

# Development Application for Planning Consent

Proposed New Telecommunications Facility 13 Sycamore Road Lake Albert NSW 2650 Lot 8 DP716602

# **Statement of Environmental Effects**

Project Reference: S4918 Lake Albert South RFNSA Reference: 2650053

November 2023

# **Document Control**

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# **Executive Summary**

Site	Lot description: Lot 8/DP716602			
Information				
	Physical address: 13 Sycamore Road, Lake Albert NSW 2650 (Lot 8/DP716602)			
	<b>Coordinates:</b> -35.157060, 147.392274			
Proposal	Ventia are seeking development consent for a new Telecommunications Facility at 13 Sycamore Road, Lake Albert SW 2650.			
	telecommunications equipment. The facility will provide Optus 4G and 5G services to Lake Albert.			
	The proposal involves:			
	<ul> <li>Installation of a new 30m monopole with a square headframe on the pole (total height with headframe 33.2metres)</li> </ul>			
	<ul> <li>Installation of four (4) new 5G panel antennas mounted on the proposed headframe</li> </ul>			
	<ul> <li>Installation of four (4) new panel antennas mounted on the proposed headframe at an elevation of 31m (centreline). All antennas will measure no more than 2.8m in length</li> </ul>			
	<ul> <li>Installation of sixteen (16) Remote Radio Units (RRU's) mounted on the new headframe.</li> <li>Installation of a new 600mm microwave dish on the proposed monopole at an elevation of 28m (centreline)</li> <li>Installation of a 4 bay Outdoor equipment cabinet adjacent to the new monopole within the proposed lease area</li> </ul>			
	Installation of a security fence surrounding the facility; and			
	<ul> <li>Installation of associated ancillary equipment including transceivers, amplifiers, antenna mounts, cable trays, feeders, cabling, combiners, diplexers, splitters, couplers, jumpers, filters, electrical equipment, signage and other associated equipment necessary for the proper function of the proposed facility.</li> </ul>			
	The facility will be located within a fenced compound.			
Purpose	Indara Corporation Pty Ltd (part of the Indara group), with Optus, are proposing a new telecommunications facility in Lake Albert. The new facility will provide improved mobile phone coverage and capacity in the Lake Albert locality. The proposed facility will help improve customer voice and data services within the area to fulfil the defined stipulations. The facility has been designed as a neutral host facility, capable of supporting co-location by other carriers, government entities and wireless service providers.			
Planning Considerations	LGA:Wagga Wagga City CouncilZoning:R5: Large Lot ResidentialOverlays:None			

Applicant	Ventia on behalf of Indara Corporation Pty Ltd		
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# 1. Introduction

Ventia, on behalf of Indara Corporation Pty Ltd (part of the Indara Group), are seeking development consent for a new telecommunications facility at 13 Sycamore Road, Lake Albert NSW 2650 (Lot 8/DP716602).

The new facility will be comprised of a 30m monopole (total height with headframe 33.2metres) supporting Optus telecommunications antennas and equipment. The purpose of the project is to significantly improve mobile telecommunications services, including coverage and network capacity, in the Lake Albert area.

This Statement of Environmental Effects provides an assessment of the project against relevant planning controls.

## 2. Background

#### 2.1 Indara and Optus

This development application has been prepared and submitted by Ventia on behalf of the Indara Group.

Indara are Australia's leading independent owner and operator of digital infrastructure. They provide critical communications and data solutions that help support the digital transformation of our society. They are passionate about investing long term in our nation, building and designing digital infrastructure that creates long term value for their customers and the broader Australian community.

Indara owns and manages over 4300 mobile telecommunications facilities across Australia. Indara operate as a neutral host – their facilities are specifically designed to accommodate co-location by Australia's mobile carriers, government agencies and other wireless services providers.

Indara has partnered with Optus Mobile Pty Ltd (Optus) to expand the Optus mobile network across Australia. This facility is being proposed to improve Optus mobile services in the Lake Albert area. The proposed facility is comprised of a new monopole and associated passive infrastructure, which will be owned and managed by Indara, and active infrastructure (antennas and telecommunications equipment) which will be owned and managed by Optus.

Note for legal purposes, the applicant for this development application is Indara Corporation Pty Ltd.

#### 2.2 Demand for Network Services

Access to high quality telecommunications services is vitally important to the community. Mobile usage continues to trend upward.

- 99% of Australians use a mobile phone; 76% of Australians do not have a landline phone and rely exclusively on a mobile phone<sup>1</sup>.
- Mobile data usage continues to significantly increase as the network is used in different ways. Between 2020 and 2021, the amount of data downloaded by phone increased by over 29%<sup>2</sup>. In the first quarter of 2022, global mobile data usage grew by 40%<sup>3</sup>. Streaming and video calling are major drivers of this increased demand.
- Covid-19 significantly changed the way that Australians live and work 61% of employed Australians worked online from home in 2021<sup>4</sup>. With many Australians continuing to adopt flexible or hybrid work arrangements, additional demand has been placed on the mobile network.
- Public safety is a significant driver behind improvements to mobile coverage. In 2021, around 78% of emergency calls were made from a mobile handset<sup>5</sup>.

More than ever, mobile telecommunications are an essential service. By extension, mobile base stations are essential infrastructure – it is important that mobile infrastructure keeps pace with this increasing demand.

#### 2.3 Coverage Objectives

<sup>&</sup>lt;sup>1</sup> <u>https://www.acma.gov.au/publications/2021-12/report/communications-and-media-australia-how-we-communicate</u>

<sup>&</sup>lt;sup>2</sup> <u>https://www.acma.gov.au/publications/2021-12/report/communications-and-media-australia-how-we-use-internet</u>

<sup>&</sup>lt;sup>3</sup> https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/mobile-traffic-update

<sup>&</sup>lt;sup>4</sup> <u>https://www.acma.gov.au/publications/2021-12/report/communications-and-media-australia-trends-and-developments-telecommunications-2020-21</u>

<sup>&</sup>lt;sup>5</sup> <u>https://www.triplezero.gov.au/triple-zero/How-to-Call-000/advanced-mobile-location</u>

Mobile phones work by sending and receiving low power radio signals, much like a two-way radio system. The signals are sent to and received from antennas that are attached to radio transmitters and receivers, commonly referred to as mobile phone base stations. The base stations are linked to the rest of the mobile and fixed phone network and pass the signal/call into those networks.

Each base station can only carry a finite number of calls. In areas of high mobile phone use, such as central business districts and high-density areas, more base stations are required to handle the level of call and data traffic.

Operators of telecommunications networks must constantly respond to changes in technology or increased demand on their existing infrastructure assets due to urban growth. Recently, 5G has become the latest industry standard for mobile phone network operators within the Australian marketplace. With consumer demands reflecting an increase in demand for speed and data bandwidth, Optus requires a new site at subject location in Lake Albert to ensure that this level of service provision can be maintained within the defined coverage improvement objectives.

#### 2.4 Site Re-location

This Development Application report relates to the previous development application (DA 22/0745) for installation of a telecommunications facility at 13 Sycamore Road, Lake Albert, located approximately 5kms southeast of the Wagga Wagga CBD. Following receipt of a number of objections to that DA it was decided to withdraw the application and a new location sought within the property locating the proposed facility at the rear of the property.

The originally proposed site for the telecommunications facility was on the western side of Sycamore Road, near the southern corner of 13 Sycamore Road, adjacent to the front boundary of the property, setback between 10m and 15m from Sycamore Road. Ventia has now explored opportunities for relocation and has identified a site adjoining some existing mature trees and setback 30m from the rear westernmost corner of the property, and 100m from Sycamore Road.

## 3. Candidate Selection

#### 3.1 Site Selection

Before proposing a new base station, mobile carriers will attempt to resolve service issues by reconfiguring or upgrading existing base stations. If upgrades do not resolve service issues, the carrier will consider any opportunities to co-locate on an existing mobile facility, building or other structure.

If there are no feasible co-location opportunities, the carrier will proceed to deploy a new 'greenfield' base station.

This facility is proposed in partnership with Optus, who have confirmed a new telecommunications facility will be needed in the Lake Albert area, and are working with Indara to deploy the new facility.

#### **3.2 Upgrade and Co-Location Opportunities**

Existing telecommunications facilities in the area have been assessed to confirm if they are feasible for co-location.

Figure 1 shows the location of existing facilities in the area around this proposed site, based on information from the Radio Frequency National Site Archive database (<u>www.rfnsa.com.au</u>). None of the existing sites in the area are suitable for co-location.



Figure 1: Existing Communications Facilities in RFNSA (Google map)

Table	1 _	Colocation	opportunities
labic	-	oolocation	opportunities

Existing and Proposed Communications Facilities			
RFNSA Details	Site Address	Comments	
2650011 Telstra	Lot 16 Plan DP203067 Vincent Rd Lake Albert NSW 2650	The site is located approximately 367m northwest of the current proposal site. The existing Telstra facility was considered as a Candidate (Candidate B in the Table 2). The candidate was discounted because the available height for the proposed facility was considered too low for the transmission link and there isn't sufficient space for the proposed microwave dish. Therefore a co-location here was not technically viable.	
2650021 Telstra Optus	57 Plumpton Road Lake Albert NSW 2650	There is an existing 30m facility located approximately 2.90m southwest of the current proposal site. Telstra and Optus are present at this site. However the site was not pursued any further	

	as it is too far west to provide improved mobile services to the intended coverage area.

#### 3.3 Alternate Candidates

A robust investigation of potential candidates has been undertaken.

In identifying a candidate, we have sought to maximise separation from sensitive uses where possible, whilst also endeavouring to minimise impacts on the environment and scenic amenity as far as practicable.

A precautionary approach has been taken to site selection in accordance with sections 4.1 and 4.2 of the *C564:2020 Mobile Base Station Deployment Code*.

The below candidates were identified and assessed against environmental, planning, community, property, engineering and radiofrequency (RF) objectives. The outcomes of the site selection process are outlined in the table below.

As shown in Figure 2, the majority of the area is large lot residential with few opportunities to locate a new mobile base station.



Figure 2: Potential candidates analysed throughout the site selection process within the locality (Google Earth)

Prospective Candidates			
Candidate	Site Address	Comments	
A	11 Sycamore Road, Lake Albert NSW 2650	Proposal to install a new 30m monopole on the property however this candidate was discounted as we had no response back from the landowner therefore could not establish an agreement with the landowner.	
В	Vincent Road, Lake Albert NSW 2650 Sewerage Treatment Works Existing Telstra Site	Co-location on existing Telstra facility. The available height for the proposed facility was considered too low for the transmission link and there isn't sufficient space for the proposed microwave dish.	
С	41 Vincent Road, Lake Albert NSW 2650	Proposal to install a new 30m monopole on the property however this candidate was discounted as we had no response back from the landowner therefore could not establish an agreement with the landowner.	
D	13 Sycamore Road, Lake Albert NSW 2650	Proposal to install a new 30m monopole on the property. The landowner is interested in establishing an agreement and it provides the intended coverage objective. therefore was chosen as the prime candidate.	

Table 2 – Candidate Analysis Summary

In response to objections to the original DA a number of possible alternative candidates were suggested by objectors. Further consideration has been given to these, but none meet the objectives. In addition to the candidates list above, we have taken consideration of these locations further. These include Rawling Park , Lawn Cemetery and other properties.

During preliminary investigation, Rawling Park is identified to be within the Terrestrial Biodiversity -Environmentally Sensitive Land overlay. This was discounted in order "*to protect and maintain the natural environment in Lake Albert*".

A number of other possible candidates were suggested, however none of these are preferable in meeting the coverage objectives.

#### 3.4 Preferred Site Candidate

The preferred site candidate at 13 Sycamore Road, Lake Albert NSW 2650 was selected as the preferred site candidate for the following reasons:

- Town planning considerations (such as zoning, surrounding land uses, environmental significance and visual impact);
- The proposed site location is at a corner area surrounded by mature trees within a semirural land;
- The site is well separated from sensitive land uses and location is close to existing utility infrastructure.
- Visual impact it is believed that the proposed site location will not result in excessive loss of amenity or the obstruction of viewing corridors to and from the proposed site.
- The site is partially landscaped with mature vegetation, this vegetation will provide an element of screening of proposed development site from the locality more generally.
- The proposed monopole will result in minimal adverse impacts as a result of construction. Construction will be undertaken from within the property.
- Direct access and sufficient car parking at the site will reduce any impacts to traffic flow during the construction phase;
- + The availability of viable connections to the power and transmission networks in the area;
- Design and construction the proposal off the existing access track will offer the least disruption during the design and construction phases for the proposed site. This location is not the most a cost-effective site solution however it will reduce the visual impact to the surrounding residents whilst maximizing coverage and service provisions within the identified locality.
- Coverage the proposal will offer the best level of coverage and service provisions to the Lake Albert locality. This is a main determining factor within the site selection process. This is a main determining factor within the site selection process.

Tenure – obtaining an agreement with the land owner of the subject site provides surety in determining the location of a mobile phone base station. An agreement has been reached between the subject landowner and Optus/Indara.

### 4. Site Context

The proposal involves establishment of a new telecommunications facility at 13 Sycamore Road, Lake Albert NSW 2650.

The subject site is situated off Sycamore Road towards the rear of a lot zoned as R5 Large Lot Residential pursuant to Wagga Wagga Local Environmental Plan 2010. The land parcel is of trapezoid shape having a long frontage along Sycamore Road (east) and a single storey dwelling is located toward the middle of the land.

The site is bounded by land zoned as R5 Large Lot Residential to the north and east. To the rear of the property is a large stud farm and to the east opposite Sycamore Road is a driving school.

The proposed telecommunication facility is set near the southwest corner of the property next to a cluster of mature trees. **Figures 3** shows the proposed site.



Figure 3: Site context. The proposed facility is located toward the southwest corner of the subject land



Figure 4: View of proposed compound location from northeastern side of the the compound



Figure 5: View of proposed compound location, from Sycamore Road

## 5. Proposed Works

#### 5.1 Equipment to be Installed

The proposed works involve installation of:

- Installation of a new 30m monopole with a square headframe on the pole (total height with headframe 33.2metres)
- Installation of four (4) new 5G panel antennas mounted on the proposed headframe
- Installation of four (4) new panel antennas mounted on the proposed headframe at an elevation of 31m (centreline). All antennas will measure no more than 2.8m in length
- Installation of sixteen (16) Remote Radio Units (RRU's) mounted on the new headframe.
- Installation of a new 600mm microwave dish on the proposed monopole at an elevation of 28m (centreline)

- Installation of a 4 bay Outdoor equipment cabinet adjacent to the new monopole within the proposed lease area
- Installation of a security fence surrounding the facility; and
- Installation of associated ancillary equipment including transceivers, amplifiers, antenna mounts, cable trays, feeders, cabling, combiners, diplexers, splitters, couplers, jumpers, filters, electrical equipment, signage and other associated equipment necessary for the proper function of the proposed facility.

The overall height of the facility, including antennas and equipment, will not exceed 33.2m above ground level. The facility will be located within a fenced 8m x 10m compound, enclosed by a 2.4m tall chainlink security fence.

Refer **Appendix 2** for proposal plans.

#### 5.2 Site Access and Parking

The property can be accessed via an existing crossover and gate off Sycamore Road. This route enables direct access to the proposed site location which will reduce any disruption to traffic flow for construction vehicles during the build phase and any future required maintenance. This access is sufficient for construction purposes and allows off road parking for any future required maintenance. Traffic management will be utilised during construction as necessary.

Once constructed, the facility will operate on an unmanned basis aside from periodic routine maintenance visits (generally 2-4 times annually). The facility will not generate significant vehicle traffic through its ongoing operation.

#### 5.3 Noise

The facility will not be a significant generator of noise. The only part of the facility that generates noise is the air conditioning units attached to the equipment shelter. The equipment shelter will emit only minimal noise from the air conditioning units, which will enable the equipment to stay within normal operating temperatures.

Cooling equipment will only operate when required and will not operate continuously. Cooling equipment will operate at levels generally comparable to those of a domestic air conditioner. The project is not expected to represent a noise nuisance given the location of the proposed equipment shelter in the context of the area.

During construction, there will be some minor excavation works which may introduce noise and vibration for a temporary period. It is anticipated that the construction and operation of the facility will

not generate any adverse noise impacts. Additionally, the separation distance from the development site and residential dwellings, will negate any potential noise impacts generated during construction.

#### 5.4 **Power and Utilities**

As Indicated in the site plan, it is proposed that the power connection to the new outdoor units will be provided from an existing site power supply which has enough capacity to support the proposed facility. Nevertheless, should upgrade of the transformer be required when necessary, it will be Optus/Indara's responsibility.

The unmanned facility does not require access to water or sewer infrastructure. The proposal will not alter stormwater runoff from the site, given the very minimal hardstand area.

The site does not require any additional permits for the connection of a sewer/roadway.

#### 5.5 Emissions

Operation of the facility will not result in emission of dust, heat, smoke, gaseous plumes or particulates.

To provide mobile coverage, the facility will produce electromagnetic EME emissions. These will be within the levels prescribed by ARPANSA and regulated by ACMA. An ARPANSA EME Report, demonstrating compliance with Australian safety standards, is attached. Refer section 8 of this report.

#### 5.6 Environmental Considerations

Section 4.15 (formerly 79C) of the EP&A Act mandates the likely impacts of the development, inclusive of environmental impacts on both the natural and built environments, and social and economic impacts in the locality.

This section takes into consideration matters of relevance to the proposed development which is inclusive of issues relating to the environmental impacts of the proposal on the built and natural form, as well as the social and economic impacts the telecommunications facility will have on the locality.

It is believed that the proposed mobile phone base station will not result in significant environmental impacts towards the built and/or natural environments as the proposed facility is located at the corner of the subject land and will not impact its existing land use. The "footprint" of the proposal comprises of 80m<sup>2</sup> enclosed by a 2.4m high chain wire fence and all works are to be located within the compound. The following environmental, social and economic considerations have been made in reference to the proposal.

#### 5.7 Heritage

No known items of Aboriginal or built heritage significance were identified within close proximity of the site.

#### 5.8 Aviation

The provisions of the Civil Aviation Regulations 1988 and the Airports (Protection of Airspace) Regulations 1996 were considered during the design and siting process.

The site is located approximately 6 km away from Wagga Wagga Airport to the east. The proposal will not penetrate the current and future Obstacle Limitation Surface (OLS) for Wagga Wagga Airport.

# 6. Legislative Context

#### 6.1 Commonwealth Legislation

#### 6.1.1 Telecommunications Act 1997 and Telecommunications (Low-Impact Facilities) Determination 2018

The *Telecommunications Act 1997* allows mobile carriers to perform certain maintenance and installation works without needing development consent. The *Telecommunications (Low-Impact Facilities) Determination 2018* also allows for certain kinds of 'Low Impact' equipment to be installed without development consent.

New towers do not fall within these federal exemptions. Accordingly, this proposal will require Council approval.

#### 6.1.2 Telecommunications Code of Practice 2018

The *Telecommunications Code of Practice 2018* emphasizes "best practice" for the installation of facilities, compliance with industry standards and minimisation of adverse impacts on the environment.

This proposal has been designed with consideration for the Code of Practice. All steps will be taken to do as little damage as practicable; the facility will be constructed and operated in accordance with industry standards and good engineering practice; and the design of the facility will be in accordance with industry best practice.

#### 6.1.3 C564:2020 Mobile Phone Base Station Deployment Code

The Communications Alliance Limited *C564:2020 Mobile Phone Base Station Deployment Code* (the Deployment Code) is an industry code of practice registered by the Australian Communications and Media Authority.

The Code applies to all licenced telecommunications carriers, and sets guidelines for site selection, community consultation, design, installation and operation of telecommunications facilities.

Sections 4.1 and 4.2 of the Code are relevant to this proposal, and require a precautionary approach to site selection, infrastructure design and site operation. The proposed facility has been sited and designed in accordance with Sections 4.1 and 4.2. Checklists demonstrating compliance can be provided on request.

The Code also requires an ARPANSA EME report be prepared for all new mobile base stations, to demonstrate compliance with relevant safety standards. The report is enclosed in Appendix 3.

#### 6.2 State Legislation

#### 6.2.1 NSW Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) controls development across New South Wales. The application has been prepared with consideration for section 4.15 of the EP&A Act.

# 6.2.2 State Environmental Planning Policy (Transport and Infrastructure) 2021

The *SEPP (Transport and Infrastructure) 2021* governs telecommunications deployment in New South Wales. This development is defined as a 'Telecommunications Facility' under Clause 2.140 of the SEPP.

The proposed development does not fall within the parameters to be considered Exempt or Complying Development under the SEPP and will require development consent.

The permissibility of the development is established under Clause 2.143(1) of the SEPP, which provides that telecommunications facilities can be deployed on any land with consent. As the works are not being done on behalf of a Public Authority (per Clause 2.141) and are not considered Exempt Development, the works are permissible with the consent of Council.

Clause 2.143(2) requires that the consent authority must take into consideration any guidelines concerning site selection, design, construction and operation of telecommunications facilities issued by the Planning Secretary. The current guidelines are the *NSW Telecommunications Facilities Guideline, Including Broadband* (October 2022). Compliance with the principles is outlined in section 6.2.3 of this document.

#### 6.2.3 NSW Telecommunications Facilities Guideline, Including Broadband

The project has been designed with consideration for, and in compliance with, *NSW Telecommunications Facilities Guideline, Including Broadband* (October 2022).

Principle 1: Design and site telecommunications facilities to minimise visual impact.			
Principle	Response		
a. As far as practical, integrate a telecommunications facility that is mounted on an existing building or structure with the design and appearance of the building or structure.	Not applicable given the proposal is for a new telecommunications facility. Section 3 of this planning report details the candidate selection process including existing facilities/structures that were considered as part of the assessment.		
b. Minimise the visual impact of telecommunications facilities, reduce visual clutter (particularly on tops of buildings) and ensure physical dimensions (including support mounts) are sympathetic to the scale and height of the building to which it is to be attached and to adjacent buildings.	An assessment of the relevant impacts of the proposal has been demonstrated within the Visual Impact Assessment in Section 7. The scale of the facility is acceptable in terms of visual impact given its context. It is considered that the facility will not result in undue impact on the visual amenity of the locality. Visual impacts are considered mitigated due to its set back distance from the road and the existing vegetation in the vicinity of the subject location. It is not considered that the tower will be visually dominant to road users along nearby roads. Therefore the proposed facility is appropriately located in a setting and will be well screened by the existing mature vegetation around the site.		
c. If a telecommunications facility protrudes from a building or structure and is predominantly seen against the sky, either match the prevailing colour of the host building or structure or use a neutral colour such as pale grey.	The proposal is a standalone structure made of concrete and steel. The proposed facility will be neutral pale grey to better blend with the sky on site.		
d. Where possible and practical, screen or house ancillary facilities using the same colour as the prevailing background and consider using the existing vegetation or new landscaping.	The proposed equipment shelter consists of four Outdoor Units (ODU's) which minimises any visual impact. Subject to the visual impact mitigation measure recommended in the Visual Impact Assessment (Appendix 5), new landscaping will be used to assist with screening the facilities.		
e. Locate and design a telecommunications facility in a way that responds to its setting (rural, residential, industrial or commercial).	The facility has been designed and sited with due concern for the surrounding landscape context. The proposed facility is situated at the southwestern corner of the subject land to achieve a desirable separation distance from the adjoining residential dwellings and		

	public road users, without impinging on the visual amenity value of the local area. The proposed design solution and site location endeavours to strike a balance between providing improved mobile phone coverage and minimising the visual impact on the local landscape setting.
f. Site and design a telecommunications facility located on or adjacent to a listed heritage item or within a heritage conservation area with external colours, finishes and scale sympathetic to the heritage item or conservation area.	Not applicable. The site is not located on or adjacent to a heritage item and/or heritage conservation area.
g. Locate telecommunications facilities to minimise or avoid obstructing significant views of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land.	As demonstrated within the Visual Impact Assessment within Section 7 of this document, the proposal will not obstruct any significant views, vistas, heritage items, landmarks, panoramas or generate any adverse visual impacts for the surrounding land uses.

NSW Telecommunications Facilities Guideline, Including Broadband			
Principle 1: Design and site telecommunications facilities to minimise visual impact			
Principle Response			
h. Consult with relevant council when proposing pruning, lopping or removing any tree or vegetation. Obtain a tree preservation order, permit or development consent if required.	Not applicable. The site is located in a cleared area. No pruning, lopping, of trees subject to a Tree Preservation Order will be required to establish the compound.		
i. Remove redundant telecommunications facilities and restore the site to the condition it was in prior to the facility's construction.	Ventia on behalf of Optus acknowledges this condition. This can also be implemented by a condition of development consent if the Council considers it appropriate.		
j. Remove redundant components of existing facilities after upgrades.	Not applicable. There are no existing facilities to be removed.		
k. Where possible, consolidate telecommunications facilities to reduce visual clutter and work with other users on co-location sites to minimise cumulative visual impact.	The nearest existing Telstra facility is considered however not feasible for the co-location of the proposed Optus facility to improve mobile services to the intended coverage area.		
I. Accord with all relevant industry design guides when siting and designing telecommunications facilities.	The proposal is in compliance with the relevant design guides.		
<i>m.</i> Assess potential visual impact in alternative site assessments.	The site has been compared to alternatives and scores well against these.		
Principle 2: Co-locate telecommunications facilities wherever practical			

a. As far as practical, locate telecommunications lines underground or within an existing underground conduit or duct.	All proposed conduits will be installed underground.
b. Where practical, co-locate or attach overhead lines, antennas and ancillary telecommunications facilities to existing buildings, public utility structures, poles, towers or other radiocommunications equipment to minimise clutter.	There are no suitable co-location opportunities within the subject area as outlined in section 3.2 of this report.
c. Consider extending an existing tower as a practical co-location solution to new towers.	Not applicable. The proposal does not involve an extension of an existing structure but rather a new tower facility.
d. Demonstrate that co-location is not practicable if choosing not to co-locate a facility.	There are no viable co-location opportunities within the subject area as demonstrated within Section 3.2 of this report.
e. If choosing to co-locate, design, install and operate a telecommunications facility so that resultant cumulative levels of radio frequency emissions are within the maximum human exposure levels set out in RPS S-1.	Not Applicable. The proposed site does not involve a co-location on an existing telecommunications facility.

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NSW Telecommunications Facilities Guideline, Including Broadband			
Principle 3: Meet health standards for exposure to radio emissions			
Principle	Response		
a. Design, install and operate a telecommunications facility so that maximum human exposure levels to radiofrequency emission comply with RPS S-1 (see Appendix C).	It is the legal obligation for any carrier to ensure that any telecommunications equipment is operated within the human exposure limits within the Radio Protection Standard.		
	The maximum human exposure levels have been calculated to be 1.46% of the public exposure limit. Refer to <i>Appendix 3</i> for the complete EME Environmental Report.		
b. Using the format required by ARPANSA, report on predicted levels of EME surrounding any development covered by the Industry Code C564:2020 Mobile Phone Base Station Deployment, and how the development will comply with ACMA safety limits and RPS S-1.	An EME Environmental Report has been included within <i>Appendix 3</i> of this document. The EME Environmental Report is in accordance with the format prescribed by Australian Radiation Protection Nuclear Safety Agency.		
	Additionally, the EME Environmental Report is a publicly accessible document which can be retrieved from: <u>www.rfnsa.com.au/2650053.</u>		
Principle 4: Minimise disturbance and risk, and	l maximise compliance		
a. Ensure the siting and height of a telecommunications facility complies with the of the Commonwealth Civil Aviation Regulations 1998 and Airports (Protection of Airspace) Regulations 1996. Avoid penetrating any obstacle limitation surface (OLS) shown on a relevant OLS plan for an aerodrome or airport (as reported to the Civil Aviation Safety Authority) within 30 km of the proposed development.	The intrusion of equipment, in particular cranes, through Obstacle Limitation Surfaces (OLS) for the airport will be considered through appropriate approvals processes to ensure safety during construction on request.		
b. Ensure no adverse radio frequency interference with any airport, port or Commonwealth defence navigational or communications equipment, including the Morundah Communication Facility, Riverina	The proposed equipment at the subject site is licensed as per ACMA regulations. As a result, there is to be no interference with other civil and military communications facilities.		
c. Carry out the telecommunications facility and ancillary facilities in accordance with any manufacturer's installation specifications.	The proposed equipment is to be installed as per the manufacturer's specifications.		
d. Protect the structural integrity of any building or structure on which a telecommunications facility is erected.	Not applicable. Proposal is a standalone structure.		

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e. Erect the telecommunications facility wholly within the boundaries of a property as approved by the relevant landowner.	The proposed 8m x 10m lease area is to be located within the boundaries of the lot and will not encroach on surrounding property boundaries.
f. Ensure all construction of a telecommunications facility accords with Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom 2004), or its replacement.	The construction of the proposal will adhere to and comply with the regulations set out within the Blue Book – 'Managing Urban Stormwater: Soils and Construction' (Landcom 2004).

NSW Telecommunications Facilities Guideline, Including Broadband			
Principle 4: Minimise disturbance and risk, and maximise compliance			
Principle	Response		
g. Mitigate obstruction or risks to pedestrians or vehicles caused by the location of the facility, construction activity or materials used in construction	The site is not generally accessible by pedestrians or vehicles and will be fenced during construction.		
h. Where practical, carry out work at times that minimise disruption to adjoining properties and public access and restrict hours of work to 7.00am and 5.00pm, Mondays to Saturdays, with no work on Sundays and public holidays.	Construction works will be conducted between 7.00am and 5.00pm, Mondays to Saturdays or as per the recommended hours stipulated by Council. Consultation with council will be undertaken throughout the construction process.		
i. Employ traffic control measures during construction in accordance with Australian Standard AS1742.3-2002 Manual of uniform traffic control devices – Part 3: Traffic control devices for works on roads.	Any required traffic control will be conducted in accordance with the relevant Australian Standard S S1742.3-2002 Manual of uniform traffic control devices – Traffic control devices on roads		
j. Guard open trenching in accordance with Australian Standard Section 93.080 – Road Engineering AS1165 – 1982 – Traffic hazard warning lamps.	Open trenching for the installation of underground power and fibre will be executed in compliance with the Australian Standard Section 93.080 – Road Engineering AS1165 – 1982 – Traffic hazard warning lamps		
<i>k.</i> Minimise disturbance to flora and fauna and restore land to a condition similar to its condition before the work was carried out	Not applicable. The proposal will not impact any significant flora or fauna.		
I. Identify any potential impacts on threatened species and communities in consultation with relevant authorities and avoid disturbance to identified species and communities where possible.	The site is not known or anticipated to support any threatened species or communities and the site is not subject to the Terrestrial Biodiversity overlay.		
<i>m.</i> Identify the likelihood of harming an Aboriginal place and/or Aboriginal object and obtain approval from the Department of Premier and Cabinet if the impact is likely, or Aboriginal objects are found.	Not Applicable. No items or areas of Aboriginal significance were identified on the proposed allotment.		

n. Reinstate, at your expense, street furniture, paving or other facilities removed or damaged during construction to at least the same condition as that prior to installation.	There is little likelihood of street furniture or other items being disturbed. However, this can be addressed through the imposition of conditions of development consent where relevant. If disturbed, all street furniture, paving and walkways will be reinstated at the end of construction to at least the same condition they were in
	before work began.

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NSW Telecommunications Facilities Guideline, Including Broadband			
Principle 5: Undertake an alternative site assessment for new mobile phone base stations			
Principle	Response		
a. Include adequate numbers of alternative sites in the alternative site assessment as a demonstration of good faith.	Total of 4 alternative sites were considered and investigated as outlined in section 3 of this report.		
<ul> <li>b. In addition to the new site selection matters in Section 4 of the Industry Code C564:2020 Mobile Phone Base Station Deployment: <ul> <li>only include sites that meet coverage objectives, and that have been confirmed as available, with an owner agreeable to having the facility on their land</li> <li>if the preferred site is a site owned by the Carrier, undertake a full assessment of the site</li> <li>indicate the weight placed on selection criteria</li> <li>undertake an assessment of each site before any site is dismissed.</li> </ul> </li> </ul>	Total of 4 alternative sites were considered and investigated as outlined in section 3 of this report.		

#### 6.3 Wagga Wagga Local Environmental Plan 2010

This Development Application will take into account the type of development in respect to the aims and objectives of the *Wagga Wagga Local Environmental Plan 2008*. It is believed that the proposal is wholly compliant with the aims of the LEP, based on the community benefit through an improvement of the existing infrastructure provision and associated wellbeing and economic benefits. An assessment against the relevant overall aims and objectives of the LEP is listed within **Table 4** below.

#### Table 4: Aims and Objectives of the Wagga Wagga Local Environmental Plan 2010

Wagga Wagga Local Environmental Plan 2010		
Aim/Objective:	Compliance:	

(aa) to protect and promote the use and development of land for arts and cultural activity, including music and other performance arts,	The proposal will help protect and promote the use and development of the land for arts and cultural activity because it will enhance the mobile network coverage in the local area and enable local residents and businesses to download information to support these activities.
(a)to optimise the management and use of resources and ensure that choices and opportunities in relation to those resources remain for future generations,	The facility will operate in a continuously unmanned basis, connection to drainage, potable water or sewage services is not required.
(b) to promote development that is consistent with the principles of ecologically sustainable development and the management	The proposal will assist ecologically sustainable development of the land and natural assets as it will enhance the mobile network coverage in the local area and enable local residents and businesses to download information.
of climate change,	The proposal seeks to retain an established use of the land and provide essential services to the Lake Albert area and surrounding area in the form of a new mobile telecommunication facility. It is considered that this represents good economical and orderly development.
	The detailed siting of the proposed development seeks to mitigate potential significant environmental effects through considered site selection and design as outlined in this report.
(c)to promote the sustainability of the natural attributes of Wagga Wagga, avoid or minimise impacts on environmental values and protect environmentally sensitive areas,	The proposed mobile telecommunications facility has been sited to limit potential environmental impacts.
	The footprint of the development is very small avoiding the removal any native vegetation to facilitate the development. Furthermore, there is sufficient on-site land to allow for natural filtration of stormwater generated from the development, so to effectively manage any risk of erosion to the land.
(d) to co-ordinate development with the provision of public infrastructure and services.	The proposed development will can help promote the efficient and equitable provision of public services, infrastructure and amenities by improving local Optus services, providing reliable services that local residents may use for personal or business purposes. Telecommunications services have significant economic benefit, and improved connectivity will indirectly benefit the community.

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#### 6.3.1 Zone Provisions

The subject lot is zoned as R5 Large Lot Residential in accordance with *Wagga Wagga Local Environmental Plan 2010* as shown in *Figure 6* below. A telecommunications facility is a prohibited item within the subject zoning; however, consent is being sought pursuant to section 2.143 of the SEPP (Transport and Infrastructure) which permits the installation of a telecommunications facility on any land. The proposal has been assessed against the objectives of the zone below in *Table 5*.



Figure 6: Land zoning of subject lot

Table	5:	R5	Large	Lot	Res	identi	al
labic	υ.	~~	Large	LUI	AC3	acina	

R5 Large Lot Residential		
Objectives:	Compliance:	
To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.	Not applicable. The proposal will not impede on any use of land for residential development. Reliable mobile telecommunications facilities are an essential service for any modern-day communities and can play a vital role for residential communities. Reliable telecommunications services assist day to day activities as well as means of	

	facilitating essential service communications in time an emergency.
	The proposal is located at the south corner of the property and will not restrict the current function of the property. The detailed siting is considered to be sympathetic to its setting. While the facility is located in a cleared area, the visual change from vantage points along the public roads are considered not significant given the presence of mature vegetation near the facility and along the road.
To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.	The proposed telecommunication facility will be established for infrastructure purpose. Improved mobile telecommunication facilities assist to improve the quality of living, working and business activities within the Lake Albert area.
	Mobile telecommunications services can help encourage the future development of urban areas.
To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.	The final power design including the capacity of the supply will be confirmed in the detailed design phase, however, a major upgrade is not anticipated. Indicatively, it is proposed that the power connection to the new outdoor units will be provided from the existing site power supply.
	The unmanned facility does not require access to water or sewer infrastructure. The proposal will not alter stormwater runoff from the site, given the very minimal hardstand area.
To minimise conflict between land uses within this zone and land uses within adjoining zones.	The current use of the land is for a flower farm within the large lot residential zone; this facility will not compromises current activities or prevent future activities being undertaken onsite within this zone and adjoining zones as it only occupies a small portion of the land.
To ensure that the clearing of native vegetation is avoided or minimised as far as is practicable	The footprint of the development is very small avoiding the removal of any native vegetation to facilitate the development.

### 6.4 The Wagga Wagga Development Control Plan 2010

The Wagga Wagga Development Control Plan 2010 (DCP) aims to complement The Wagga Wagga LEP by providing additional planning provisions within The Wagga Wagga LGA. The DCP has been

taken into consideration throughout the planning process of the proposed telecommunications facility.

The subject DCP does not contain specific controls for Telecommunications facilities, however will be assessed in accordance to the Guiding Principles (GP) within the DCP. These are addressed in *Table 6.* 

The Wagga Wagga Development Control Plan 2010		
Control:	Compliance:	
Part A Section 1 General		
1.5 Guiding Principles		
Those principles underpin the DCP and inform the assessments and decision made on an application.	An assessment of the proposal against the Wagga Wagga Development Control Plan 2010 has been undertaken below.	
<ul> <li>GP1 Sustainability, climate change management, and efficient use of resources</li> <li>i. To protect and enhance the viability of natural systems</li> <li>ii. To achieve good environmental outcomes</li> <li>iii. To manage incremental change to retain sustainable outcomes</li> <li>iv. To support waste minimisation strategies</li> <li>v. To protect the indigenous, European and natural heritage</li> <li>vi. Vi. To avoid use of rainforest and old growth timbers</li> </ul>	The detailed siting of the proposed development seeks to mitigate potential significant environmental effects through considered site selection and design as outlined in this report. A Site Waste Minimisation and Management Plan (SWMMP) can be provided as a Condition of the approval should this be required. The proposal does not involve the removal of any vegetation, flora, and fauna or constitute any threats to natural systems within the locality. The proposed site is not located on, or adjacent to a heritage item. The proposal does not require any significant cutting or filling of land; there is ample space on site the natural filtration of stormwater to naturally filtrate into the soil without causing run-off to adjoining properties and Optus complies with electromagnetic energy standards set by ARPANSA.	
<ul> <li>GP2 Site responsive development</li> <li>i. To design for compatibility with topography, physical characteristics and setting</li> <li>ii. To achieve a positive contribution to the streetscape and/or natural environment</li> </ul>	The facility has been designed and sited with due concern for the surrounding landscape context. The proposed facility is integrating into the existing vertical elements in the area. There are a number of existing vertical utility structures and mature trees along the public road – given the nature of the surrounding land uses and benefits of the site, the proposal is considered compatible with its local streetscape and natural environment.	

 Table 6: The Wagga Wagga Development Control Plan 2010

GP3 Design quality	The proposed installation will be constructed in accordance with the Building Code of Australia and relevant Australian
<ul> <li>To achieve quality sustainable development</li> <li>To respond to site</li> </ul>	standards. The detailed design will include further information in relation to such matters.
conditions	The proposed telecommunication facility is located on flat terrain. The foundations of the monopole, and footings of the equipment cabinet, have been designed with consideration for relevant wind region loading requirements.
GP4 Quality public domain	Telecommunications services have significant community
i. To achieve vibrant and attractive public spaces	settlements, sustainable agriculture, economic and employment development, recreation and community.
ii. To enhance opportunities	
iii. To design for crime prevention and public safety	community safety by providing a vital 'first response' tool for emergency services. A strong mobile network is highly beneficial in an emergency situation or natural disaster, but is also beneficial for residents with household emergencies, or stranded tourists or visitors.

#### 6.4.1 Bushfire

The land is not identified as 'Bushfire Prone Land'.

#### 6.4.2 Acid Sulphate Soil

Acid Sulphate Soils is not identified during investigation works.

#### 6.4.3 Flood

The site is subject to flooding based on the Council provided flood details - The site is subject to inundation by overland flow stormwater flooding (MOFFS). It is impacted by the 1:100 year ARI event and is within the flood planning area (FPA) which includes all areas exceeding 150mm in depth during this event. The site is also subject to the PMF event.

Pursuant to C2 of section 4.2 in Wagga Wagga Development Control Plan 2010 (DCP), the proposed telecommunication facility is deemed to be critical utilities that are to be located on land above the PMF level in all precincts.

Optus accepts the Defined Flood Level (DFL) based on annual probability of exceedance of 1:100 plus freeboard as determined by the appropriate authorities. Optus and Indara design standards require that a facility be designed with all critical service items (Outdoor Cabinets) to be located above AEP 1% event (with 200mm freeboard as minimum). Based on the flood plan in 1% AEP Event according to the Wagga Wagga Major Overland Flow Floodplain Risk Management Study And Plan, the peak flood depth at the subject location is 0.3-0.5m. In this instance, Optus and Indara have opted to adopt an additional clearance of 500mm freeboard above the AEP 1% flood level to further proof the facility.

The height of the proposed platform will be at 1m above the ground to ensure that equipment is above the 0.3-0.5m Peak Flood Depth in 1% AEP event with the additional 500mm freeboard (in accordance with the DCP). All equipment associated with the facility will be located at this height including all transmission equipment, power meter (smart meter) and battery back-up. With the equipment located at this level, the facility would be able to remain operational during a flood event of an equivalent nature to that of the adopted 1% AEP line. It should be noted that the proposed telecommunications facility will require a connection to the existing power grid. During a flood event, In the event that power is lost to the subject site, the site will remain operable on battery backup for approximately three (3) hours. After this time, the site cannot operate until such time as the power is restored via mains supply or generator. The amended design is considered to be compliant with the DCP Controls C2 outlined in Council's information request.

While we acknowledge that the proposed telecommunication facility is deemed to be critical utilities that are to be located on land above the PMF level in all precincts pursuant to the DCP, Optus and Indara also acknowledge and accept the risk that should the flood level exceed this AEP 1%, such as that stipulated by council as the Probable Maximum Flood level for the site, that the facility will be inundated. In such an eventuality, some level of service (limited) will be maintained within the surrounding area by existing sites within the Optus network.

The amended design is considered to be compliant with the DCP Controls C2 outlined in Council's information request. Mobile base stations operate on a continuously unmanned basis, and require infrequent maintenance (generally two to four visits each year). Accordingly, the unmanned facility does not result in an increase of people in presence using the site therefore it does not increase the flood risk to life from such use. The proposed compound encompasses a small footprint of only 8m x 10m, it is considered that the facility does not increase the flood risk to the adjoining lands and the surrounding area.

It is acknowledged that this change in design will result in an increased visual impact on the local area. However the raised platform at this level is not considered to have significant increase visual impact as the proposed landscaping along the western side of the security fence will provide

decent visual screening viewing from the west. The equipment cabinet will not be visible from surrounding land uses due to its location being surrounded by mature vegetation to the northwest, south and southeast. Furthermore, existing vegetation within the adjoining lots will provide some screening to the facility when viewed from areas to the north, northwest, east and southeast of the proposed location.

As mentioned in Section 5.3, the facility will not be a significant generator of noise and the elevated platform will not result in significant adverse noise and vibration during construction given that the platform will be prefabricated and galvanised structure and will be assembled on the concrete footings.



Figure 7 – Lake Albert Design Flood Depths and Extent 1% AEP Event (Wagga Wagga Major Overland Flow Floodplain Risk Management Study And Plan)

# 7. Visual Impact

The visual impact of the proposal has been considered carefully in undertaking the site selection process. The site is surrounded by mature vegetation which mitigates any visual impact on the surrounding area. The proposed facility is sited within the west corner of the property with the vegetation in the area providing partial screening to the proposed telecommunications facility from all directions.

With thousands of base stations in operation around Australia, panel antennas, dishes and other relevant equipment have become part of the landscape. Telecommunications facilities aren't only operated by mobile phone networks but may also include critical infrastructure assets employed by the emergency services, rail and other public utility authorities to ensure the active and safe operation of their respective duties.

Optus seeks to propose facilities in locations that have the least amount of impact possible on a community, while being able to deliver a high-quality service. However, it is recognised that, similar to all forms of development, telecommunications facilities have a visual effect. This visual effect can be attributed to two unavoidable characteristics of mobile phone base stations:

- They are structures which generally protrude above other structures; and
- They need to be located at suitable heights in order to operate effectively.

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

- Limiting the height of the proposed monopole to 30m (total height with headframe 33.2metres). This will ensure that the best level of coverage can be provided to the locality, without constructing to a height which would offer no additional benefit to the service area.
- The proposed location of the facility will be consistent with existing activities on the subject land parcel and will not interfere with current or future on-site activities
- Ground based equipment is to be located in an area that will be partially screened from adjoining
  uses by existing mature vegetation in the locality and along the public road; Furthermore, there
  are a number of vertical structures along the road reserve (such as power poles) which will help
  to offset the site's visual impact.
- The siting and location of the proposal has been taken into consideration during the site selection process in order to ensure that the site does not result in any undue visual intrusion towards surrounding viewing corridors.
- There are no specific sensitive uses, such as schools, childcare centres within a 500m of the site.



Figure 8: View looking northwest from Elm Rd towards suject location



Figure 9: View looking north from Cnr of Elm Rd and Sycamore Road

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Figure 10: Streetscape looking east along Elm Road



Figure 11&12: Streetscape looking southwest & northeast along Sycamore Road



Figure 13: Photomontage View 1 – looking southeast from Vincent Road



Figure 14: Photomontage View 2 – Looking north from Sycamore Road

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Figure 15: Photomontage View 3 – Looking southwest from Sycamore Road



Figure 16: Photomontage View 4 – Looking west from Sycamore Road in front of Able driving school

As can be seen above in *Figure 8-16*, there is extensive existing low-middle level vegetation within the vicinity of the site. The vegetation provides a moderate level of visual screening of the proposed facility from the bottom and midlevel of the facility to the surrounding roads and adjacent residences.

The proposed telecommunications facility sets back from Sycamore Road and is situated behind the existing tree canopy which will minimise the visual impact to the adjacent land users viewing from all directions. Views from the nearby dwellings towards the site are limited and are partly obscured by existing trees. As shown in *Figure 10-12*, there are a row of mature trees located along Sycamore Road and Elm Road which will effectively screen most of the facility. The most affected dwelling directly east of the facility at 14 Sycamore Road is located behind a row of trees extending along the eastern side of Sycamore Road. The existing power poles along the eastern side of Sycamore Road will provide some vertical context to the area. It's acknowledged the proposed facility will be taller than these existing vertical structures, however the facility will not overly stand out in the context. To further mitigate the impacts on the surrounding area the compound will have landscaping installed along the southwestern boundary to screen the base of the facility from views from the south and southwest.

Several photomontages have been prepared in *Figure 13-16* that provide an indicative view of the facility within the setting.

A separate Visual Impact Assessment has been prepared by external Specialist Consultants. This should be read in conjunction with this SEE. It is attached at Appendix 5.

# 8. Radiofrequency Emissions and Safety

It is the position of the Australian government, and peak health bodies like the World Health Organization (WHO), that mobile base stations are safe.

#### Statement from Australia's Chief Medical Officer

I'd like to reassure the community that 5G technology is safe. There is no evidence that telecommunication technologies, such as 5G, cause adverse health impacts. This position is supported by health authorities in Australia – such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) – and around the world, such as the World Health Organization.

Mobile phone networks and other wireless telecommunications emit low-powered radio waves also known as radiofrequency (RF) electromagnetic energy (EME). This is different to ionising radiation associated with nuclear energy or use in medicine. <u>The radio waves to which the general public is</u> exposed from telecommunications are not hazardous to human health.

#### https://www.health.gov.au/news/safety-of-5g-technology

#### Australian Government Advice

What do we know about EME? Answer: extensive scientific research confirms that mobile technology has no long or short term health effects; and the Australian Government is focused on capturing the benefits of advanced telecommunications while ensuring strict protections and safety standards are met.

The EME standard set by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) defines the maximum exposure limit for all wireless equipment and is strictly enforced by the Australian Communications and Media Authority (ACMA). Measurements undertaken by carriers and ACMA show that mobile telecommunication sites emit a tiny fraction of maximum EME exposure limits. The exposure limits are themselves very conservative. As such, sites which operate at 100% of the limit are still considered safe.

This standard is informed by decades of quality studies undertaken by expert Australian and international scientists which show the low levels of EME produced by telecommunications equipment have no adverse effects. This includes previous generations of mobile technology, like 3G and 4G, and the higher, more efficient, radio waves used for 5G.

https://www.infrastructure.gov.au/media-centre/5g-and-electromagnetic-energy

EME is one of the most heavily studied types of energy in the world. Decades of research shows there is no verifiable evidence that EME from telecommunications facilities pose a negative health risk, especially when emission levels are below the maximum exposure limits set out in the Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz (the Standard).

#### https://www.infrastructure.gov.au/media-technology-communications/spectrum/5g-eme

All mobile base stations in Australia must comply with a strict safety standard called the *Standard for Limiting Exposure to Radiofrequency Fields – 100 KHz to 300 GHz (RPS S-1).* The standard has been prepared by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), based on the recommendations of ICNIRP (International Commission for Non-Ionising Radiation Protection).

The Australian Communications and Media Authority (ACMA) regulates compliance with the standard. The safety standard applies to all mobile frequencies currently used in Australia, including 3G, 4G and 5G.

The Standard operates by placing a limit on the strength of the signal (or RF EME) that mobile carriers can transmit to and from any network base station. The environmental standard restricts the signal strength to a level low enough to protect all people at all times. It has a significant safety margin, or precautionary approach, built into it.

An ARPANSA EME report has been prepared to demonstrate compliance with the Australian standard. This report demonstrates the maximum signal strength that a proposed telecommunications facility is capable of producing, assuming it is operating at maximum capacity.

This facility will operate at maximum EME levels representing **1.046%** of the Australian standard. Refer Appendix 3.

Note that mobile base stations are designed to operate at minimum, not maximum, power levels at all times. The facility will only operate at a level necessary to accommodate the number of customers using the facility at any one time. Actual EME levels emitted by the facility will generally be much lower than those shown in the ARPANSA EME Report.

# 9. Conclusion

Ventia, for the Indara Group, is seeking development consent to install a new telecommunications facility at 13 Sycamore Road, Lake Albert NSW 2650 (Lot 8/DP716602). The new facility is proposed to improve mobile services in the Lake Albert area.

The facility has been sited to minimise impact on surrounding land uses as far as practicable, generally accords with planning requirements for the site, and has as small as possible a visual impact.

Given the significant public benefit afforded by the proposal, it is requested that consent be granted to undertake the project.

# Appendix 1: Certificate of Title

Appendix 2: Proposal Plans

# Appendix 3: ARPANSA EME Report

Appendix 4: Owners Consent

# Appendix 5: Visual Impact Assessment