensure continued voice and data services, is to establish a new facility generally within the identified search area, which extends from Sexton Hill Drive in the north, to Blue Haze Crescent approximately 670m south of the reservoir and between Chinderah Bay and the Golf Course. A site in this locality would avoid the occurrence of significant consequential coverage deficiencies upon the decommissioning of the existing site on the reservoir.

## **Visual Impacts**

In response to the community feedback from the pre-application consultation on the original proposal, the Carriers have changed the locality of the facility to the western side of the water reservoir to gain additional screening from mature trees. They further reduced the height of the proposed monopole from 41m to 35m and removed the headframes to minimise potential visual impacts of the proposal. These changes have also been implemented on advice from the Visual Impact Statement (VIA) prepared by Planit Consulting, attached as **Appendix D**.

The VIA submitted with the DA and subsequent amendment to include analysis from additional viewing locations, as requested by Council's Strategic Planning and Urban Design Unit, concludes that the subject location is "*optimal*" and that the "*slimline tower design has an assessed Significance of Visual Impact of 'not Significant' within both the Local Context and Regional Context*".

Considering the above, the implemented visual mitigation measures is considered sufficient to address and minimise any visual impacts.

## **Inadequate community consultation**

We note that some submitters are not satisfied with the level of community consultation undertaken by the carriers in the Pre-DA consultation process and the DA public exhibition, which occurred over the January school holidays.

Pre-DA community consultation for the proposed replacement facility was undertaken during November 2017 as per Council's resolution. In response to community feedback to the pre-DA consultation, the Carriers made design and location changes to the proposal as discussed above. Further communications were then sent to all pre-DA submitters in October 2018, addressing the key issues raised by the community and advising on the Carriers' plan to lodge the DA shortly thereafter. We believe that this pre-application consultation and resulting changes to the proposal based on feedback, indicate transparency and a willingness on behalf of the Carriers to work with the community to find a solution as required.

The DA was formally accepted by Council in December 2018 and Council publicly exhibited the application during January 2019 with an extension granted upon request from local residents. The public exhibition process is managed by Council and legislated by the Environmental Planning and Assessment Act 1979. The Carriers therefore do not have any input in the timeframe of the process. As Tweed Shire Council is the responsible authority for this process, it would be up to Council to decide whether the level of community consultation undertaken to date is sufficient.

While the consultation undertaken to date may not satisfy all participants; or resolve all differences of opinion or values, the Carriers are willing to undertake additional targeted consultation to address the concerns that have been raised by submitters through the DA process and propose to work with Council to undertake additional targeted consultation if agreed.

## **Multiple version of EME Reports with varying levels**

The discrepancies between the EME levels in the report currently available on the RFNSA website and the values in previous versions, is due to the prediction methodology used that has combined the existing technologies on the water reservoir with those on the new monopole, which has resulted in an overestimate of the predicted EME levels for the proposed facility alone. This issue has been rectified and we can confirm that the current version (dated 5 November 2018) on the RFNSA website and as lodged with the DA, is correct.

## **Impact on property values**

It should be kept in mind that a base station has been in operation on the water tower for approximately 20 years and the objective of this proposal is to relocate the existing equipment onto a new monopole structure. While the Carriers are not experts on property values and the mechanisms which underpin them, what we can say is that there are over 10,000 base stations across the country in all types of locations from city buildings, sporting ovals, hospitals, parks, throughout CBD, suburban and rural environments. We are not aware of any reputable study indicating the proximity of base stations negatively impacting property values.

## **Future upgrades and 5G**

The proposal does not include any 5G technology. However, we cannot predict the future network and data traffic requirements for this facility. Regardless of the nature and extent of future upgrades, the radiofrequency (RF) EME limits as per the ARPANSA Standard are applicable to all base stations and technologies (including 5G) throughout Australia and compliance thereto will always be maintained.

## **Potential Noise Impact**

No additional noise generating equipment will be installed as part of the proposal. The existing air conditioning units and cooling fans installed in the equipment shelters operate at low-level noise, similar to those used in residential properties and are subject to council bylaws in relation to noise restrictions. As such, they should not be of any disturbance to surrounding residents.

We trust that this response assists in providing more clarity in addressing the concerns raised during the public exhibition period.



# COMMUNICATIONS TOWERS, RADIO TRANSMITTERS AND SAFETY

Information for schools, teachers, students, and parents

## Radio transmitters—Are they safe?

Some parents, teachers, and students may have concerns about possible health effects from exposure to electromagnetic energy (EME) coming from radiocommunications transmitters on towers near schools as well as from WiFi routers and mobile phones. This factsheet outlines the steps the Australian Government takes to keep Australians safe.

Exposure to radiofrequency (RF) EME has been the subject of detailed research by experts. Exposure limits are set well below the level at which adverse health effects are known to occur and include a wide safety margin to protect the public.

### What is EME?

RF EME is the energy in radio waves, and is used for wireless communication. It has been in use for over 100 years. It is used to send and receive signals between communications equipment such as broadcast towers, radios and televisions, mobile phone towers and phones, radar facilities, and electrical and electronic equipment. It is also part of our natural environment.

### How is EME regulated?

Two Australian Government agencies, the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the Australian Communications and Media Authority (ACMA), are responsible for regulating RF EME exposure.

ARPANSA is an independent Australian Government agency charged with protecting Australians from

exposure to EME. ARPANSA is responsible for advising what safe levels of EME exposure are. ARPANSA has developed a public health standard which sets limits for human exposure to RF EME. The limits are set well below the level at which adverse health effects are known to occur and include a wide safety margin to protect the public. The exposure standards take into account the many sources of RF EME present in the modern environment.

The ACMA licenses the operation of radiocommunications transmitters. Licences require transmitters to comply with the exposure limits set out in the ARPANSA standard.

### How much EME comes from radio transmitters?

All transmitters must operate below ARPANSA's public exposure standard. Typically transmitters operate at a tiny percentage of the ARPANSA standard.

## Should mobile phone transmitters be located a specified number of metres from schools?

Because transmitters must operate below the ARPANSA standard, there is no particular advantage locating these away from schools. In fact, poor location of the transmitters can affect the performance of mobile handsets, requiring more power to be emitted from the handset to connect with nearby transmitters. This is potentially of greater concern as handsets are used near the body.

## Is the scientific information on EME up to date?

ARPANSA maintains continual oversight of emerging research into the potential health effects of EME exposure in order to provide accurate and up-to-date advice to the Government. ARPANSA works with the World Health Organisation in researching the health effects of human exposure to EME. Should scientific evidence indicate that the current ARPANSA standard does not adequately protect the health of Australians, the Government would take immediate action to rectify the situation.

## Is EME from mobile phone handsets safe?

There is no clear evidence in the existing scientific literature that the use of mobile phones poses a long-term public health hazard (although the possibility of a small risk cannot be ruled out).

For those who are concerned, ARPANSA provides advice on strategies, particularly for children, to reduce EME exposure from handsets. ARPANSA advises that people who are concerned about the possibility of health effects can minimise their exposure to RF EME emissions by reducing call time, making calls where reception is good, using hands-free devices or speaker options, or by texting. People could also pay attention to the manufacturer's advice regarding spacing from the body if phones are to be attached to belts or placed in pockets.

## What about WiFi and laptops?

ARPANSA, as well as the World Health Organisation, have advised that there is no established scientific evidence showing that the low exposure to RF EME from WiFi adversely affects the health of children or the general population. On the basis of current scientific information ARPANSA sees no reason why WiFi should not continue to be used in schools and other places.

## Where can I find out more information?

Further information is available from the following expert bodies:

### **Australian Radiation Protection and Nuclear Safety Agency**

[www.arpansa.gov.au/Science/rf](http://www.arpansa.gov.au/Science/rf)

[www.arpansa.gov.au/pubs/eme/fact11.pdf](http://www.arpansa.gov.au/pubs/eme/fact11.pdf)

[www.arpansa.gov.au/pubs/factsheets/018is\\_Wi-Fi.pdf](http://www.arpansa.gov.au/pubs/factsheets/018is_Wi-Fi.pdf)

### **Australian Communications and Media Authority**

[www.acma.gov.au/Citizen/Consumer-info/](http://www.acma.gov.au/Citizen/Consumer-info/)

[Rights-and-safeguards/EME-hub](http://www.acma.gov.au/Citizen/Consumer-info/Rights-and-safeguards/EME-hub)

### **World Health Organisation**

[www.who.int/topics/electromagnetic\\_fields](http://www.who.int/topics/electromagnetic_fields)

[www.who.int/mediacentre/factsheets/fs193/en/index.html](http://www.who.int/mediacentre/factsheets/fs193/en/index.html)

### **International Commission on Non-Ionising Radiation Protection (ICNIRP)**

[www.icnirp.org](http://www.icnirp.org)

You can also find out more about transmitters in your community, including EME reports and community consultation information, from the Radio Frequency National Site Archive [www.rfnsa.com.au](http://www.rfnsa.com.au)