

10 October 2018

Ms L Cumming
Planning Consultant
Muswellbrook Shire Council
PO Box 122
Muswellbrook NSW 2333

Dear Ms L Cumming,

RE: Development Application No. 76/2018 – Installation of New Telecommunications Facility, Lot 18 DP1075238 REF: Park – Hill Street, Muswellbrook 2333

I am writing in reference to your letter dated the 25 September 2018 regarding the submissions received during the public exhibition period for the above development application. Please see below response to the key issues raised in the submissions to assist council in their assessment of the proposed Telstra telecommunications facility.

Site Selection

A number of factors influence the exact location of a mobile base station, including site acquisition, technical feasibility, Federal, State and Council approvals, whether there is existing local infrastructure that can be utilised and the coverage requirements for the area. Among these factors is the ability to secure land tenure at a location that facilitates the connection to a power supply, underground fibre for connectivity with the greater mobile phone network, and suitable land attributes like elevation that allow the base station to provide coverage to the maximum possible number of homes, businesses and users within the area. The proposed location at the Victoria Park is a practical solution to achieve those objectives.

Telstra recognises the sensitivity associated with proposals such as this one and we try hard to strike a balance between providing services and minimising our impact on the community and the local environment. Telstra does not consider the sporting field to be a sensitive community location. Examples of these locations are typically schools, day care centres and residential areas.

Today's society relies on mobile phones working everywhere including at home, at school and at work. When base stations are located close to users, the transmitter power required by the mobile phone and base station to communicate is relatively low. If base stations were located further away, the power required is generally higher, and this means higher electromagnetic energy ("EME"). Therefore, to provide good reception and minimise EME, base stations need to be located close to users and where we live.

Further details of the alternative locations considered as part of the proposal are provided within the planning report.

Precautionary Approach

The Mobile Phone Base Station Deployment Code (C564:2011) ("Code") does not specifically define community-sensitive locations, but provides examples of sites which have sometimes been



considered sensitive; for example, child care centres, schools, aged care centres and hospitals. Telstra does not consider a sporting field to be a community sensitive location.

While carriers have to consider the implications of community-sensitive locations, they are still able to place infrastructure there or nearby if they have balanced the location with other, equally important factors. All mobile phone base stations must comply with the mandatory regulations for EME.

The Code does not specify a distance at which infrastructure must be sited from community-sensitive locations.

Please refer to the Australian Communications and Media Authority (ACMA) Fact Sheet – Mobile Phone Base Station Deployment at <https://www.acma.gov.au/theACMA/industry-code-mobile-phone-base-station-deployment>

Base Stations & Buffer Zones

We note the community's comments in relation to the Proposed Facility being located further away. Such well-meaning advice is based on the assumption that the further away a base station is from people the less they would be exposed to radio wave emissions.

As indicated above, once a call is connected both mobile phones and their base stations are designed to operate at the lowest levels to make a quality call and avoid network interference. Base stations are constantly adapting their output levels depending on the number of calls they are handling and how far away the handsets are from them.

Therefore, the further a base station is built from the target coverage area, the more power it needs to keep customers connected, which could actually increase exposures in that area – the very thing such approaches are trying to avoid.

In most circumstances the best location to build a base station in order to minimise emissions is closest to where the service is required, including residential areas.

EME and Health

Telstra places very high importance on EME safety. All of Telstra's mobile base stations are designed to comply with the relevant Australian safety standard known as the Australian Radiation Protection and Nuclear Safety Agency ("ARPANSA") Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz (2002) or ("RPS 3"). The Radio Frequency ("RF") EME emissions from mobile phone base stations and other communications installations are regulated by the Australian Communications and Media Authority ("ACMA"). The ACMA's regulatory arrangements require base stations to comply with the exposure limits in the ARPANSA RF Standard. The ARPANSA Standard is designed to protect people of all ages and health status against all known adverse health effects from exposure to RF EME. The ARPANSA Standard is based on scientific research that shows the levels at which harmful effects occur and it sets limits, based on international guidelines, well below these harmful levels.

We regard ARPANSA and the World Health Organisation ("WHO") as representing the accepted expert opinion on EME both in Australia and internationally. In relation to base stations and health, the conclusion from the WHO is: "Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects." WHO Fact sheet 304.



ARPANSA's position is: "Based on current research there are no established health effects that can be attributed to the low RF EME exposure from mobile phone base station antennas" Mobile Phone Base Stations and Health" Fact Sheet August 2016.

ARPANSA provides the opportunity for the public and community to talk directly with scientists on issues about radiation exposure and protection in Australia. ARPANSA can be contacted on 1800 022 333 from 11:00 am to 12:30 pm on Tuesdays and Thursdays (Melbourne AEST), except during public holidays. You can also send an enquiry via ARPANSA's online contact form.

All of Telstra's base stations are designed to comply with the RPS 3. Telstra's engineers conduct a thorough EME compliance assessment as part of the base station design. For each base station, an EME Environmental Report is prepared by Telstra and can be accessed by members of the public via the Radio Frequency National Site Archive (RFNSA) at www.rfnsa.com.au. You can search via location or site number 2333021. The Environmental Report estimates the maximum cumulative EME emitted from the base station. Telstra's calculations have the predicted EME level from the Proposed Facility as a maximum of 1.046% of the allowable public exposure limit. This predicted EME level is approximately 95 times below the maximum exposure limit (100%) set by ARPANSA. The calculations do not take into account trees, vegetation or buildings which may alter the EME levels, generally decreasing them.

Once a base station becomes operational or is modified, a Site Compliance Certificate is prepared by a National Association of Testing Authorities (NATA) Assessor to certify that the site has been assessed and complies with the Radio Frequency Human Exposure Limits as specified by the Australian Communications and Media Authority (ACMA) Licence Condition Determination (LCD) and the requirements of RPS 3. A copy of the Site Compliance Certificate for a site can be accessed via the RFNSA.

Visual Amenity

Visual impact is very important to Telstra in any area in which we seek to install a new facility. With over 16,000 base stations in operation around Australia, panel antennas, dishes and other relevant equipment have become part of the urban landscape. Telecommunications facilities aren't only operated by mobile phone networks but also entail critical infrastructure assets employed by the emergency services, rail and other public utility authorities to ensure the active and safe operation of their respective duties.

Freestanding mobile phone base stations are a common feature within urban and rural landscapes. The justification behind the use of a freestanding structure is to provide line of site coverage within flat and undulating topography. Specific design elements have been included within the planning of the proposed Muswellbrook facility, inclusive of:

- Limiting the height of the proposal to 26.30m. This will ensure that the best level of coverage can be provided to the locality, without constructing to a height which would offer no additional benefit to the service area.
- Ground based equipment is to be located directly adjacent to the existing amenities building. This is to minimise the bulk and scale of the proposal in context to the surrounding environment.
- The proposal involves the swap out of an existing lighting structure. The placement of the proposed structure adjoining to other lighting structures to reduce the proliferation of tall structures within the wider area.



- The siting and location of the proposal has been taken in to consideration during the site selection process in order to ensure that the site does not result in any undue visual intrusion towards surrounding viewing corridors.

Property Values

As you are aware, property valuation is a complex issue, with fluctuations in price being subject to a number of factors. Many of these are subjective, and may be as diverse as aspect, views, condition of the property, local amenity and access to services, including high quality communications. Since the mid-1990s, thousands of telecommunication facilities have been installed throughout Australian metropolitan and regional areas. During this period, property values have continued to increase, showing no clear signs of deterioration as a result of the location of communications facilities. Telstra is not aware of any credible evidence that directly links the siting of telecommunications facility to a decrease in property prices.

Fire

The Proposed Facility does not result in unacceptable risk from fire to persons or property. The telecommunications facility is unmanned and remotely operated so it does not pose a fire risk to human life. Further, the facility is pre-fabricated and designed in accordance with the Building Code of Australia and Australian Standards, and is intended to serve the purpose of providing critical communications to the public and the emergency services during times of natural disasters including bushfires and flooding.

Regards,

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