



Statement of Environmental Effects

Proposed Upgrade to an existing Vodafone and Optus
Telecommunications Facility

600 GREGORY TCE BOWEN HILLS 4006

Lot 703 on SP288048

Prepared by: CommPlan Pty Ltd

On behalf of Optus

June 2022



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EXECUTIVE SUMMARY

<p>Proposal</p>	<p>Vodafone proposes to upgrade the existing telecommunications facility located at the Brisbane Exhibition Grounds at 600 GREGORY TCE BOWEN HILLS 4006</p> <ul style="list-style-type: none"> • Installation of three (3) new Vodafone antennas on an existing triangular headframe on an existing tower at a height of 25.1m, 23.15m and 21m (antenna centreline); • Installation of three (3) new Optus antennas on an existing triangular headframe on an existing tower at a height of 25.1m, 23.15m and 21m (antenna centreline); • Removal of existing Optus and Vodafone superseded equipment; • Installation of Remote Radio Units (RRUs) at various heights mounted to the existing headframe on the existing tower; • Installation of two GPS antennas onto the rooftop of the equipment shelter; • Upgrade and installation of equipment within the existing equipment shelter located at the base of the tower; • Installation of ancillary equipment associated with operation of the facility including; cabling, ladders, safe access devices, gates, signage, bird proofing, earthing, electrical works, strengthening works if required and air-conditioning equipment. 	
<p>Purposes</p>	<p>The proposed facility is necessary for Vodafone and Optus to continue to provide mobile and wireless telecommunications services to Bowen Hills and surrounding areas.</p>	
<p>Property Details</p>	<p>Legal property description: Lot 703 on SP288048 Street Address: Lot 703 on SP288048</p>	
<p>Town Planning Scheme</p>	<p>Council: Brisbane City Council Zone: EC Emerging Community Principal Designated Use: Commercial</p> <p>Heritage: RNA Showgrounds; Royal Queensland Showgrounds; Royal National Agricultural and Industrial Association of Queensland Exhibition Grounds/Show Grounds; National Agricultural and Industrial Association of Queensland Exhibition Grounds. Listed as a local heritage item.</p> <p>Priority Development Area: Bowen Hills Priority Development Area Assessing Authority: Economic Development Queensland (EDQ)</p>	
	<p>Relevant State & Local Planning Policies</p>	<p>Complies</p>

Applicable Planning Policies	Brisbane City Plan 2014	Complies
	Bowen Hills Priority Development Scheme	Complies
Application	Use and upgrade of an existing Vodafone and Optus telecommunications facility at 600 Gregory Terrace, Bowen Hills, Queensland 4006.	
Applicant	Vodafone and Optus c/- CommPlan PO Box 267 EDGECLIFF NSW 2027 Contact: Emma Lachlan + 61 2 9363 3815 emmal@commplan.com.au Our Ref: 440131 Showgrounds	

1 INTRODUCTION

Mobile telecommunications play a central role in society and are becoming increasingly integrated into our day-to-day lives. It shapes how people communicate, access information and complete daily tasks. Individuals, families, businesses and society are all benefiting from the improved connectivity facilitated by mobile phone technologies. In addition to its personal and social value, the evolution of mobile phone and wireless broadband technologies has delivered significant benefits to the Australian economy by improving productivity, business management and customer engagement.

As such, the demand for effective telecommunications services and infrastructure has increased considerably. An increasing number of people are demanding more mobile services from more locations nationwide. People are also demanding coverage to be uninterrupted in their houses, places of work and while they move around the country.

To cater for the growing demand both Vodafone and Optus have embarked on a nation wide upgrade of existing mobile phone telecommunications facilities to ensure customers needs are met.

1.1 Site Location

The proposed upgrade is located on an existing Vodafone and Optus tower that is located at 600 Gregory Terrace, Bowen Hills, Queensland 4006. The reason for this application is due to the property being classified as a local heritage item under the Brisbane City Council Plan 2014. The site is also located within the Bowen Hills Priority Development Area and has been assessed under the Bowen Hills Priority Development Scheme.

Part of the proposed upgrade works are considered to be 'Maintenance Activities' pursuant to the *Telecommunications Act 1997*.

Further assessment is undertaken below of the proposed upgrade against all legislation though the *Telecommunications Act 1997* has been operative since 1 July 1997. This legislation establishes the criteria for 'low impact' telecommunication facilities. If a proposed facility satisfies the requirements of a 'low impact' facility, the development is exempt from compliance with QLD Environmental planning legislation.

Further clarification of the term 'low impact' is provided in the *Telecommunications Act 1997* and the *Telecommunications (Low Impact Facilities) Determination 2018*, which was gazetted subsequent to the Act. The *Telecommunications (Low Impact Facilities) Determination 2018* establishes certain facilities, which cannot be considered low impact facilities.

The proposed upgrade is not considered a "low impact" facility under the definitions contained in the Commonwealth legislation as the subject lot is located within a local and Queensland heritage listed item and therefore considered to be within an 'area of environmental significance' under the definition of the *Telecommunications (Low Impact Facilities) Determination 2018* and therefore requires a development application to be submitted and approved by Economic Development Queensland due to the area being located within a Priority Development Area. If the site was not located within a heritage listed item the proposed works could be considered a Low Impact Facility.

2 DESCRIPTION OF SITE AND SURROUNDS

The proposed facility is located on a vacant portion of property which is owned by The Royal National Agricultural and Industrial Association of Queensland. The property operates as The Brisbane Showgrounds.

The land is zoned EC 'Emerging Community' which is a Commercial zoning. The proposed upgrade on the existing telecommunications tower is located within the Brisbane Showgrounds. The facility is on the South-Western border of the property near the border of Gregory Terrace road. The surrounding area is also zoned Emerging Community and the site is removed from residential development and is surrounded by Commercial use properties.

TA map of the existing site location and surrounding area is provided in **Figure 2** below.

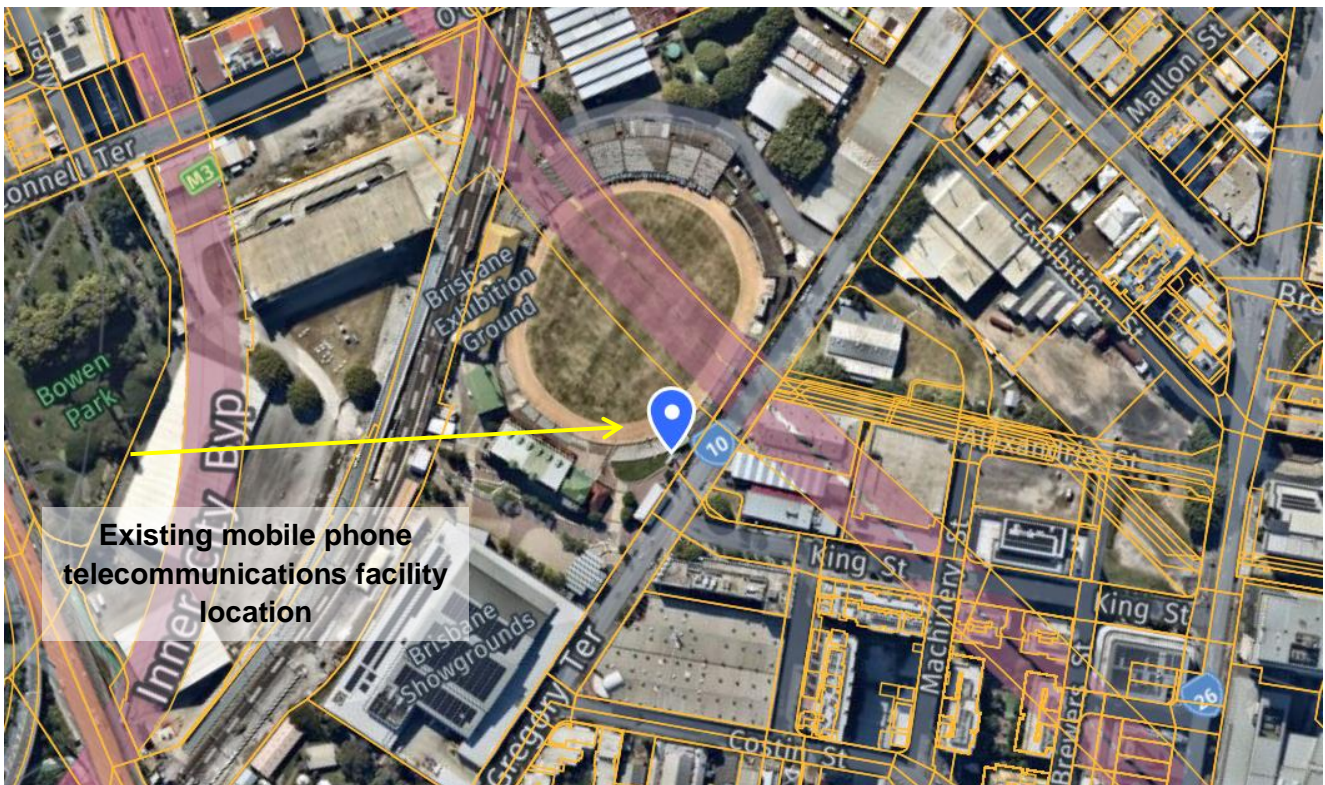


Figure 2 – Existing Vodafone and Optus telecommunications subject site and surrounds (Near Map)

. The zoning map is shown in **Figure 3** below.

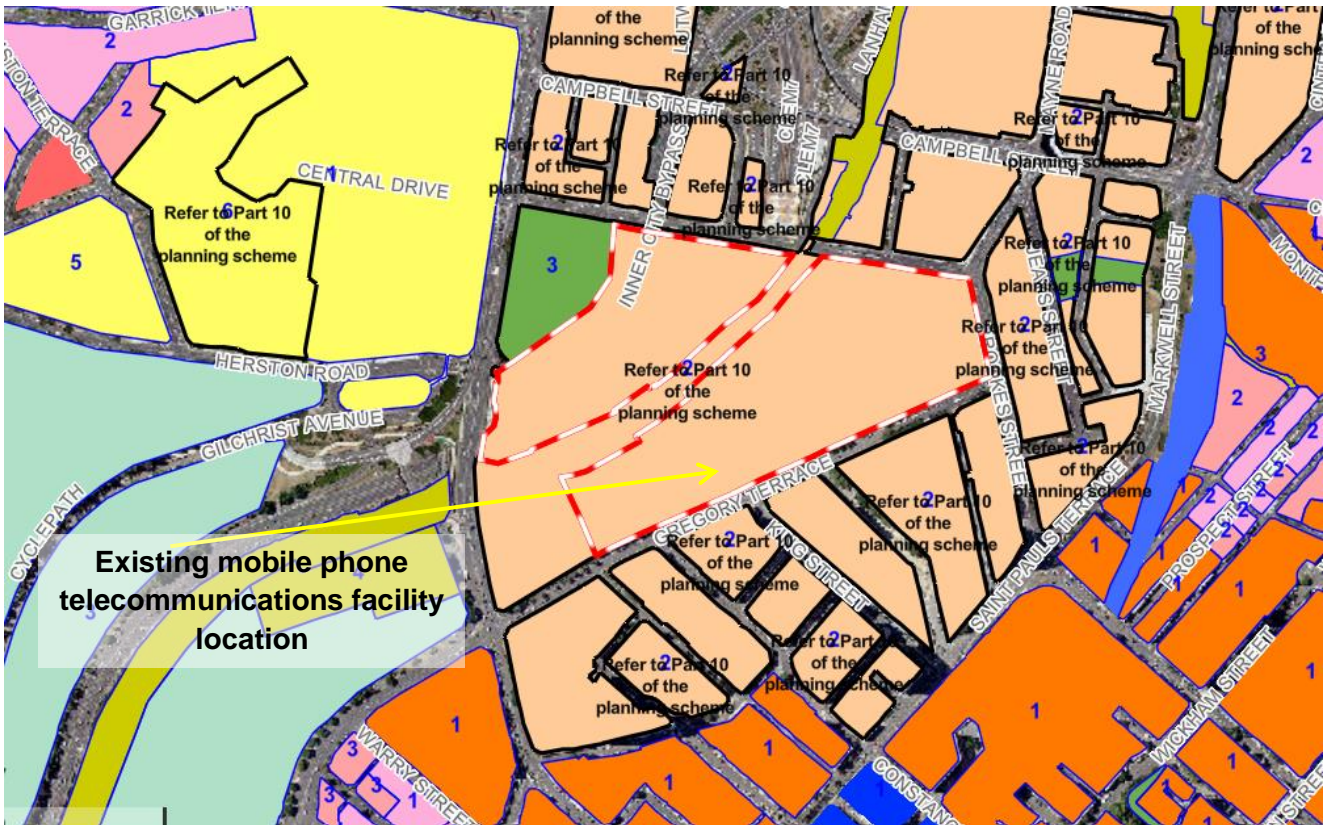
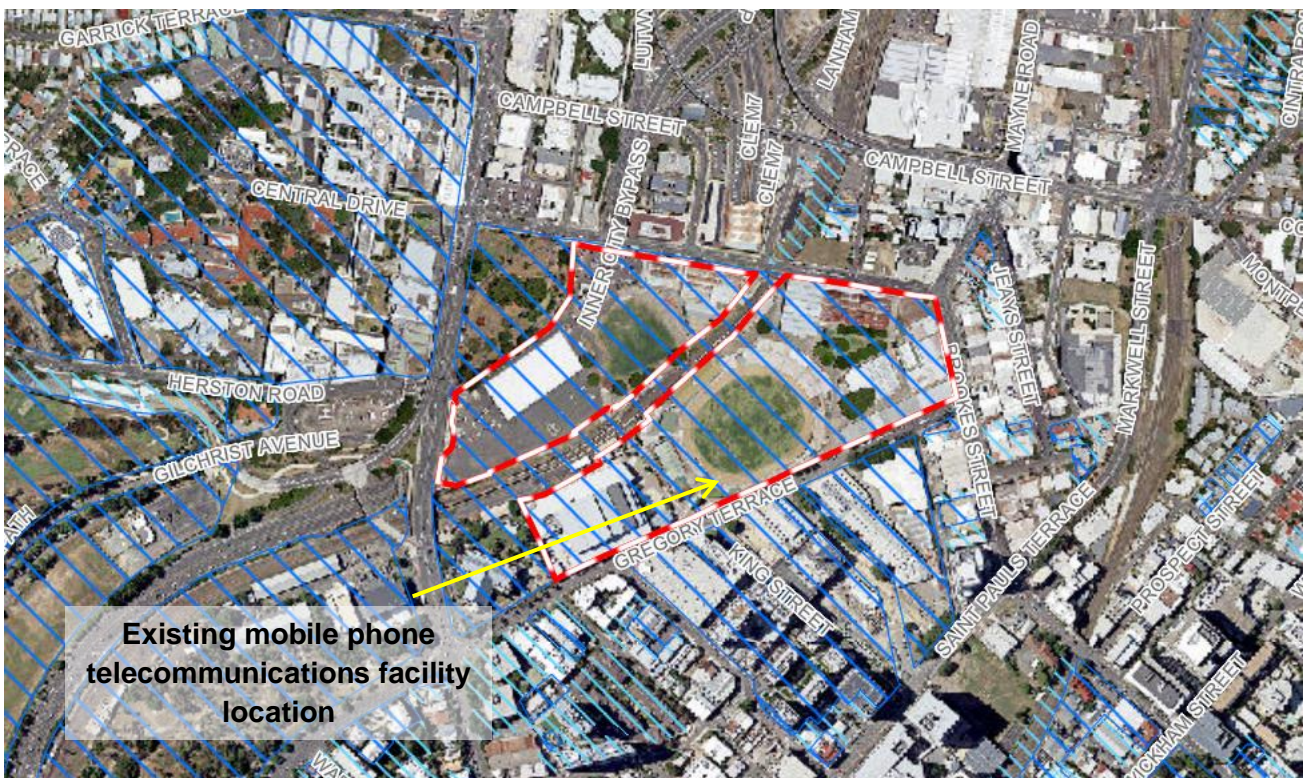


Figure 3 – Zoning Map (Brisbane City Council City Plan 2014)

The lot in which the existing facility is located is located within a local heritage item. Please see Figure 4 below for the heritage map.



3 THE PROPOSAL

The proposal is to upgrade the existing Vodafone and Optus mobile phone telecommunications facility located at Brisbane Showgrounds. The proposal is to add additional telecommunications equipment to the existing tower.

Plans showing the location of the facilities, the type, location and configuration of antenna on the existing pole are located in **Appendix 1**.

3.1 Facility and Equipment Details

Vodafone and Optus proposes to install a new mobile phone network telecommunications facility 600 Gregory Terrace, Bowen Hills, Queensland 4006. The proposal consists of the following:

- Installation of three (3) new Vodafone antennas on an existing triangular headframe on an existing tower at a height of 25.1m, 23.15m and 21m (antenna centreline);
- Installation of three (3) new Optus antennas on an existing triangular headframe on an existing tower at a height of 25.1m, 23.15m and 21m (antenna centreline);
- Removal of existing Optus and Vodafone superseded equipment;
- Installation of Remote Radio Units (RRUs) at various heights mounted to the existing headframe on the existing tower;
- Installation of two GPS antennas onto the rooftop of the equipment shelter;
- Upgrade and installation of equipment within the existing equipment shelter located at the base of the tower;
- Installation of ancillary equipment associated with operation of the facility including; cabling, ladders, safe access devices, gates, signage, bird proofing, earthing, electrical works, strengthening works if required and air-conditioning equipment.

3.2 Access Details

Access details remain the same as the site is existing.

3.3 Power Details

The existing facility is connected to power, and this does not change.

4 SECTION 79C ASSESSMENT

The proposal has been assessed having regard to the relevant Heads of Consideration under Section 79C (1) of the *Environmental Planning and Assessment Amendment Act, 1979*. This provides that, in determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application.

4.1 Any Environmental Planning Instruments

4.1.1 Commonwealth Legislation – The Telecommunications Act

The *Telecommunications Act 1997* has been operative since 1 July 1997. This legislation establishes the criteria for 'low impact' telecommunication facilities. If a proposed facility satisfies the requirements of a 'low impact' facility, the development is exempt from compliance with QLD Environmental planning legislation.

Further clarification of the term 'low impact' is provided in the *Telecommunications Act 1997* and the *Telecommunications (Low Impact Facilities) Determination 2018*, which was gazetted subsequent to the Act. The *Telecommunications (Low Impact Facilities) Determination 2018* establishes certain facilities, which cannot be considered low impact facilities.

The proposed upgrade to the existing tower is not considered a “low impact” facility under the definitions contained in the Commonwealth legislation as the lot in which the tower is situated is located within a local heritage item. If the subject lot was not a heritage item the works could be considered to be low impact.

The proposed upgrade is therefore subject to QLD Environmental Planning legislation and in this instance, development consent is therefore required for the proposed tower. Other aspects of the proposal are considered maintenance activities pursuant to the *Telecommunications Act 1997* and these include the upgrade to the internal equipment cabinets, antennas, cabling and other ancillary activities.

The proposed telecommunications facility will comply with the requirements of the *Telecommunications Act 1997*, the Telecommunications Code of Practice 2018 and the Industry Code C564:2018 Mobile Phone Base Station Deployment.

Details about the proposed facility and its EME compliance are provided below and can also be found on the website: www.rfnsa.com.au (RFNSA Reference Number: 4006005 or by contacting the applicant on the details provided. The proposed facility will be in compliance with the ECMA EMR regulatory arrangements. The ARPANSA EME Report for the proposed facility is attached to this SEE in **Appendix 2**.

This facility is designed to comply with the ACMA EMR regulatory arrangements.

This facility operates currently and the proposed upgrade also has been designed and will be installed in accordance with relevant regulations relating to exposure to EME. The facility will be designed and operated to minimise EME exposure to the general public.

The environmental EME level is minimised through radio network design. Adaptive power control is a network feature that automatically adjusts the power and hence minimises EME from both the base station and the handset or other device. Another feature, called discontinuous transmission, reduces EME emissions by automatically switching the transmitter off when no speech or data is sent.

The site has been designed to restrict public access to any areas that exceed the general public exposure limits. The installation of a non-climbable pole prevents access to the areas where the antennas are located.

Any safety risks to the public will be minimised by:

- On site signage
- Restricted access from locked gates and anti-climbing devices.

Any radiofrequency interference that the proposed facility may cause to other services is prevented through the use of directional antennas and frequency selection.

Radio propagation analysis has been used to select appropriate antenna tilts to meet the requirements for coverage from the facility, while minimising interference to other networks.

Due consideration has been given to control interference to other services, for example:

Transmitters are designed to comply with ACMA regulations which minimise spurious interference to other services.

Sufficient antenna separation is maintained between antennas of different networks.

Detailed radio frequency (RF) modelling has been performed to ensure that interference into other services (such as domestic electrical equipment, medical equipment and emergency networks etc) is within acceptable limits.

The proposed facility also includes the use of 5G technology. 5G is the next evolution of mobile wireless technology. 5G technologies, like all mobile technologies before it, are safe.

5G technologies are subject to the same EME Standards and is regulated by the Australian Communications and Media Authority (ACMA). Vodafone and Optus 5G networks will comply with all Australian standards.

- 5G will utilise higher frequencies than 4G, but that does not mean higher power.
- 5G frequencies do not travel as far as 4G frequencies and are typically less powerful.
- An EME report is completed and published for every proposed Optus and Vodafone mobile phone network facility and the EME report shows predicted levels of EME. The report is located in **Appendix 2** to this report.

4.2 Brisbane City Plan 2014

The relevant local environmental plan applicable to the subject site is the *Brisbane City Council Plan 2014*.

4.2.1 Neighbourhood Centre Zone

The proposed site is within the EC 'Emerging Community' zone.

The purpose of the Emerging Community zone is to provide for

- *identify land that is intended for an urban purpose in the future; and*
- *protect land that is identified for an urban purpose in the future from incompatible uses; and*
- *provide for the timely conversion of non-urban land to land for urban purposes.*

The proposal is considered to be consistent with these objectives and oval outcomes. The proposal will promote business and economic development and improve efficiency and the economic attractiveness of the area as well as creating a well-functioning urban purpose landscape because the area will have excellent wireless telecommunications services. The existing telecommunications facility and proposed upgrade to the facility is compatible with the existing commercial and residential nature of the area.

4.2.2 Telecommunications Tower Code

The purpose of the Telecommunications Tower Code is to facilitate safe and effective provision of telecommunication servicing while minimising the potential impacts on the community and environment.

Performance Criteria	Acceptable Solution	Response
<p>P1</p> <p>Design, Construction and operation of a telecommunications tower must accord with and implement the Telecommunication Tower Planning Scheme Policy</p>	<p>A1.1 The proposal accords with and implements the Telecommunications Towers Planning Scheme Policy</p> <p>OR</p> <p>A1.2 The proposal accords with and implements a memorandum of understanding or standard operating agreement between Council and the carrier (and landowner if relevant)</p>	<p>The proposal complies with the Telecommunications Tower Scheme Policy. The proposed upgrade to the existing Vodafone and Optus telecommunications tower does not conflict with any other uses on site and does not inhibit potential future uses of the property.</p> <p>The proposal ensures that all measures have been taken to ensure public health and safety.</p>
<p>P2 Proposal must not constitute a safety hazard to aviation operations</p>	<p>A2.1 Proposals do not emit high electromagnetic energy or signal transmission in the vicinity of airports or airport navigational systems</p> <p>A2.2 No building, structure, object or activity more than 15m above ground level intrudes into prescribed airspace for Brisbane or Archerfield Airports.</p>	<p>The existing facility and proposed upgrade complies with AS2772.1—Radio Frequency Radiation—Maximum Exposure Levels. The frequency in which the existing Vodafone and Optus telecommunications facility operates does not impact on any airport or airport navigational system. The proposed upgrade will not change this.</p> <p>The proposal is approximately 13m away from Brisbane Airport and 16km from Archerfield Airport.</p>

4.2.4 Critical Infrastructure and Movement Overlay Code

Table 8.2.9.3—Performance outcomes and acceptable outcomes

Performance Outcomes	Acceptable Outcomes	Response
Access to telecommunications facility, major electricity infrastructure, substation, renewable energy facility, transport depot or utility installation		
<p>PO2</p> <p>Development ensures that a telecommunications facility, major electricity infrastructure, substation, renewable energy facility, transport depot or utility installation which support a disaster response activity retains necessary access during a natural disaster event to ensure its continued operation.</p>	<p>AO2</p> <p>Development for a telecommunications facility, major electricity infrastructure, substation, renewable energy facility, transport depot or utility installation:</p> <ol style="list-style-type: none"> a. has direct vehicular access to a critical route or an interim critical route; or b. has a hazard-free route to a critical route or an interim critical route during a natural disaster event; or c. includes upgrades to infrastructure to enable access to a critical route or an interim critical route during a natural disaster event; or d. has been designed to operate in all flood events without human intervention. 	<p>The proposed Vodafone and Optus facility complies with PO2 and AO2.</p> <p>The proposal provides essential telecommunications infrastructure which will support disaster response in such circumstances. The proposed facility also as direct, hazard free access established as part of this proposal. The proposal has been designed to withstand any flooding event.</p>

The proposal to upgrade the existing telecommunications facility complies with the relevant Overlays under the City Plan on the subject property.

The proposal is permitted with consent in accordance with the provisions of the City Plan.

The proposed development seeks to upgrade the existing telecommunications infrastructure that will provide further and better wireless telecommunications services to the surrounding area. The location and the size of the facility does not change and will not prevent the future use of the property and the presence of the facility will also not hinder the proper and orderly development of the property.

The use of the site, as discussed in Section 8 – Other Issues for Consideration, will have negligible impact on the character and use of the surrounding area.

4.2.5 Gross Floor Area – SC1.2.2 Administrative Terms of Brisbane City Plan 2014

Gross Floor Area is noted under Section 1.2.2 in the Brisbane City Council Plan 2014. The definition of Gross Floor Area under the plan is:

Gross floor area, for a building, means the total floor area of all storeys of the building, measured from the outside of the external walls and the centre of any common walls of the building, other than areas used for—

- a. building services, plant or equipment; or*
- b. access between levels; or*
- c. a ground floor public lobby; or*
- d. a mall; or*
- e. parking, loading or manoeuvring vehicles; or*
- f. unenclosed private balconies, whether roofed or not.*

The gross floor area of the proposed upgrade does not change as the telecommunications facility is existing and there is no change to the footprint of the development. Please refer to the Design Plans in **Appendix 1**.

4.3 Heritage

The proposal is for an upgrade of an existing telecommunications facility within the Brisbane Showgrounds at the property, 600 Gregory Terrace, Bowen Hills, QLD 4006. The subject property is listed under the Brisbane City Plan 2014 and the Queensland Heritage Register as a heritage item. The item was listed on the register in 2013. The heritage significance of the property has been listed as '*Social and community: Showground/exhibition grounds*'. There are specific buildings that are listed as items of significance on the heritage register and the location of the exiting Vodafone and Optus tower is not one of them. The proposal is for a minor upgrade to the existing tower on the subject property and does not impact on the heritage significance of the property. The proposed upgrade does not alter the existing visual impact of the facility and continues to also provide a dual purpose to the Brisbane Showground by providing flood lighting facility to the showgrounds.

4.4 Any Draft Environmental Planning Instruments

There are no DRAFT environmental planning instruments currently affecting the sit

4.5 Bowen Hills Priority Development Area

The Bowen Hills Priority Development Area (PDA) facilitates the development of a regionally significant mixed-use precinct that is well connected to public transport and the Brisbane CBD.

The PDA includes 108 hectares of land in the inner northern suburb of Bowen Hills, located three kilometres from the Brisbane CBD. The proposed existing telecommunications facility is located within the Bowen Hills PDA.

The existing telecommunications facility and proposed upgrade and subject of this development application is located within the 'Specialised Centre – Entertainment' Zone.

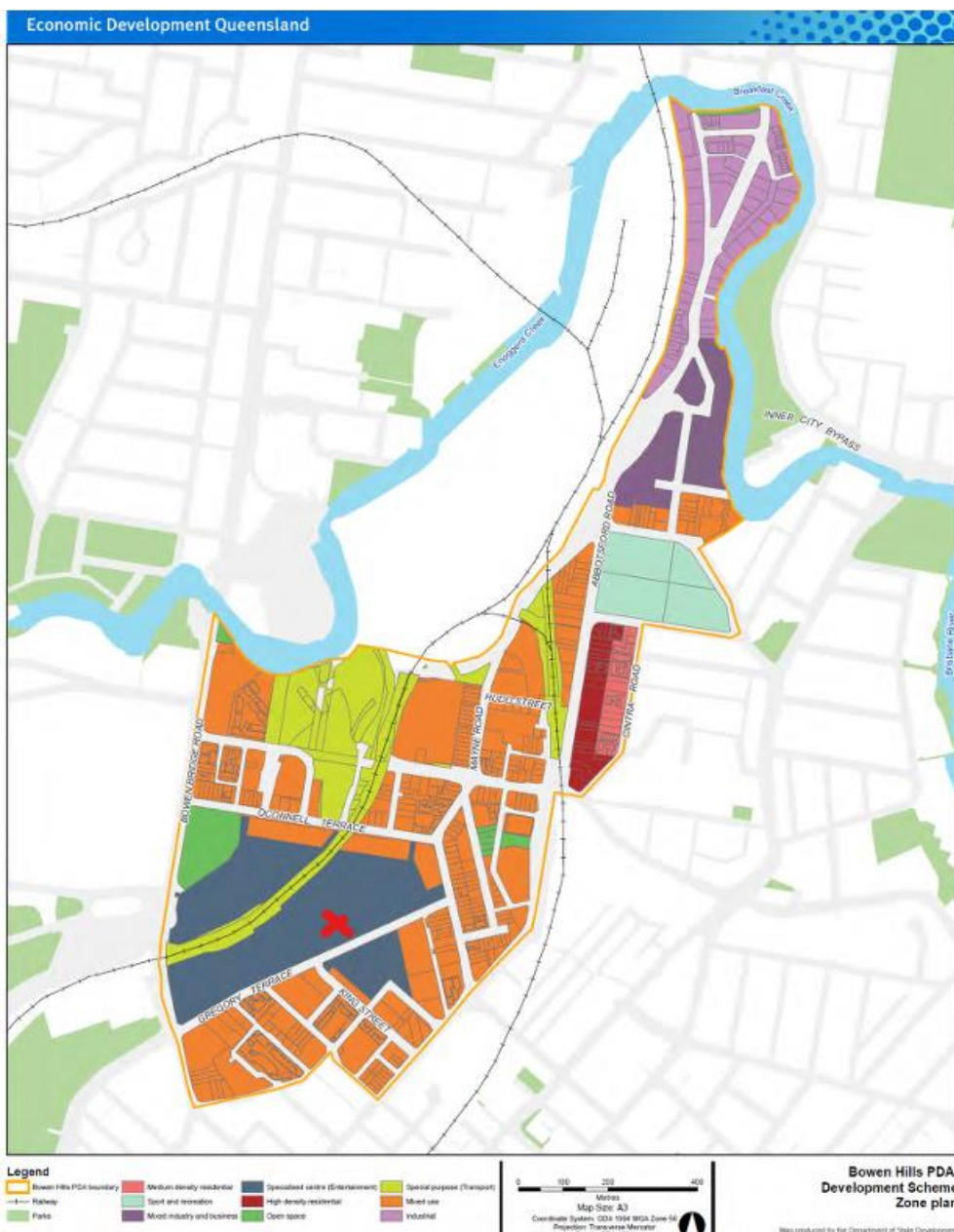


Figure 5 - Bowen Hills – Priority Development Scheme Map (Site marked by Red X)

The preferred development intent of the area is: "Development supports the use of the Old Museum

and Brisbane Showgrounds, providing areas and large format facilities for library, museum or gallery, exhibition, event, festival, concert, conference, showground, public or community group gatherings, indoor and outdoor sport and recreation, private functions, trade exhibitions and displays, plus ancillary office, catering, light refreshments and sale of merchandise.”

The proposed upgrade to the existing telecommunications facility ensures that the area can function as an entertainment precinct as those working, travelling to the area as well as living in the area will require access to good quality telecommunications services. The proposed upgrade will support those especially visiting the Showgrounds and surrounding area and will support the use of the area as an entertainment zone.

Telecommunications facilities are not listed as prohibited uses under this zone.

Under Section 2.5.6 of the PDA it is noted there are heritage places within the PDA area. Heritage places Development promotes the historic identity of the Bowen Hills PDA, by conserving the cultural significance of heritage places and sensitively managing any development and adaptive reuse opportunities by:

“i. avoiding significant adverse impacts on the cultural heritage significance of the place by protecting the fabric, features and setting of a heritage place when providing for its continued use, interpretation and management.”

The proposal is for an upgrade of an existing telecommunications facility within the Brisbane Showgrounds at the property, 600 Gregory Terrace, Bowen Hills, QLD 4006. The subject property is listed under the Brisbane City Plan 2014 and the Queensland Heritage Register as a heritage item. The item was listed on the register in 2013. The heritage significance of the property has been listed as ‘*Social and community: Showground/exhibition grounds*’. There are specific buildings that are listed as items of significance on the heritage register and the location of the existing Vodafone and Optus tower is not one of them. The proposed upgrade does not alter the existing visual impact of the facility and continues to also provide a dual purpose to the Brisbane Showground by providing flood lighting facility to the showgrounds.

4.6 Noise

Noise and vibration emissions associated with the proposed facility will be limited to the initial upgrade construction phase. Noise generated during the construction phase will be of short duration and will be in accordance with relevant applicable QLD standards.

There will be some low-level noise from the ongoing operation of air conditioning equipment associated with the equipment cabinets, once installed. Noise emanating from the air conditioning equipment is at a comparable level to a domestic air conditioning installation and will generally accord with the background noise levels.

4.7 Social and Economic Impacts

Access to high quality and reliable mobile telecommunications services is well understood to be a necessity in Australia’s modern economy. This is specifically more relevant in regional and urban areas such as Bowen Hills and surrounding areas, where it is increasingly important to have access to high quality mobile telecommunications services through the development of telecommunications facilities

such as the proposal to upgrade the existing mobile telecommunications facility at 600 Gregory Terrace, Bowen Hills.

The demand for greater data and mobile connectivity is evident in the need to provide additional facilities such as this one. Upgrading the existing facility within Bowen Hills allows for great access to mobile telecommunications services for the local area and wider Brisbane City Council area.

The proposal will provide people who live, work in, visit or travel through the area with much needed wireless telecommunications services to access information, socially and economically interact and complete daily tasks. Individuals, families, businesses and society are all benefiting from the improved connectivity facilitated by mobile technologies. In addition to its personal and social value, the evolution of mobile technologies has delivered significant benefits to the Australian economy by improving productivity, business management and customer engagement. There is also a wide range of community safety benefits with mobile phones often being used in emergency events such as bush fires, car accidents and domestic incidents.

9 CONCLUSION

The proposed upgrade to the existing Vodafone and Optus telecommunications facility at 600 Gregory Terrace, Bowen Hills, Queensland 4006 will allow for the existing facility to continue to be an integral component in the ongoing development of the mobile telecommunications infrastructure in the locality and wider Brisbane City Council region. The facility will provide an important community benefit by providing access to critical mobile telecommunications infrastructure, and therefore greatly improved wireless telecommunications services in the area.

The proposed upgrade to the existing tower is considered appropriate in light of the relevant legislative, environmental, technical, radio coverage and public safety requirements and is considered acceptable in social, economic and environmental terms as demonstrated in this Statement of Environmental Effects.

There are no major environmental impacts likely to occur which could render the construction and operation of the proposed facility unacceptable, and the proposal satisfactorily meets the requirements of the relevant state and local planning instruments and policies.

For these reasons, it is respectfully requested that the Department looks favourably at this application and that it be progressed to a positive resolution.

Appendix 1 – Design plans

Appendix 2 – ARPANSA EME Report