



property & infrastructure

Statement of Environmental Effects

Proposed Installation of a Telecommunications Facility

Address:

Lot 19 DP3468
20X Harris Road
Normanhurst NSW 2076

RFNSA Site Reference:

2076021

Prepared for Submission to:

HORNSBY SHIRE COUNCIL

March 2020

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Document Controls

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1 Introduction

Singtel Optus Propriety Limited (Optus) and Vodafone Hutchison Australia (VHA) are licensed carriers under the *Telecommunications Act 1997* (Cwlth) (“Telecommunications Act”). Optus and VHA are currently expanding and improving their mobile phone networks throughout New South Wales to meet growing demand for mobile telecommunications services. As part of this project, Optus and VHA are proposing to install a new telecommunications facility at Normanhurst to improve the coverage within the Hornsby Shire Council local government area (LGA) generally.

The Carrier’s mobile phone networks operate through a series of local cells each containing a set of antennas that transmit and receive low-powered radio waves to and from mobile phone handsets in the surrounding area. Each cell contains a mobile telecommunications facility called a base station, with each base station being connected to the whole network via a series of underground cables and in some circumstances point-to-point radio links.

In today’s modern society mobile smart phones have become an essential element within everyday life where there is a demand for high quality mobile phone services, call coverage, and data usage. With the increased demand for technology comes an increased need for infrastructure to ensure such quality coverage is maintained. Currently there are some mobile network problems in and around Normanhurst and Thornleigh area. These include some areas where there is poor or no coverage due to the location and performance of the existing sites, the inability of the radio signal to penetrate inside buildings, and the increased demand for mobile phone services.

This Statement of Environmental Effects (SEE) has been prepared to accompany the development application (DA) to Hornsby Shire Council (Council) for the construction of a mobile phone base station on land at Lot 19 DP3468, 20x Harris Road, Normanhurst NSW 2076. The preparation of the SEE and lodgement of the DA has been undertaken by CPS Global on behalf of the Carriers.

The owner of the land is Hornsby Shire Council. Please find enclosed owners consent to lodge the development application from Mr Steve Fedorow, Director of Community and Environmental Division at Hornsby Shire Council as **Appendix A**.

CPS Global has been engaged by Optus to provide property, planning, and project management services to obtain tenure, to design, and to construct appropriate sites for the installation of the Carrier’s mobile network base station. As Optus’ consultants, CPS Global is authorised to facilitate the environmental assessment of identified sites and apply for any planning approvals required to develop the telecommunications facility.

This statement describes the proposed development at the site in the context of relevant planning controls and policies applicable to the proposed development. Furthermore, the statement provides an assessment against the relevant matters for consideration under *Section 4.15* of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979).

The environmental assessment has been undertaken in *Section 8* of this SEE and is supported by additional studies. In accordance with the environmental assessment and supplementary documentation, the proposed development is considered appropriate to its context and surroundings, and within the planning parameters with negligible impact.

Mobile phones have formed an integral part of society and they are considered a necessity to everyday life. The proposed facility will have significant benefits to the residents, workers, and travellers to Normanhurst and Thornleigh areas. It will enable productivity and service delivery in various sectors, including, but not limited to, health, education, finance, and business. The facility will have a significant benefit to the safety of residents providing needed mobile phone coverage. For these reasons, it is considered that the proposed facility is in the public interest.

2 Site Description and Environmental Context

2.1 Site Description

The site is at Lot 19 DP3468, 20x Harris Road, Normanhurst NSW 2076. The site is an existing flood light pole at the Normanhurst Oval.

Please find enclosed a copy of the planning certificate pursuant to Section 10.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as **Appendix B**.



Figure 1: Site Location
(Source: Google Earth, 2019)

The site is located with the Normanhurst Oval in the north eastern portion of the sport oval. The site is an area of open space that includes a sports field with netball courts, a playground, recreation area that includes toilet facilities.

The site is zoned RE1 Public Recreation under Hornsby Local Environmental Plan 2013 (Hornsby LEP). The location of the facility is within the RE1 portion of the site. The immediate area to the east is predominately open space in nature with sport oval, beyond that and to the north the area comprises of mature vegetation. To the west and further to the south the area is residential in nature and is characterised by single dwellings on small lots that is typical of the Normanhurst area.

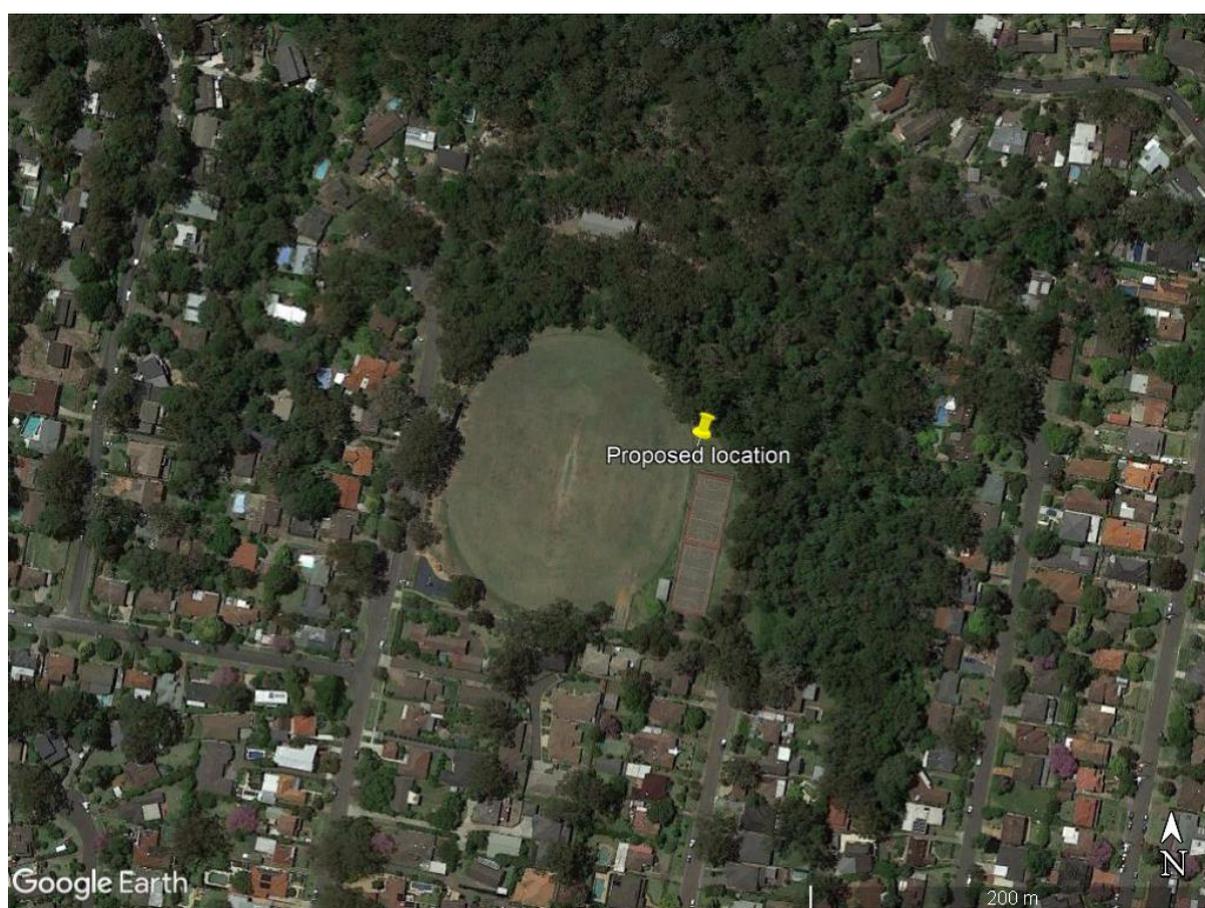


Figure 2: Site Location

(Source: Google Earth, 2020)

2.2 Existing Development and Visual Character

The proposed facility is located within a large area of open space. The facility is located within the Normanhurst Park located east of the Harris Road reserve. To the north of the site there is Waitara Creek. This large area of tall vegetation will provide screening to the facility from the east and south. The areas to west and north of the proposed site also include tall trees that will provide partial screening from residences located in the area.

The areas of open space are surrounded by residential uses. Dwellings comprise mostly two storey single dwellings on small lots. As a result of these residential lots with large building envelopes that are built to minimum setback requirements, only the houses that front the oval will have a view to the proposed facility. There will be some limited views to the west and south where the topography increases.

2.3 Heritage

The subject site is not listed as an item of heritage significance on the Hornsby LEP 2013, nor is it within a heritage conservation area. A basic search of the Aboriginal Heritage Information Management System (AHIMS) returned no recorded Aboriginal sites or places in the area.

Please see **Appendix B** and **Appendix C** for greater detail.

3 Alternative Sites Considered

The Carriers have undertaken a detailed process in selecting the site for the proposed facility. Alternative candidates were considered as part of the proposal.

It is required by all carriers under the *Telecommunications Act 1997* and the *State Environmental Planning Policy (Infrastructure) 2007* that consideration be given to co-location and the upgrade of existing facilities as a priority.

The closest telecommunications facilities to the site are located at 1 Pioneer Avenue, Thornleigh NSW 2120 and at the corner of Pennant Hills Road and Frith Avenue, Normanhurst NSW 2076. These are located 0.87km and 1.25km respectively from chosen site and outside search area. Optus and Vodafone are currently located on both facilities and so reconfiguration of these sites would not alleviate the current coverage problems experienced within Normanhurst and surrounding areas.

In this instance, there are no suitable existing telecommunication structure in the surrounding area that could provide the necessary coverage for Normanhurst and its surroundings. Nonetheless, the facility will support infrastructure for two Carriers and would be considered a co-location once operational.

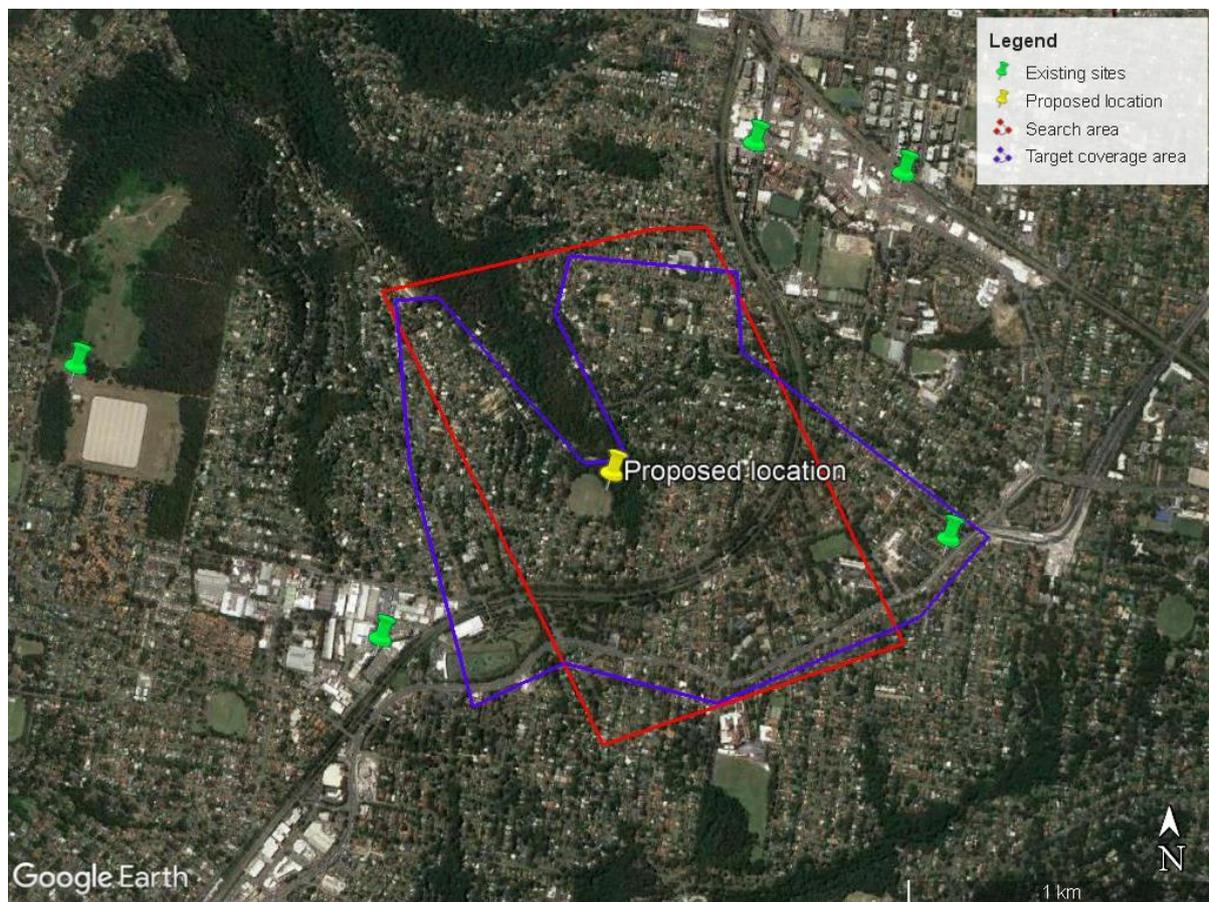


Figure 3: Existing telecommunications sites in the area
(Source: Google Earth, 2020)

The suitability of each site for the facility is assessed based on a number of factors, which include, but are not limited to, the following:

- Environmental considerations, including local and state planning policies;
- Co-location opportunities;
- Engineering constructability;
- Minimal environmental impact during the construction phase and operation of the facility;
- Visual amenity;
- Topographical constraints;
- Occupational health and safety;
- Radio frequency coverage objectives; and
- The ability to secure tenure on the property.

As a result of this assessment, the following possible sites were identified.

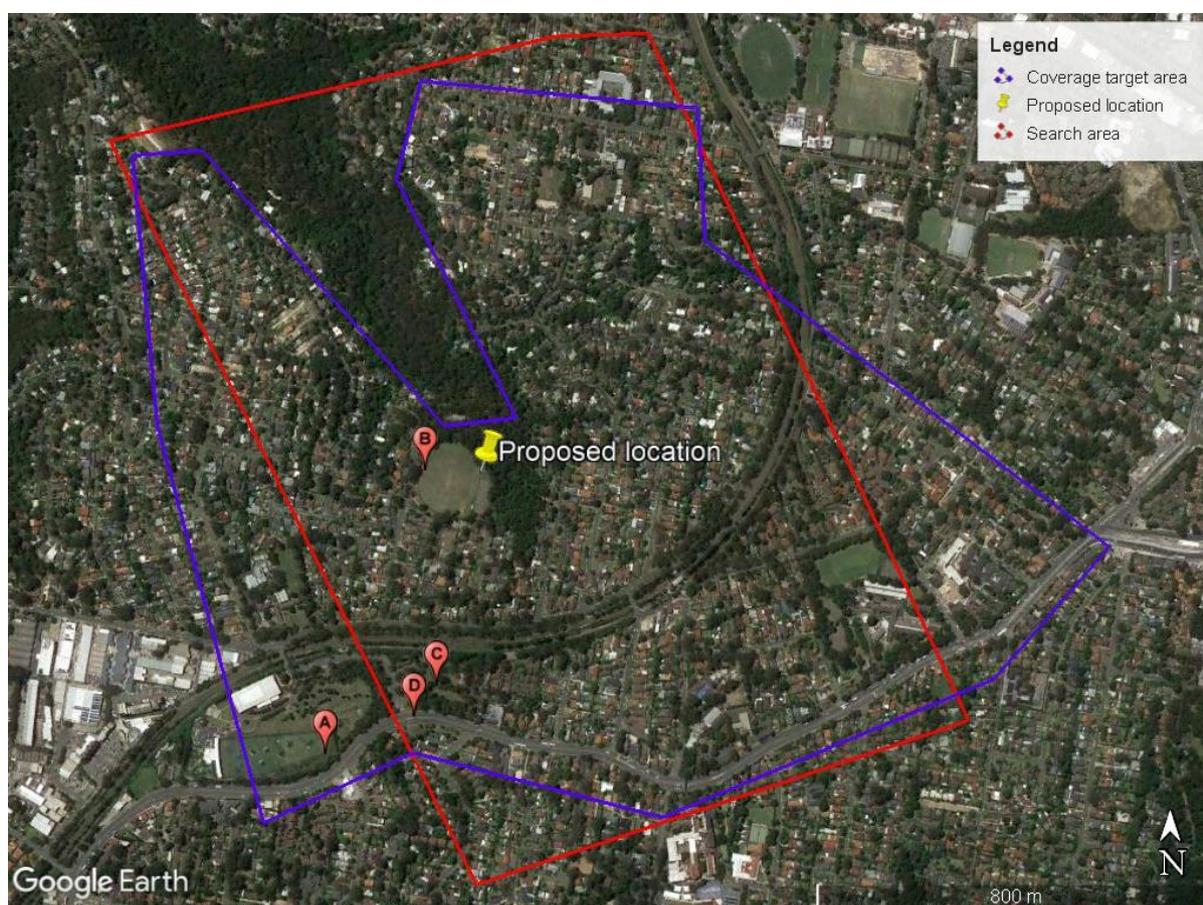


Figure 4: Alternative Candidates Considered
(Source: Google Earth, 2020)

Table 1: Alternative Candidates Considered

Candidate	Proposal	Comment
<u>Candidate A</u> Thornleigh Golf Centre 142-178 Pennant Hills Road, Thornleigh	Installation of a new 40 metre monopole	Ground level of the proposed location would allow for good coverage. However, its location in the south-west corner of the coverage target area makes it difficult to provide effective coverage, particularly to the north-east.
<u>Candidate B</u> Normanhurst Park 20x Harris Road, Normanhurst	Replacing the existing flood light pole with a new 30 metre monopole	The location has been proposed in initial DA proposal. However, during public exhibition community raised concerns related to close proximity to residential dwellings and potential collision with plans to redevelop the existing club house. In order to address the concerns, a decision was made to change location of the proposal to north eastern corner of the Normanhurst Oval.
<u>Candidate C</u> Kenley Park 136-140 Pennant Hills Road, Normanhurst	Installation of a new 40 metre monopole	Ground level of the proposed location would allow for good coverage. However, its location in the south-west corner of the coverage target area makes it difficult to provide effective coverage, particularly to the north-east.
<u>Candidate D</u> Ausgrid light pole Pennant Hills Road, Thornleigh	Replacing the existing light pole with a new 25 metre monopole	The height of the proposal would not achieve radiofrequency objectives and would require additional facilities.

3.1 The Preferred Candidate

As a result of the site selection process undertaken by Optus, the candidate that involves swapping out the existing flood light pole and replacing it with a new 30 metre monopole within Normanhurst Park, is considered to be the most appropriate site for the following reasons:

- The location will provide much needed network coverage to the areas of Normanhurst, Thornleigh and Hornsby;
- The site is considered to be an appropriate location to service the residential area;
- There is significant vegetation that will provide some screening to the facility from within the immediate locality;
- The site has been designed with the surrounding locality in mind and utilises already existing structure;
- The amended location is having a consideration of future plans to upgrade the existing club house and addresses concerns regarding the proximity to residential dwellings;
- The proposal allows two Carriers to be present at the site, reducing the number of facilities needed in the locality;
- The location of the proposed facility will have a minimal impact on the character and setting of the recreation area;
- The proposed development will not have a detrimental impact to the objectives of the zone;

- The location, situation, and elevation of the site would ensure the proposal meets Optus and Vodafone's coverage objectives, therefore improving the quality of telecommunications services to the surrounding areas while minimising the visual impact; and
- The ability to secure land tenure.

4 Planning History

19 June 2019

CPS Global, on behalf of Optus, wrote to Hornsby Shire Council requesting a pre-lodgement meeting.

Please find enclosed a lodgement confirmation of the Pre-Lodgement Application as **Appendix D**.

19 July 2019

CPS Global received Pre—Lodgement Advice from Hornsby Shire Council.

Please find the advice attached as **Appendix E**.

5 August 2019

CPS Global wrote to Hornsby Shire Council requesting a feedback regarding additional landscaping requirements for proposed facility.

Please find a copy of the correspondence as **Appendix F**.

27 August 2019

CPS Global received comments on the landscaping requirements from Hornsby Shire Council.

Please find the correspondence with Council enclosed as **Appendix G**.

Statement of Environmental Effects addresses the issues raised in the Council's correspondence and provides information on the matters.

17 December 2019

CPS and Optus representatives have met with Council to discuss the concerns raised by community and a solution to address the concerns. It has been agreed that location of the proposed is to be changed in order to minimise a potential impact of the facility on local residents.

5 Design of the Proposal

5.1 Proposed Equipment to be Installed

The proposal is for a mobile phone network base station that would provide improved depth of coverage to the Carrier's network within Normanhurst and surrounding areas.

The proposal seeks consent for:

- Replacing the existing flood light pole with a new 30.00 metre steel monopole;
- Reinstating the flood light at the height of 22 metres;
- Installation of three (3) Optus and three (3) Vodafone panel antennas on a triangular headframe mounted atop of the monopole;
- Installation of ancillary equipment including non-EME emitting Remote Radio Units (RRUs) mounted on the headframe;
- Installation of 5-bay outdoor equipment unit in standard colour "pale eucalypt";
- Ancillary equipment associated with the safe operation of the facility, including but not limited to, equipment housing, cable trays, cable ladders, cabling, earthing, electrical works, and air conditioning equipment.

Please find enclosed a set of plans as **Appendix H**.

5.2 Access Details

Access to the site is to be via driveway off Bryan Avenue.

Please refer to the set of plans enclosed as **Appendix H** for further details.

5.3 Electricity Details

Power will be taken from the existing power supply on site.

Please refer to the set of plans enclosed as **Appendix H** for further details.

5.4 Strength of the Electromagnetic Field

The facility would operate within the exposure standards in:

- (1) The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) Standard (the Radiation Protection Standard for Maximum Exposure levels to Radiofrequency Fields – 3KHz to 30 GHz (ARPANSA Standard));
- (2) Radiocommunications (Electromagnetic Radiation Human Exposure) Standard 2003; and
- (3) Any other standards endorsed by the Commonwealth Government and the Australian Communications and Media Authority (ACMA).

The facility would operate at low power levels as compared to many other radiocommunications transmitters such as television or radio broadcasting facilities.

The maximum strength of the electromagnetic field that the facility will produce will be less than 2.39% of the ARPANSA mandated exposure limit. This estimation is based on the maximum level of radio frequency (RF) / electromagnetic cumulative energy (EME) at 1.5 metres above ground level of the antenna.

Please find enclosed an ARPANSA Environmental EME Report dated 27 February 2020 as **Appendix I**.

5.5 Construction Details of the Proposed Facility

The construction of a telecommunications facility fundamentally consists of three stages, including:

- Site preparation;
- The installation of the monopole and equipment; and
- The installation of the communications and antennas involving technicians working within the outdoor equipment unit and riggers fixing the antennas to the pole.

The site preparation stage involves activities such as field testing, excavation, and construction foundations. This is followed by the delivery of pre-fabricated equipment housing and pole sections by low loader trucks, which are then fitted into place by a crane and fixed to the footings. Lastly, the antennas are installed on the pole by riggers and connected with the rest of the outdoor equipment unit and other equipment by qualified technicians.

Appropriate construction management measures, incorporating soil erosion and sediment controls, in accordance with the relevant regulations of the “*Blue Book*” – ‘*Managing Urban Stormwater: Soils and Construction*’ (Landcom 2004) will be implemented. A Soil and Erosion Control plan is included as part of **Appendix H**.

Any traffic impacts associated with construction will be of short-term duration and are not anticipated to adversely impact on the surrounding road network. In the unlikely event that a road closure would be required, the Carriers would request permission from the relevant authorities.

Noise and vibration emissions associated with the proposed facility will be limited to the construction phase outlined above. Noise generated during the construction phase will be of short duration and will be in accordance with the standards outlined in the *Environmental Protection Regulation 1998* and *Environmental Protection (Noise) Policy 1997*. Construction works will only occur between the hours of 7.00am and 6.00pm or as prescribed in the conditions of any development consent.

There will be some low-level noise from the ongoing operation of the air conditioning equipment associated with the outdoor equipment unit 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 prescribed by *Australian Standard AS1055*.

6 Commonwealth Legislative Framework

6.1 Telecommunications Act 1997

The *Telecommunications Act 1997* (Cth) is a federal regulation of telecommunications facilities and the activities of carriers and service providers. Schedule 3 of the *Telecommunications Act* allows carriers to enter on to land and exercise limited defined powers, which include the power to:

- inspect the land to determine whether the land is suitable for the carrier's purposes;
- install a low-impact facility on the land; and
- maintain a facility that is situated on the land.

Schedule 3 of the *Telecommunications Act* exempts carriers from the requirements of State and Territory environmental and planning legislation in some circumstances, including where telecommunications facilities fall under the *Telecommunications (Low-Impact Facilities) Determination 2018* ("the Determination"). In this instance, Optus and Vodafone seek to erect a telecommunications facility that is not believed to fall within the definition of a "low-impact facility" as defined in the Determination.

6.2 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* is a commonwealth regulation that provides a streamlined national regulation regarding the protection of items of a national and international environmental significance such as flora and fauna, ecological communities, and heritage items. These areas include:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (Ramsar Convention);
- Nationally threatened species and ecological communities;
- Migratory species;
- Commonwealth Marine Areas;
- The Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mining); and
- A water resource in relation to coal seam gas development and large coal mining development.

In light of these considerations the subject site is not an area of environmental significance as it will not impact on any of the areas listed above.

6.3 Telecommunications Code of Practice 2018

In exercising the powers given under the *Telecommunications Act*, carriers are required to act in accordance with best engineering practice, comply with recognised industry standards and minimise adverse impacts as much as practicable. The requirements for carrier conduct are outlined in the *Telecommunications Code of Practice 2018* ("the Code").

The Code requires carriers to ensure that design, planning and installation of facilities are in accordance with best practise. Under the Code "best practise" is defined as "using the best available design, planning and location practices to minimise the potential degradation of the environment and the visual amenity associated with the facility".

The facility would comply with the requirements of the Code.

6.4 Industry Code C564:2018 Mobile Phone Base Station Deployment

In response to requests for greater council and community involvement in relation to the installation of the telecommunications facilities, the Communications Alliance Limited (formerly the Australian Communications Industry Forum Limited) was formed by the Australian Communications Industry to ensure a unified approach in the rollout of telecommunications networks.

The Communications Alliance developed an industry code of practice which is reviewed regularly to ensure the highest quality of standards in industry practice relating to the roll out of mobile radio communications equipment. The current code is known as the *Industry Code C564:2018 Mobile Phone Base Station Deployment* (“the Deployment Code”). The Deployment Code replaces the previous code of practice from 2011.

The Deployment Code cannot change the regulatory and legislative regime at the local, state, or federal level. However, it can supplement the existing requirements already imposed on carriers by requiring them to consult with the local community and to adopt a precautionary approach in planning, installing, and operating mobile communications infrastructure.

The proposal is not considered a low-impact facility as prescribed by the Determination and is therefore subject to local and/or state planning processes requiring consent.

Careful consideration and the principles of the ‘precautionary approach’ have been applied in the siting of the proposed infrastructure. This takes into consideration the surrounding context, proximity to community sensitive locations, coverage objectives, and EME exposure which is well within the guidelines of the Australian Standard.

The Precautionary Approach has been applied to the development in the selection and design of the proposal in accordance with *Sections 4.1 and 4.2* of the Deployment Code.

Please find enclosed a copy of *Section 4.1 and 4.2* of the Deployment Code, Application of the Precautionary Approach to Site Selection checklist as **Appendix J**.

7 New South Wales Legislative Framework

7.1 State Environmental Planning Policy (Infrastructure) 2007

The *State Environmental Planning Policy (Infrastructure) 2007* (“SEPP Infrastructure”) was introduced to facilitate the delivery of infrastructure across New South Wales under the EP&A Act 1979. Its aims are:

- (a) *Improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and*
- (b) *Providing greater flexibility in the location of infrastructure and service facilities, and*
- (c) *Allowing for the efficient development, redevelopment or disposal of surplus government owned land, and*
- (d) *Identifying the environmental assessment category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development), and*
- (e) *Identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development, and*
- (f) *Providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing.*

The proposal complies with all elements of the SEPP Infrastructure. The SEPP Infrastructure as amended by the *SEPP (Infrastructure) Amendment (Telecommunications Facilities) 2010*. Clauses 113 and 115 in conjunction with the local planning provisions are being relied upon for permissibility of the proposed development at the subject location and are the basis for lodging and seeking Council consent for this development.

Clause 113 of the SEPP (Infrastructure) defines a “Telecommunications Facility” as:

- (a) *any part of the infrastructure of a telecommunications network, or*
- (b) *any line, cable, optical fibre, equipment, apparatus, tower, mast, antenna, dish, tunnel, duct, hole, pit, pole or other structure in connection with a telecommunications network.*

Clause 115(1) provides that:

Development for the purposes of telecommunications facilities, other than development in clause 114 or development that is exempt development under clause 20 of 116, may be carried out by any person with consent on any land.

Telecommunications facilities are therefore permissible in all zones within the Hornsby Shire Council local government area with the consent of Council.

Clause 115(3) of SEPP Infrastructure provides that:

Before determining a development application for development to which this clause applies, the consent authority must take into consideration any guidelines concerning site selection, design, construction or operating principles for telecommunications facilities that are issued by the Director-General for the purposes of this clause and published in the Gazette.

In this respect, the *NSW Telecommunications Facilities Guideline including Broadband (July 2010)* (“the Guideline”) has been issued by the Director-General. The principles that must be taken into consideration are outlined in *Section 2.2* of the Guideline.

7.2 New South Wales Telecommunications Facilities Guideline Including Broadband

The New South Wales government issued the *New South Wales Telecommunications Facilities Guideline Including Broadband (July 2010)* (“the Guideline”). The purpose of the Guideline is to:

“Provide a guide to the state wide planning provisions and development controls for telecommunications facilities in NSW contained in the State Environmental Planning Policy Infrastructure 2007 (SEPP Infrastructure)”

The Guideline outlines a number of key issues for consideration by consent authorities (where relevant) and carriers in the determination of the design and siting of telecommunications facilities including:

- ensuring that certain “guiding principles” relating to the design, siting, and construction of telecommunications facilities are developed and adhered to;
- consideration of visual impact and the need to reduce the impacts on heritage items as well as other items of environmental significance;
- that telecommunications facilities must be designed, installed, and operated to comply with standards relating to human exposure to EME appearing in any applicable code or standard made under any applicable law of the Commonwealth;
- encourage co-location with other facilities; and
- undertake site analysis to respond to site conditions.

These matters have been taken into account as part of the site selection and design for the proposal, these are discussed in more detail below.

Table 2: Table of compliance with the NSW Telecommunications Facilities Guideline including Broadband.

Principle 1: A telecommunications facility should be sited to minimise visual impact		
Specific Principles	Compliance	Comment
<p>(a) <i>As far as practical, a telecommunications facility that is to be mounted on an existing building or structure should be integrated with the design and appearance of the building or structure.</i></p> <p>(b) <i>The visual impact of telecommunications facilities should be minimise, visual clutter is to be reduced particularly on the tops of buildings, and their physical dimensions (including support mounts) should be sympathetic to the scale and height of the building.</i></p> <p>(c) <i>Where telecommunications facilities protrude from a building or structure and are predominantly backgrounded against the sky, the facility and their support mounts</i></p>	Yes	(a) – (c) These principles relate to facilities that are located on existing buildings or structures and are not directly applicable to a new free-standing monopole such as the proposed in this instance.

<p><i>should be either the same as the prevailing colour of the host building or structure, or a neutral colour such as grey should be used.</i></p> <p><i>(d) Ancillary facilities associated with the telecommunications facility should be screened or housed, using the same colour as the prevailing background to reduce its visibility, including the use of existing vegetation where available, or new landscaping where possible and practical.</i></p> <p><i>(e) A telecommunications facility should be located and designed to respond appropriately to its landscape setting.</i></p> <p><i>(f) A telecommunications facility located on, or adjacent to, a State or local heritage item or within a heritage conservation area, should be sited and designed with external colours, finishes and scale sympathetic to those of the heritage item or conservation area.</i></p> <p><i>(g) A telecommunications facility should be located so as to minimise or avoid the obstruction of a significant view of a heritage item or place, a landmark, a streetscape, vista, or a panorama, whether viewed from public or private land.</i></p> <p><i>(h) The relevant local government authority must be consulted where the pruning, lopping, or removal of any tree or other vegetation would contravene a Tree Preservation Order applying to the land or where a permit or development consent is required.</i></p> <p><i>(i) A telecommunications facility that is no longer required is to be removed and the site restored, to a condition that is similar to its condition before the facility was constructed.</i></p>		<p>(d) The associated equipment will be housed in outdoor equipment unit. The equipment unit would be in the standard colour, pale eucalypt. No additional landscaping has been proposed, however if considered necessary, this can be agreed or conditioned by Council as part of any development consent.</p> <p>(e) The facility has been located and designed to respond to its surrounding landscape context. For more detail, please see <i>Section 8.7.1</i> below.</p> <p>(f) The site is not a heritage item, nor within a heritage conservation area.</p> <p>(g) The proposed facility does not occupy a position that will obstruct views or sightline to any heritage item or place, landmark, streetscape, vista, or panorama. For more detail, please see <i>Sections 8.1, 8.2 and 8.7.4</i> below.</p> <p>(h) The proposal does not involve the removal of any tree or other vegetation. Please see Appendix K for an Arborist Report.</p> <p>(i) This aspect could be conditioned as part of any development consent.</p> <p>(j) The siting and design have taken</p>
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(j) <i>The siting and design of telecommunications facilities should be in accordance with any relevant Industry Design Guides.</i>		into consideration the Precautionary Approach. A copy of Precautionary Approach is attached as Appendix J .
Principle 2: Telecommunications facilities should be co-located wherever possible		
Specific Principles	Compliance	Comment
<p>(a) Telecommunications lines are to be located, as far as practical, underground or within an existing underground conduit or duct.</p> <p>(b) Overhead lines, antennas, and ancillary telecommunications facilities should, where practical, be co-located or attached to existing structures such as buildings, <i>public utility structures, poles, towers or other radiocommunications equipment to minimise the proliferation of telecommunications facilities and unnecessary clutter.</i></p> <p>(c) <i>Towers may be extended for the purposes of co-location.</i></p> <p>(d) <i>The extension of an existing tower must be considered as a practical co-location solution prior to building new towers.</i></p> <p>(e) <i>If a facility is proposed not to be co-located the proponent must demonstrate that co-location is not practicable.</i></p> <p>(f) <i>If the development is for a co-location purpose, then any new telecommunications facility must be designed, installed and operated so that the resultant cumulative levels of radio frequency emissions of the co-located telecommunications facilities are within the maximum human exposure levels set out in the Radiation Protection Standard.</i></p>		<p>(a) Not Applicable</p> <p>(b) There are no existing facilities within the required search ring that are practical for co-location. Nonetheless, the facility will support infrastructure for two Carriers and would be considered a co-location once operational.</p> <p>(c) The proposed facility will accommodate Optus and VHA facility. Once constructed it will be a co-located facility and will not require an extension.</p> <p>(d) Not Applicable</p> <p>(e) For more detail, please see <i>Section 3.0 and Table 1</i> above.</p> <p>(f) The facility will be in accordance with industry standards on EME. Please see Appendix I for the Environmental EME Report.</p>
Principle 3: Health Standards for exposure to radio emissions will be met		
Specific Principles	Compliance	Comment
(a) <i>A telecommunications facility must be designed, installed and operated so that the maximum human exposure</i>		(a) The proposed installation will comply with the Australian Communications and Media Authority (ACMA) regulatory arrangements with

<p>levels to radiofrequency emissions comply with Radiation Protection Standard.</p> <p>(b) An EME Environmental Report shall be produced by the proponent of development to which the Mobile Phone Network Code applies in terms of design, siting of facilities and notifications. The Report is to be in the format prescribed by the Australian Radiation Protection Nuclear Safety Agency. It is to show the predicted levels of electromagnetic energy surrounding the development comply with the safety limits imposed by the Australian Communications and Media Authority and the Electromagnetic Radiation Standard, and demonstrate compliance with the Mobile Phone Networks Code.</p>		<p>respect to electromagnetic radiation exposure levels.</p> <p>(b) EME Exposure Levels from this site have been calculated in accordance with the ARPANSA prediction methodology and report format. This report is enclosed as Appendix I. For more detail, please see <i>Section 8.7.9</i> below.</p>
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Principle 4: Minimise disturbance and risk, and maximise compliance

Specific Principles	Compliance	Comment
<p>(a) The siting the height of any telecommunications facility must comply with any relevant site and height requirements specified by the Civil Aviation Regulations 1988 and the Airports (Protection of Airspace) Regulations 1996 of the Commonwealth. It must not penetrate any obstacle limitation surface show on any relevant Obstacle Limitation Surface Plan that has been prepared by the operator of an aerodrome or airport operating within 30 kilometres of the proposed development and reported to the Civil Aviation Safety Authority Australia.</p> <p>(b) The telecommunications facility is not to cause adverse radio frequency interference with any airport, port or Commonwealth Defence navigational or</p>	<p>Yes</p>	<p>(a) The proposal is in compliance with the height requirements of CASA. Please Appendix L for correspondence with CASA.</p> <p>(b) The base station is designed to create no electrical interference problems with other radio-based systems and complies with the requirements of relevant Australian Standards.</p>

<p>communications equipment, including the Morundah Communications Facility, Riverina.</p> <p>(c) The telecommunications facility and ancillary facilities are to be carried out in accordance with the applicable specifications (if any) of the manufacturers for the installation of such equipment.</p> <p>(d) The telecommunications facility is not to affect the structural integrity of any building on which it is erected.</p> <p>(e) The telecommunications facility is to be erected wholly within the boundaries of a property where the landowner has agreed to the facility being located on the land.</p> <p>(f) The carrying out of construction of the telecommunications facilities must be in accordance with all relevant regulations of the Blue Book – 'Managing Urban Stormwater: Soils and Construction' (Landcom 2004), or its replacement.</p> <p>(g) Obstruction or risks to pedestrians or vehicles caused by the location of the facility, construction activity or materials used in construction are to be mitigated.</p> <p>(h) Where practical, work is to be carried out during times that cause minimum disruption to adjoining properties and public access. Hours of work are to be restricted to between 7.00am and 5.00pm, Mondays to Saturdays, with no work on Sundays and public holidays.</p> <p>(i) Traffic control measures are to be taken during construction in accordance with Australian Standard S1742.3-2002 Manual of uniform traffic control devices – Traffic control devices on roads.</p>		<p>(c) The base station facilities are designed to be installed in accordance with any relevant manufacturer specifications. The proposal will comply with the requirements of all relevant Australian Standards.</p> <p>(d) The facilities are not being erected on any existing building or structure.</p> <p>(e) The location and layout of the facilities reflect discussions with the landowner and will be reflected in any associated lease or licence entered between the carriers and the landowners.</p> <p>(f) – (k) These matters can be appropriately addressed through the imposition of conditions by Council on any development consent.</p>
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<p>(j) <i>Open trenching should be guarded in accordance with Australian Standard Section 93.080 – Road Engineering AS1165 – 1982 – Traffic hazard warning lamps.</i></p> <p>(k) <i>Disturbance to flora and fauna should be minimised and the land is to be restored to a condition that is similar to its condition before the work was carried out.</i></p> <p>(l) <i>The likelihood of impacting on threatened species and communities should be identified in consultation with relevant state or local government authorities and disturbance to identified species and communities avoided wherever possible.</i></p> <p>(m) <i>The likelihood of harming an Aboriginal Place and/or Aboriginal object should be identified. Approvals from the Department of Environment, Climate Change and Water (DECCW) must be obtained where impact is likely, or Aboriginal objects are found.</i></p> <p>(n) <i>Street furniture, paving or other existing facilities removed or damaged during construction should be reinstated (at the telecommunications carrier's expense) to at least the same condition as that which existed prior to the telecommunications facility being installed.</i></p>		<p>(l) The works will not impact on threatened species and communities.</p> <p>(m) The site is unlikely to contain any Aboriginal artefacts. An AHIMS Basic Search has been conducted and returned no known items of Aboriginal significance. A copy of this the AHIMS Basic Search Result is attached as Appendix C.</p> <p>(n) This can be addressed by Council through the imposition of conditions on any development consent.</p>
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7.3 State Environmental Planning Policy 55 Remediation of Land

Clause 7 of the *State Environmental Planning Policy No 55 Remediation of Land* (SEPP 55) outlines consideration with regards to contamination and remediation that is to be considered when determining a development application. In particular whether it has considered the following:

- (1) *A consent authority must not consent to the carrying out of any development on land unless:*
- (a) it has considered whether the land is contaminated, and*
 - (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*

- (c) *if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*
- (2) *Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subclause (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.*
- (3) *The applicant for development consent must carry out the investigation required by subclause (2) and must provide a report on it to the consent authority. The consent authority may require the applicant to carry out, and provide a report on, a detailed investigation (as referred to in the contaminated land planning guidelines) if it considers that the findings of the preliminary investigation warrant such an investigation.*
- (4) *The land concerned is:*
- (a) *land that is within an investigation area,*
 - (b) *land on which development for a purpose referred to in Table 1 to the contaminated land planning guidelines is being, or is known to have been, carried out,*
 - (c) *to the extent to which it is proposed to carry out development on it for residential, educational, recreational or child care purposes, or for the purposes of a hospital – land:*
 - (i) *in relation to which there are no knowledge (or incomplete knowledge) as to whether development for a purpose referred to in Table 1 to the contaminated land planning guidelines has been carried out, and*
 - (ii) *on which it would have been lawful to carry out such development during any period in respect of which there is no knowledge (or incomplete knowledge).*

According to the Section 10.7 planning certificate, a potentially contaminating activity may have occurred on the property. The proposed development does not result in the change of land use to which our planning assessment suggest that a new telecommunications facility will be acceptable. Any contaminated soils exposed during the proposed works will be remediated in accordance with the relevant guidelines under SEPP No. 55 and the necessary soil disposal permits will be arranged. Should Council deem it necessary, the provision of a detailed site investigation audit may be conditioned as part of any development consent.

8 Section 4.15 Evaluation – Matters for Consideration

Under Section 4.15 of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979) the consent authority must take into consideration the environmental impacts and general considerations associated with the proposal. This section addresses the requirements in accordance with Section 4.15 of the EP&A Act 1979.

8.1 Hornsby LEP 2013

The consent authority for development on the subject site is Hornsby Shire Council. The *Hornsby Local Environment Plan 2013* (LEP 2013) is the current planning instrument for development in the location of the proposed facility.

Under the LEP 2013, the subject site is zoned Re1 Public Recreation. The development of a telecommunications facility is permissible with the consent of Hornsby Shire Council in accordance with Clause 115(1) of the SEPP (Infrastructure) 2007, whereby telecommunications facilities are permissible in any zone.

Relevant provisions of the LEP 2013 in relation to the proposal are discussed below.

Clause 2.1 Land Use Zones

Zone RE1 Public Recreation

The objectives of the RE1 Public Recreation Zone are:

- *To enable land to be used for public open space or recreational purposes.*
- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*
- *To protect and maintain areas of bushland that have ecological value.*

The installation of a telecommunications facility in this location is considered to be generally consistent with the objectives of the zone. The facility will be located on an existing flood light pole that does not impact the sites use as a public park. The facility will not change the use of the light pole nor will it impact on the activities undertaken in the park.

Clause 5.11 Bush fire hazard reduction

The site is identified as being located within a bushfire prone area. The HLEP 2013 states:

“Bush fire hazard reduction work authorised by the Rural Fires Act 1997 may be carried out on any land without development consent.”

A bushfire risk assessment has been prepared and is included as **Appendix M**.

The report identifies that the proposed facility will be constructed to minimum standards required in accordance with the guidelines of Planning for Bushfire Protection 2006. Further, it notes the community Resilience Practice Note 1/11 from the Rural Fire Service provides a direction that telecommunications infrastructure is critical in the event of a bushfire emergency. The required standard for telecommunications infrastructure is BAL40. It is recommended that the area within the equipment cabin should be managed as an asset protection zone. Bushfire hazard is discussed in more detail in Section 8.2 below.

Clause 7.6 Earthworks

(1) The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

The proposed development will include some minor earthworks. It is considered that the works will not have a detrimental impact on the immediate locality, or on any heritage items.

A soil and erosion control plan is included as **Appendix H**.

8.2 Hornsby DCP 2013

The *Hornsby Development Control Plan 2013* (DCP 2013) came into effect on 11 October 2013 and applies to all land within the Hornsby LGA.

The general objectives of the DCP are as follows:

- *provide a comprehensive document that provides a framework for development of land in the Hornsby Local Government Area,*
- *clearly set out the processes, procedures and responsibilities for the involvement of the community and key stakeholders in the development of land,*
- *promote development that is consistent with Council's vision of creating a living environment,*
- *protect and enhance the natural and built environment, and ensure that satisfactory measures are incorporated to ameliorate any impacts arising from development,*
- *encourage high quality development that contributes to the existing or desired future character of the area, with particular emphasis on the integration of buildings with a landscaped setting,*
- *protect and enhance the public domain,*
- *minimise risk to the community, and*
- *ensure that development incorporates the principles of Ecologically Sustainable Development (ESD).*

The proposed location and design of the proposal has had regard to the objectives required by Council. Section 7.3 Telecommunications of Hornsby DCP 2013 provides planning controls for the construction of telecommunications facilities. These are discussed in **Table 3** below.

Table 3: Table of Compliance with Section 7.3 Telecommunications

7.3.1 Location	
Desired Outcomes	
a. Telecommunications facilities that are located to maximise the co-location of facilities to limit visual impact on the locality.	
b. Telecommunications facilities that are located to minimise the impact of electromagnetic radiation on sensitive landuses.	
Prescriptive Measures	
a. The facility should be consistent with the Australian Communications Industry Forum (ACIF) Code, including consideration of alternative locations and infrastructure to minimise electromagnetic radiation	The Carriers ensure that their facilities are installed, designed and certified by qualified professionals in accordance with all relevant Australian Standards. This ensures that the Optus and VHA's facility will not result in any increase in the level of risk to

	<p>the public. This facility is to be operated in compliance with the mandatory standard for human exposure to EME – currently the Radio communications (Electromagnetic Radiation Human Exposure) Standard 2003. Furthermore, wherever possible the Carriers seek to locate their facilities away from community sensitive locations (e.g. schools, childcare centres, hospitals). In this instance, no sensitive uses have been identified in proximity of the proposed site.</p>
<p>b. Telecommunications facilities should be located:</p> <ul style="list-style-type: none"> • on business and industrial sites, or • on existing infrastructure sites, and • to avoid locations within or at the termination of a significant vista or focal point of a streetscape, and • to avoid heritage conservation areas or items. 	<p>The site is considered to be an appropriate location to service the residential area. The location of the proposed facility will have a minimal impact on the character and setting of the recreation area. The development has been designed with the surrounding locality in mind and utilises already existing structure. The proposed site is not within a heritage conservation area and does not contain an item of significant heritage under the protection of Hornsby LEP 2013.</p>
<p>c. Where practical, antennae and similar structures should be co-located or attached to existing structures, such as buildings, public utility structures, poles, towers or other telecommunication facilities to minimise visual impact.</p>	<p>The proposal includes swapping an existing floodlight pole for a stronger and slightly thicker monopole. Utilising already existing tall structure will minimise the visual impact of the facility.</p>
<p>d. If a facility is proposed not to be co-located, the proponent should demonstrate that co-location is not practical or desirable considering the ACIF Code exclusions.</p>	<p>The Carriers have undertaken a detailed process in selecting the site for the proposed facility. Alternative candidates were considered as part of the proposal. It is required by all carriers under the <i>Telecommunications Act 1997</i> and the <i>State Environmental Planning Policy (Infrastructure) 2007</i> that consideration be given to co-location and the upgrade of existing facilities as a priority.</p> <p>In this instance, there are no suitable existing telecommunication structure in the surrounding area that could provide the necessary coverage for Normanhurst and its surroundings.</p> <p>The proposed facility will support infrastructure for two Carriers and would be considered a co-location once operational.</p>
<p>7.3.2 Design</p>	
<p>Desired outcome</p> <p>a. Telecommunications facilities that are designed to minimise the visual impact on the locality.</p>	

Prescriptive Measures	
<p>a. Telecommunications facilities should be designed in accordance with industry best practice.</p>	<p>In exercising the powers given under the <i>Telecommunications Act</i>, carriers are required to act in accordance with best engineering practice, comply with recognised industry standards and minimise adverse impacts as much as practicable. The requirements for carrier conduct are outlined in the <i>Telecommunications Code of Practice 2018</i> (“the Code”). The Code requires carriers to ensure that design, planning and installation of facilities are in accordance with best practise. Under the Code “best practise” is defined as “using the best available design, planning and location practices to minimise the potential degradation of the environment and the visual amenity associated with the facility”. The facility would comply with the requirements of the Code.</p>
<p>b. Telecommunications facilities should be integrated with the design, appearance and scale of the building or structure on which it is located with regards to colour, texture, material and built form.</p>	<p>The facility has been designed to reduce the impacts of visual amenity. The proposal includes the replacement of the existing floodlight pole with a stronger and larger pole. The site comprises of a number of other tall elements such as floodlight poles, infrastructure features such as utility poles and tall trees.</p>
<p>c. Ground level ancillary structures (such as equipment huts) should be screened with native landscaping.</p>	<p>The outdoor equipment unit will be painted in ‘pale eucalypt’ colour in order to blend with the surrounding greenery. Notwithstanding, if Council consider additional landscaping is appropriate to reduce visual impact to the equipment outdoor units, this can be conditioned.</p>

Section 1B.6.1 Tree Preservation

The proposal does not seek to remove or damage any trees. Although the bushfire land map shows that the proposed facility is located within the 100m buffer from Category 1 vegetation, it is considered that the bushfire prone vegetation within 100m of the site is highly fragmented and heavily effected by weeds on the edges of the Normanhurst Park. The bushfire Risk Assessment concludes that the vegetation to the east of the site is narrow and fragmented and therefore does not present a risk of a fully developed bushfire impacting the proposed site. Please refer to **Appendix M** for greater details.

4.6 Bushfire prone land

The section of the DCP provides guidance and controls for all development upon land classified as being bushfire prone within the Hornsby Shire Council LGA.

A bushfire risk assessment has been produced to accompany this SEE and is located at **Appendix M**. The report concludes that the proposed development will be constructed to be minimum standard required in accordance with the guidelines in *Planning for Bushfire Protection 2006*. The report assesses the proposed development against all the elements of bushfire attack and concludes that the provided the subject facility is constructed with the recommendations that it is considered to satisfy the aims and objectives of *Planning for Bushfire Protection 2006*.

The report makes recommendations as follows:

(1) Construction Standard: The proposed development shall be constructed to a minimum standard of Section 3 (construction general) and Section 8 (BAL 40) of AS3959, 2009 'Construction of Buildings in Bushfire Prone Areas' and Section A3.7 of the NSW Rural Service Addendum to Appendix 3 of 'Planning for Bushfire Protection 2006'.

(2) At the commencement of building works and in perpetuity, the area within the equipment cabin should be managed as an asset protection zone. Guidance is provided at Appendix 2.

Council may include any conditions of development consent with regard to these recommendations. Please refer to **Appendix M** for greater details.

The proposed development is therefore considered to be consistent with the aims and objectives for the zone. In addition, the Rural Fire Service has released a Community Resilience Practice Note 1/11. The Practice Note provides direction on the application of bush fire protection measures to telecommunication facilities in bush fire prone areas. The Practice Note states that telecommunications facilities are considered to be critical infrastructure for firefighting communications and for providing warnings, information, and communication channels for people in bush fire prone areas during emergencies. The proposed facility will therefore have a significant benefit to the area and is in the public interest.

8.3 Draft Environmental Planning Instruments

The subject land is not affected by an exhibited Draft Local Environment Plan.

8.4 Planning Agreement

The proposal is not subject to any planning agreement.

8.5 The Regulations

As discussed in *Section 6* and *7* of this SEE, the proposal is consistent with the relevant regulations applicable to the site.

8.6 Coastal Zone Management Plan

The site is not subject to any Coastal Zone Management Plan.

8.7 The Likely Impacts of the Development

The impacts of the proposal in relation to a range of potential issue areas are assessed below. It is considered that the proposal will not create any significant or unacceptable impacts on the locality.

8.7.1 Visual Character and Impacts

The site is located in the northeast corner of the Normanhurst Oval. The subject site is characterised by open grassy ground containing a sports field with netball courts, a playground, recreation area that includes toilet facilities and significant tall vegetation to the north. The site comprises of a number of other tall elements such as floodlight poles, other infrastructure features such as utility poles and the tall trees located to the north and east. The site is relatively isolated, located outside of the residential area of Normanhurst.

The topography of the subject land is generally flat. The proposed facility is located within a large area of open space. The land gently lowers to the west of the proposed site. The area to the north and east contains significant tall vegetation and the Waitara Creek. Beyond this to the north and east the area is residential. To the west and south the area is predominantly residential in nature. Within the visual catchment, existing buildings, topography, vegetation in gardens limit visibility, therefore the cabin and lower parts of the facility would be of minimal visibility in all views, with minor views of the upper part of monopole and aerials.

The visual catchment may be wider from public domain locations such as recreational area, the views however are partially constrained to glimpses from this area by vegetation.

The proposed facility will support infrastructure for two Carriers and would be considered a co-location once operational. Therefore, the proposed height is to ensure the proposal will meet coverage objectives. The proposal includes swapping an existing floodlight pole for a stronger and slightly thicker monopole. However, utilising already existing tall structure will minimise the visual impact of the facility.

Please find the photomontages showing the proposed facility in context of its surroundings as **Appendix O**.

Overall it is considered that the subject monopole does not have substantial negative effects on the intrinsic character of the wider setting. As a result, this weighting factor is considered to have a neutral impact. The low levels of visual effects therefore equate to low impacts.

In our opinion the monopole is best left unpainted so that the steel may weather over time and darken, as it would be viewed against a background of vegetation. It will also match the existing floodlight infrastructure in the sports field.

The visual impacts of the subject monopole on its overall visual catchment were considered to be moderate to low and acceptable regarding potential visual impacts. In our opinion the development application can be supported on visual impact grounds.

8.7.2 Access, Transport, and Traffic

The proposed facility would be situated on a floodlight pole within the Normanhurst Oval, 20X Harris Road, Normanhurst. Access to the site is to be via new access track off Bryan Avenue.

It is considered that there is adequate space on-site to allow all constructions to be contained within the site boundaries. Limited vehicle movements will be associated with the installation and maintenance of the facility. Traffic in the local area will not be impeded by the installation of the proposed telecommunications facility on the site. No road closures will be required during the construction process. There will be no noticeable increase in traffic volumes.

Once the proposed facility is operational it will be unmanned and will only require regular maintenance approximately three times a year. Direct access to the site off Harris Road will not require any additional management measures once constructed.

8.7.3 Utilities

Electricity is available from the nearby electricity supply on site. The existing power supply is adequate, and the details of the power run are shown in the plans enclosed as **Appendix H**.

The site does not require any water during operation and as the facility is unmanned, no wastewater is produced.

8.7.4 Heritage

The site does not contain any items of heritage significance.

8.7.5 Demolition and Construction

The proposal includes the removal of the existing floodlight pole and replacing it with a stronger and slightly larger pole. It is considered that demolition and construction will be undertaken in a short time frame. The majority of the works are internal works within the facility equipment cabin. Should Council be minded approving the application, all construction can take place within hours conditioned as part of any development consent.

8.7.6 Flora and Fauna

The site does not contain endangered or threatened species. It is considered the propose development will not impact on any habitat within the park.

8.7.7 Bushfire Requirements

The issue of bushfire requirements is addressed in *Section 8.1 and 8.2* above.

Please find enclosed a Bushfire Risk Assessment as **Appendix M**.

8.7.8 Noise

The noise associated with the construction of the facility would not be significant. Construction would take place during the day and works would proceed in accordance with Council's noise controls.

There will be some noise associated with the operational stage of the development with the equipment shelter air conditioning units. The air conditioning is required to comply with Australian Standards for noise and will be comparable to a domestic air conditioning unit.

8.7.9 Technological Hazards, Health, and Safety

Optus and VHA take the health and safety of the public very seriously.

The Carriers operate within the operational standards set by the Australian Communication and Media Authority (ACMA) and Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). ARPANSA is a Federal Government agency incorporated under the Department of Health and is charged with the responsibility for protecting the health and safety of both people and the environment from the harmful effects of radiation (ionising and non-ionising). The operational standards are based on international standards set by the International Commission for Non-Ionizing Radiation Protection (ICNRP).

All Carriers ensure that their facilities are installed, designed and certified by qualified professionals in accordance with all relevant Australian Standards. This ensures that the Optus and VHA's facility will not result in any increase in the level of risk to the public. This

facility is to be operated in compliance with the mandatory standard for human exposure to EME – currently the *Radio communications (Electromagnetic Radiation Human Exposure) Standard 2003*.

In addition to this, the Carriers undertake further measures when designing the facility, to minimise the EME exposure to the general public, by installing the facility in accordance with the Australian Mobile Telecommunications Association (AMTA) Radio Frequency (RF) Safety Compliance Program – Base Station Design Guidelines Engineering for Access Control to minimise EME. Other preventative measures include:

- Utilising Dynamic/Adaptive Power Control network feature that automatically adjusts the power and hence minimises EME from the facility;
- Varying the facility's transmit power to the minimal required level, minimising EME from the network; and
- Discontinuous transmission, a feature that reduces EME emissions by automatically switching the transmitter off when no data is being sent.

The proposed facility will also have restrictions aimed at preventing public access, including a secured compound fence with a locked gate and warning signs placed around the facility.

The Environmental EME Report associated with this site is enclosed as **Appendix I**. The report shows that the maximum predicted EME levels will equate to 2.39% of the maximum exposure limit, which is significantly below the allowable exposure limit under the Australian Standard (100% – which is still considered to be safe).

This measurement is based on the maximum worst case scenario, considering direct exposure at full operational capacity of the facility which is generally not a true representation of a real-life scenario. The signal from the facility is usually affected by various factors including service demand, the existing network support of surrounding base stations, distance, topography, physical and natural barriers (e.g. hills, trees, buildings et cetera). Other variations include antenna specifications and azimuth, power input to name a few.

Refer to Figure 4 below for EME predictions at various distances within 500m from the facility and 1.5m from ground level. The table illustrates the maximum predicted level from the proposed facility will be 2.39% at 178 metres from the subject site.

Furthermore, wherever possible the Carriers seek to locate their facilities away from community sensitive locations (e.g. schools, childcare centres, hospitals). In some instances however, this is unavoidable especially in densely populated and well-developed areas.

The predicted EME levels shown in the Environmental EME Report are based on the distance, angle, and height range relative to the specific ground level at the area of interest. The prediction shows the worst-case scenario, not including possible signal attenuation due to physical or natural obstacles such as buildings or trees. The predicted EME levels are considerably low and will be within the allowable ARPANSA Standard.

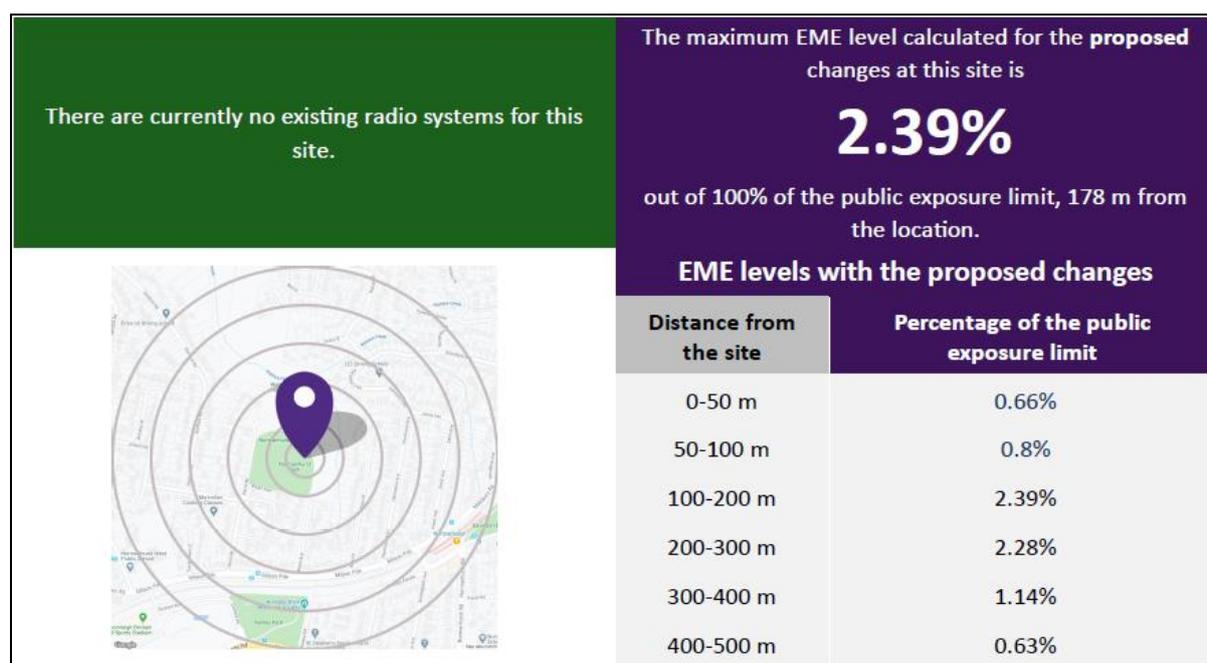


Figure 5: Calculated EME levels as detailed in the ARPANSA Environmental EME Report

Maximum cumulative EME level for the proposed configuration				
Location	Height range	Electric field (V/m)	Power density (mW/m ²)	Percentage of the public exposure limit
Normanhurst Oval	0-3 m	1.14	3.43	0.062%
Normanhurst Scout	0-3 m	1.97	10.33	0.17%
Playground	0-3 m	1.61	6.84	0.13%
Residence A	0-6 m	4.064	43.81	0.8%
Normanhurst West Public School	0-6 m	0.58	0.89	0.016%

Table 4: Calculated EME levels of nearby locations

8.7.10 Economic and Social

The proposal would contribute to the provision of improved Optus and VHA coverage to Normanhurst and Thornleigh areas and the greater Hornsby Shire Council LGA. The facility would provide economic benefits through improved services, a greater choice of service carriers, and by maintaining competition between providers will reduce costs to consumers.

The improvement in coverage and call quality would facilitate business opportunities from local operators and the ability of local residents to work from home. Improved service levels would also ensure better coverage for visitors and users of the nearby public recreation areas.

8.8 Suitability of the Site for the Development

The proposed site for the Optus and VHA telecommunications facility is considered suitable for the following reasons:

- The proposed development will not have any detrimental impacts on the objectives of the zone;
- An extensive site selection process has been undertaken and it is considered that the subject site is the most suitable for a telecommunications facility;
- The site has been designed in consideration of the surrounding locality. The facility will be largely screened by existing vegetation and it will be colour matched to the vegetated surroundings;
- The proposed facility utilises a slim line monopole, sympathetic materials, and colours;
- The location meets the desired radiofrequency objectives;
- It has been particularly targeted to provide the optimal required quality of service as required by Optus and VHA for the Hornsby Shire Council LGA.

8.9 Submissions

The proposed development does not meet the requirements of a low-impact facility as detailed in the *Telecommunications (Low-Impact Facilities) Determination 2018*. As a result, the proposal is subject to the requirements of Hornsby Shire Council provisions with regard to notification in accordance with the Hornsby DCP 2013.

Council will have regard to any submissions that it receives as a result of consultation taken under *Section 4.15 (d) and (e)* of the EP&A Act 1979.

8.10 The Public Interest

The proposal has been revised as much as practical to address concerns raised by community in a course of public exhibition.

The proposed development is in the public interest. Mobile phones are an important part of everyday life; people want to use their phones where they live, work, and play and expect them to operate effectively. Recent technological advances have led to a greater demand for improved mobile phone and wireless coverage, which in turn has led to greater demand for telecommunications infrastructure. The proposed facility is required as there is currently significant stress being placed on existing Carrier's networks in Normanhurst, Thornleigh and the surrounding areas.

A mobile phone base station that provides coverage to a geographic area is known as a 'cell'. Cells are aligned next to each other in a similar pattern to a honeycomb, and it is for that reason that mobile phone networks are sometimes referred to as a 'cellular' network. The capacity of the cell is often determined by a number of factors that may hinder its efficiency including the topography of the surrounding areas, physical constraints such as trees or buildings, or the cell's capacity to carry the call.

Each base station can only carry a finite number of calls and in areas where the residential density may not be as high, base stations will often be located on hills or tall structures to maximise the coverage area. When a mobile phone base station reaches capacity, its coverage area will shrink. Areas that previously had good network coverage will be left with poor and possibly no network coverage. The proposed facility will be supporting the existing facilities in the area ensuring that network coverage is maintained at all times.

Additional benefits that the infrastructure will have for the community include:

- Emergency calls and text alerts – Mobile phones are now the predominant way to access the triple zero service. Additionally, mobile phones will send a text message based on the last known location of the handset at the time of an emergency.

- Landline usage and ownership is declining at an increasing rate and more people now use their mobile phone to make triple zero calls than landlines. (67% of 000 calls made in 2017 came from mobile phones)
- The ability to have phone and mobile data coverage, particularly from within the home or office.
- Increase in the ability to work from home and home occupations.
- Mobile phones are beneficial in the case of road accidents or breakdowns.
- Meeting the demands of residents in the Hornsby Shire Council area, ensuring they have improved network coverage and access to the latest 4G technology.

It is considered that the safety and ability to assist in the case of an emergency, as well as providing the Hornsby Shire Council community with 4G technologies, the demand and necessity far outweighs the negative impacts of the development. This proposal is therefore considered to be in the public interest.

9 Conclusion

The proposal is for the installation of a mobile telecommunications base station on land at Lot 19 DP3468, 20x Harris Road, Normanhurst NSW 2076. The proposed facility would form an integral part of the wider network. The proposed facility would provide an important community benefit to the Hornsby Shire Council LGA by providing improved and reliable communications services to the local community.

It is considered that the proposal is in accordance with the objectives of the Hornsby LEP 2013 and other state and federal legislations, in particular State Environmental Planning Policy (Infrastructure) 2007, which allows development for the purposes of telecommunications facilities on any land, with consent.

The environmental impact assessment taking pursuant to Section 4.15 of the EP&A Act 1979 has determined that the proposal would not cause any significant environmental impact and would have minimal impact upon the amenity of the area.

Therefore, for the reasons stated above and having regard to the environmental planning assessment set out in this SEE, it is respectfully requested that Council grant development consent for the proposed works.