



From:

# Development Application for Planning Consent

*Proposed New Telecommunications Facility  
22-30 St Andrews Street  
MAITLAND NSW 2320  
Lots 102 & 103 on DP875117*

## Statement of Environmental Effects

**Project Reference: S4692 MAITLAND NORTH**  
**RFNSA Reference: 2320039**

**September 2024**

# Document Control

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# Executive Summary

<b>Site Information</b>	<b>Lot description:</b> Lots 102 & 103 on DP875117 <b>Physical address:</b> 22-30 St Andrews Street MAITLAND NSW 2320 <b>Coordinates:</b> -32.73178, 151.55163
<b>Proposal</b>	<p>Indara Corporation Pty Ltd (part of the Indara group), care of CPS Technology &amp; Infrastructure, are seeking development consent for a new Telecommunications Facility at 22-30 St Andrews Street MAITLAND NSW 2320 (Lots 102 &amp; 103 on DP875117).</p> <p>The proposed facility will be owned by the Indara Group and host Optus telecommunications equipment. The facility will provide Optus 4G and 5G services to Maitland and the surrounding area.</p> <p>The proposal involves:</p> <ul style="list-style-type: none"> <li>• One (1) 30m Indara monopole (33.4m inc antennas);</li> <li>• One (1) new antenna headframe supporting three (3) Optus panel antennas, (each no taller than 2.8m in length);</li> <li>• One (1) outdoor equipment cabinet located on a new 500mm high steel platform with steps and a handrail;</li> <li>• Ancillary equipment associated with the operation and safety of the facility, including remote radio units, amplifiers, filters, cabling, antenna mounts, and the like</li> </ul> <p>The facility will be located within a fenced compound. The monopole will be unpainted concrete, and the associated equipment will be unpainted factory finishes of off-white for antennas, and galvanised steel for framing and mounts. The elevated platform, equipment cabinets, compound fencing, and other ground level infrastructure, will be painted 'Colorbond Pale Eucalypt Green'.</p>
<b>Purpose</b>	<p>Indara Corporation Pty Ltd (part of the Indara group), with Optus, are proposing a new telecommunications facility at Maitland. The new facility will provide improved Optus coverage and capacity for Maitland and the surrounding area.</p> <p>The facility has been designed as a neutral host facility, capable of supporting co-location by other carriers, government entities and wireless service providers.</p>
<b>Planning Considerations</b>	<b>LGA:</b> Maitland City Council <b>Zoning:</b> MU1 - Mixed Use Zone <b>Overlays:</b> Flood Prone Land Acid Sulfate Soil - Class 4 & 5 Local Conservation Area – General (Central Maitland Heritage Conservation Area)

<b>Applicant</b>	CPS Technology & Infrastructure Limited on behalf of Indara Corporation Pty Ltd Suite 1003 1 Newland Street Bondi Junction NSW 2022  Contact Person: Ben Dyer Email: <a href="mailto:ben.dyer@cpstech.com.au">ben.dyer@cpstech.com.au</a> Our Reference: S4692 MAITLAND NORTH
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# 1. Introduction

CPS Technology & Infrastructure, on behalf of Indara Corporation Pty Ltd (part of the Indara Group), are seeking development consent for a new telecommunications facility at 22-30 St Andrews Street, Maitland NSW 2320 (Lots 102 & 103 on DP875117).

The new facility will be comprised of a 30m monopole 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 Maitland 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 CPS Technology & Infrastructure on behalf of the Indara Group.

Indara are Australia's leading independent owner and provider of shared wireless telecommunications infrastructure, with a portfolio of over 4300 telecommunications sites across Australia. 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 our customers and the broader Australian community.

Indara owns and manages over 4300 mobile telecommunications facilities across Australia. Indara operate as a neutral host – our 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 Maitland 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 is 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

The facility is needed to provide additional network coverage and capacity in this part of the Maitland City Council local government area.

Maitland is a fast-growing area in the Lower Hunter region, particularly due to the record levels of movement between major cities and regional areas. This is putting a strain on existing networks which need to be upgraded and expanded to keep up with a growing population. Section 3.2 below shows there is a clear lack of existing telecommunications facilities in north Maitland. The two closest facilities provide only In-Building Coverage and the closest free standing facility is located 1.33km south-east of the proposed site. Given this there are no existing facilities which are suitable to service the targeted area. The proposed facility will alleviate service issues and provide access to reliable

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

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

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

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

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



wireless telecommunications coverage to the surrounding residential and commercial areas. This high level and speed of effective services is expected by those whom live, work in and visit the area.

## **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 will not resolve service issues, the carrier will consider any opportunities to co-locate on an existing mobile facility, building or other structure.

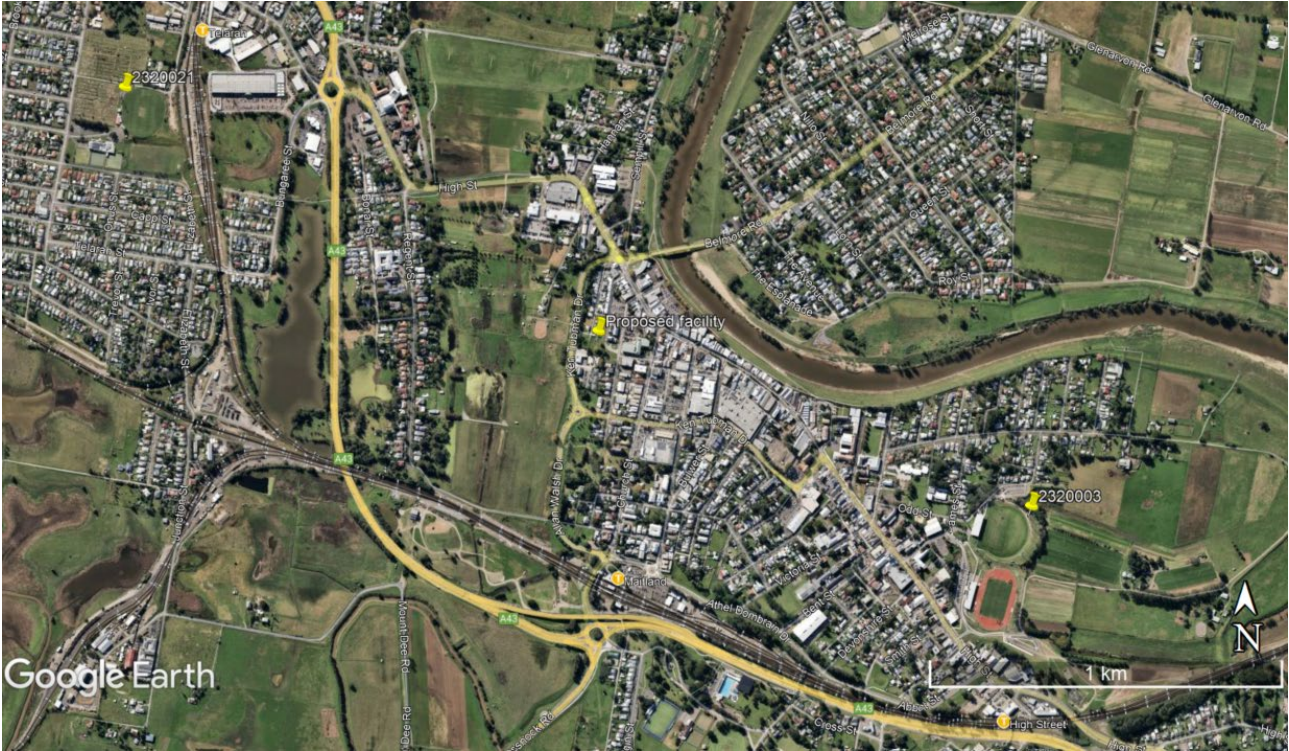
If there are no feasible co-location opportunities, the carrier will proceed to deploy a new 'greenfield' base station.

This facility is proposed in partnership with Optus, who have confirmed a new telecommunications facility will be needed in the Maitland 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 ([www.rfnsa.com.au](http://www.rfnsa.com.au)). None of the existing sites in the area are suitable for co-location.



**Figure 1: Existing Macro Telecommunications Facilities in Maitland (Google Maps & RFNSA)**

Existing and Proposed Communications Facilities		
RFNSA Details	Site Address	Comments
<b>2320003</b> 3GIS NSW Government - Telco Authority Optus Vodafone Telstra	'Maitland Sports Ground' James Street HORSESHOE BEND NSW 2320	This site is a 35m monopole located 1.33km (south-east) from the subject site and already accommodates Optus equipment. Due to the separation distance and insufficient height, an upgrade to this facility will not resolve the coverage issues around the subject site.
<b>2320021</b> Optus Vodafone Telstra	'Coronation Oval' Clark Street TELARAH NSW 2320	This site is a 35m monopole located 1.5km (north-west) from the subject site and already accommodates Optus equipment. Due to the separation distance, an upgrade to this facility will not resolve the coverage issues around the subject site.

There are no existing sites in the area that are suitable for colocation. As a result, a new greenfield option is required to provide the required service to the area.

### 3.3 Alternate Candidates

A robust investigation of potential candidates has been undertaken.

In identifying a candidate, CPS have sought to maximise separation from residences and 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*.



**Figure 2: Potential candidates for a new Telecommunications Facility (Google Earth)**

Prospective Candidates		
Candidate	Site Address	Comments
<b>A</b>	New 30m monopole Ausgrid Maitland Zone substation No. 528. 22-30 St Andrews Street  Maitland 2320 (Title: 103/DP875117)  Zone: MU1: Mixed Use	Located approximately 50m east of the Prime (Candidate D) on the same property but different lot. This candidate was discounted on design grounds for being too close to a high voltage feeder pole.
<b>B</b>	New 30m monopole 22-30 St Andrews Street Maitland 2320 (Title: 100/DP875117)  Zone: MU1: Mixed Use	Located approximately 65m south-east of the Prime (Candidate D) on the same property but different lot. This candidate was discounted as it was located over Telstra underground cables.
<b>C</b>	New 30m monopole 22-30 St Andrews Street Maitland 2320 (Title: 101/DP875117)  Zone: MU1: Mixed Use	Located approximately 65m south-east of Candidate D on the same property but different lot. This candidate was discounted as it was also located over Telstra underground cables.
<b>D</b>	New 30m monopole (Prime) 22-30 St Andrews Street Maitland 2320 (Title: 102/DP875117)  Zone: MU1: Mixed Use	Located approximately 65m north-west of Candidate C. The candidate does not conflict with any underground assets, does not require any vegetation clearing, allows for the co-location of infrastructure and achieves Optus' coverage objectives.
<b>E</b>	New 30m monopole 29-31 Sempill Street, Maitland 2320 (Title: 2/ DP1051969)  Zone: RU1: Primary Production	This candidate had a willing landowner, however the site is towards the northern end of the desired coverage area. This negatively impacts the performance, and may result in the need for an additional facility in the future to service the balance of the area that wouldn't achieve effective coverage from this location.

Candidate D at 22-30 St Andrews Street Maitland 2320 has been selected as the candidate for this project. While the candidate has residences to the north, all other adjoining uses are either commercial or infrastructure. The location does not conflict with existing or future uses, or impact of any underground assets or vegetation.

## 4. Site Context

The subject land is located at 22-30 St Andrews Street, Maitland (Lots 102 & 103 on DP875117).

Maitland is a major regional service centre in the Hunter Valley and is located approximately 35km from Newcastle. It is an important regional hub which supplies the region with a number of essential services.

The subject property is located within a mixed-use area in the middle of Maitland. The primary uses in the immediate area are commercial to the south and east, and a service station adjoining the land to the south-west. The land on the northern side is dominated by residential uses, with further pockets or residential scattered around the commercial and mixed use areas. The closest residential dwelling is the northern neighbouring dwelling located immediately adjoining the proposed site.

The broader area opens up into rural land to the west, which appears to be used as grazing land. The subject property is located at the western edge of the Central Maitland Heritage Conservation Area, which will be further discussed in Section 6.3 of this report.

The Hunter River runs along Maitland's eastern border and approximately 300m from the proposed site. As a result, the majority of Maitland and the subject property have been mapped as being flood prone.

The subject site itself is an irregular shaped property consisting of four separate lots, all owned and operated as one site by Ausgrid. It includes an electrical substation which contains high voltage electrical equipment and two brick buildings, each 6m high at the eaves and with sharply slanting rooves reaching an height of 11m. The substation and outbuilding are surrounded by a 1.8m security fence topped with razorwire, while the overall property is surrounded by a brick fence.

The proposed development location is close to the western boundary, adjacent to the Denman Street road reserve, on a cleared, maintained grass area. There are a few mature trees located at the southern end of the property which provides some screening for the properties to the south.

The proposed facility is setback almost 50m from Ken Tubman Drive, the major road in the area, and approximately 70m from the St Andrews Street frontage. The proposal utilises an existing clear portion of land, so no vegetation removal is required for the proposed lease area, or development.

Figures 3 to 8 show the proposed site.



**Figure 3: Site context.** Excepting the residences to the north within the mixed use area, the proposed facility achieves considerable setbacks from residences, mainly being surrounded by commercial uses (Nearmaps)



**Figure 4: Zoning context:** The proposed facility is located within a relatively narrow mixed use corridor, between rural zoning to the west and a commercial centre zoning to the east. (NSW Planning Portal)



**Figure 5: Site context.** The new facility is located along the western boundary of the subject lot (Google Earth)



**Figure 6: View of proposed compound location facing west – inductively shown in red**



**Figure 7: View within the proposed compound location facing east**



**Figure 8: The new access track route to the proposed compound**



## 5. Proposed Works

### 5.1 Equipment to be Installed

The proposal involves:

- One (1) 30m Indara monopole (total height of 33.4m inc. antennas);
- One (1) new antenna headframe supporting three (3) Optus panel antennas, (each no taller than 2.8m in length);
- One (1) outdoor equipment cabinet located on a new 500mm high steel platform with steps and a handrail;
- Ancillary equipment associated with the operation and safety of the facility, including remote radio units, amplifiers, filters, cabling, antenna mounts, and the like

The facility will be located within a fenced compound. The monopole will be unpainted concrete, and the associated equipment will be unpainted factory finishes of off-white for antennas, and galvanised steel for framing and mounts. The elevated platform, equipment cabinets, compound fencing, and other ground level infrastructure, will be painted 'Colorbond Pale Eucalypt Green'.

The overall height of the facility, including antennas and equipment, will not exceed 33.4m above ground level. The facility will be located within a fenced 6.6m x 6.6m compound, with the lease area measuring 7m x 7m security fence.

Refer **Appendix 2** for proposal plans.

### 5.2 Site Access and Parking

The proposed facility will use the existing crossover that provide access between St Andrews Street and Lot 103 (part of the overall Ausgrid property). The concrete internal access will be used, with a new vehicular access track coming off this and leading 20m to the proposed facility. The existing and proposed access arrangements are adequate for both construction and ongoing maintenance of the site, without any disruption to road use and traffic flow – refer to the submitted site plans and **Figures 7 and 8** above.

During the construction phase, one or two trucks will be used to deliver the equipment, and a crane and Elevated Work Platform (EWP) will be utilised to lift the equipment into place. Accordingly, the construction phase will not be a significant generator of vehicular traffic and will not adversely impact local traffic flow.



**Figure 9: Existing crossover and internal access to the Ausgrid property (Source: Google Maps)**

Once constructed, the facility will operate on an unstaffed basis aside from periodic routine maintenance visits (generally 2-4 times annually), as well as for any necessary emergency maintenance. 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 cooling fans on the equipment cabinet.

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.

### **5.4 Power and Utilities**

The proposed facility will connect to the existing property electricity pole from the north western corner of the site. An application to the power authority will determine the most suitable method of connecting power to the facility.

No works associated with stormwater drainage, or connections to reticulated water and sewerage, are proposed or required.

## 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 energy (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 as Appendix 3. Also refer to section 8 of this report.

## 5.6 Environmental Considerations

### 5.6.1 Flooding

The subject site is flood prone and within a declared floodplain.



Figure 10: Flood map (Maitland City Council)

Council's 1% Average Exceedance Probability map indicates a flood level of 9.74m at the proposed development location, which is approximately one metre above the existing ground level in this location. In order to avoid inundation, the equipment cabinets are proposed to be elevated 1.6m above the ground level, allowing for the required 1m plus a 600mm margin of freeboard. Details on the elevated equipment cabinets are available in the proposal plans.

The proposed facility is fully autonomous and will not create new hazards to persons at the site. The proposed compound will add a small additional area of impervious surface to the site, insufficient to cause other than negligible changes to the quantity or quality of flows over the site. Additionally, the subject site is already flat and so the proposed facility will not result in any changes to the existing ground level. The facility design allows floodwaters to move freely in and around the lease area, with the monopole footing constructed at ground level and the elevated platform, enabling unimpeded water flow beneath it.

To better support hazards within the area, the facility will feature a battery backup system housed within the equipment cabinet, which will ensure continued operation during a power outage. This back up system is typically capable of providing power for 2-3 days, depending upon demand.

The proposed facility is fully autonomous and will not impede flood flows or increase flood risk to the subject site or adjoining properties. The design allows floodwaters to move freely in and around the lease area, with the monopole footing constructed at ground level and the elevated platform enabling unimpeded water flow beneath it.

## **5.6.2 Acid Sulfate soils**

The subject site is located within a Class 4 and 5 Acid Sulfate soils area. Due to the site's category of Acid Sulphate Soils and the volume of excavation required below the natural ground level, we see the development having minimal impact on existing acid sulfate levels, however this can be assessed in greater detail once the footing design is finalised.

The following principles are adopted to combat any potential impact of Acid Sulfate Soils being identified on the subject site:

- The disturbance of Acid Sulfate Soils should be avoided wherever possible.
- Where disturbance of Acid Sulfate Soils is unavoidable, preferred management strategies are:
  - Minimisation of disturbance.

- Neutralisation.
- Hydraulic separation of sulfides, either on its own, or in conjunction with dredging.
- Strategic reburial.
- Stockpiling of untreated Acid Sulfate Soils above the permanent groundwater table with (or without) containment is not an acceptable long-term management strategy. For example, soils that are to be stockpiled, disposed of, used as fill, placed as temporary or permanent cover on land or in waterways, sold or exported off the treatment site or used in earth bunds, should be treated/managed in a timely manner.
- All excavated materials which need to be stockpiled should be covered to reduce exposure to the weather.
- Neutralisation can be achieved by using agricultural lime. Mix excavated soil material and surfaces with lime at a rate recommended by manufacturer's instructions.
- Reburial location must be one that is permanent.
- When reburying materials, precaution should be taken to avoid oxidation.

## 5.7 Heritage

The subject site is located within the Central Maitland Heritage Conservation Area. This area is of Local Significance.

There is one Local heritage listed place and one State heritage listed in the locality. The locally listed place is "Springfield" at 34 St Andrews St (listing number 1176) and is located 80m south of the subject site. The State heritage listed item is located at 473 High Street, Maitland (Listing number 00089) and is located 125m east of the subject site.

The proposed facility will not be apparent when viewing either heritage item from its primary street frontage. Due to this and the separation distance of these listed items from the proposed development, no impact to their significance is expected to occur.



**Figure 11: Heritage map (NSW Planning Portal Spatial Viewer)**

Central Maitland Heritage Conservation Area Statement of significance

*Central Maitland has historic significance of exceptional value recording an early settlement of the Hunter Valley which grew to be the major centre in the region – larger than Newcastle. It also became one of the largest settlements in NSW during the middle of the nineteenth century. Its historic role is reflected in the excellent examples of Commercial, Civic and Ecclesiastical buildings and in the rarer and more modest surviving examples of early housing. The Heritage Conservation Area’s aesthetic significance is derived from the intactness of its streetscapes, its*

*landmark buildings and strong edge definition of river and flood plain. Regent Street contains an exceptional collection of mansions and large residences of the late Victorian and Federation periods. The area is of social significance for its continuing roles as a regional centre for administration, cultural activities and several religious denominations.*

The proposed development is located on the western edge of this conservation area, at the rear of the Ausgrid electricity substation. With the exception of the dwellings north of the subject site, the immediate locality has been significantly altered from the original state, as described in the statement above. These new era buildings include the Maitland police station, Ampol service station, Hunter Valley Orthodontics and Busy Bees at Maitland, all within close proximity to the subject site.

The singular elements of the statement of significance include the 'strong edge definition with the river and floodplain, and Regent Street which 'contains an exceptional collection of mansions and large residences of the late Victorian and Federation periods.' The proposed facility is located over 500m east of Regent Street, a distance at which the slim monopole would appear of slight bulk and height and there is significant obstruction from street trees, and over 250m from the Hunter River with obstruction being provide by the two (2) storey commercial buildings in the intervening area. See section 7 of this report for more information.

The dwellings at the southern end of Denman Steet appear to have retained some of their originality but are not excellent examples being sought for retention in the statement above. Each dwelling has been altered over the years with extensions, carports / garages and porticos. Many of the original design characteristics such as fencing, windows and facade design elements have been replaced over time. It is noted that none of these dwellings have an individual heritage listing.



**Figure 12: Denman Street Streetscape looking south (Google Streetview)**



**Figure 13: Denman Street Streetscape looking north (Google Streetview)**

It is acknowledged that the proposed facility will be the tallest structure in the area, and for this reason will be noticeable within the landscape, however this is necessary for the proper functioning of mobile telecommunications facilities, and is generally accepted to be the case by residents. In terms of character impact, buildings such as the police station and service station have a far greater impact on the changed character of the area as they are significant buildings dominating the streetscape. The Ausgrid substation also substantially impacts upon any asserted heritage character this area.

The proposed facility will not be a focal point when viewing heritage listed items within the context of their surroundings. This is because of its separation from them, but also because of the sympathetic design and finishes, intended to blend into the background as much as possible. The monopole and associated equipment have been designed to be as low scale as possible whilst still achieving coverage requirements. The structure is proposed to be non-reflective unpainted concrete, which has been found to be the least conspicuous colour against the majority of backgrounds. Like most other installations of infrastructure, such as light and power poles, the proposed facility will be not draw the attention of the casual observer.

Due to the proposed design measures, the restrained and modified heritage value of nearby dwellings, modern commercial buildings, and major infrastructure existing on the subject site, it is not considered that the proposed telecommunications facility will have any substantive impact on the heritage value of the locality or the conservation area generally.



## 5.8 Aviation

There are a number of airports and aerodromes within 30km of the subject site, as follows:

- Maitland Airport, approximately 6km to the north west;
- Luskintyre Airfield, approximately 14km to the north west;
- Cessnock Aerodrome, approximately 20km to the south west;
- Elderslie Airport, approximately 24km to the north west; and
- Newcastle (Williamstown) Airport, approximately 25km to the east;

The proposed facility does not penetrate the Obstacle Limitation Surface (OLS) for any of these facilities, however given the proposed facility is greater than 30m in height, within 30km of an airport or aerodrome, it was referred to CASA for assessment, and will be referred to Air Services Australia as a 'Tall Structure' prior to construction.

CASA responded with no objection to the proposal and no requirements, stating that the proposal *"will not be a hazard to aircraft operations and will not require any aviation markings or lighting."*

## 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 planning 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 licensed 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 consequently 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 as the development won't be installed on an existing building or structure.
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.	The location chosen is considered to be a reasonable compromise location to avoid negative visual impacts on adjoining and surrounding uses. The facility is considerably taller than surrounding buildings, however it has been designed to be as low as possible, whilst still providing the necessary coverage. Mature trees on the property and nearby will assist in softening and screening the visual impact.
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 proposed facility will feature a concrete monopole, with steel headframe, and factory light grey antennas and ancillary equipment mounted on the headframe. These colours and finishes have been found to be the

	least conspicuous colour against the majority of backgrounds.
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 equipment cabinets, elevated platform, fencing, and other ground level equipment, are proposed to be finished in 'Colorbond Pale Euacalypt Green' to reflect their predominantly vegetated background when viewed from different angles.
e. Locate and design a telecommunications facility in a way that responds to its setting (rural, residential, industrial or commercial).	The location and design is considered to be sympathetic to its setting within a mixed use area of commercial, infrastructure, and residential, by virtue of its lowest possible height, colours and finishes.
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.	There are no heritage listed sites adjacent to the subject site, however it is within a heritage conservation area. As previously discussed in this report, the heritage values in the subject part of this area are considerably diminished, particularly by modern commercial, government, and infrastructure developments. The proposal does not offend these diminished heritage values.
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.	It is not considered that the proposed facility obstructs any significant vistas or landmarks, or views of heritage buildings, landmarks and the like. Refer section 7 of this report, where photo montages are provided from significant vantage points.

<b>NSW Telecommunications Facilities Guideline, Including Broadband</b>	
<b>Principle 1: Design and site telecommunications facilities to minimise visual impact</b>	
<b>Principle</b>	<b>Response</b>
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.	No vegetation removal is required for this proposal.
i. Remove redundant telecommunications facilities and restore the site to the condition it was in prior to the facility's construction.	This will be undertaken when the facility is decommissioned.
j. Remove redundant components of existing facilities after upgrades.	This will be undertaken when necessary.
k. Where possible, consolidate telecommunications facilities to reduce visual clutter and work with other users on co-location sites to minimise cumulative visual impact.	A key characteristic of Indara sites is the ability to accommodate multiple carriers. Only Optus is currently proposed, but the site has been selected, and infrastructure designed, in order to enable other carriers to co-locate in the future.

<p>l. Accord with all relevant industry design guides when siting and designing telecommunications facilities.</p>	<p>The siting and design of the proposed telecommunications facility is entirely compliant with the New South Wales Telecommunications Facility Guideline, as released by the NSW Department of Planning and Infrastructure.</p>
<p><b>Principle 2: Co-locate telecommunications facilities wherever practical</b></p>	
<p>a. As far as practical, locate telecommunications lines underground or within an existing underground conduit or duct.</p>	<p>This wireless facility will include underground optic fibre communications lines.</p>
<p>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.</p>	<p>No existing co-location opportunities were practical in this case, and no local buildings provided a suitable height to achieve necessary coverage without substantial negative visual impact. Once constructed, the proposed facility will provide an opportunity for other carriers to co-locate.</p>
<p>c. Consider extending an existing tower as a practical co-location solution to new towers.</p>	<p>No existing co-location opportunities were practical in this case.</p>
<p>d. Demonstrate that co-location is not practicable if choosing not to co-locate a facility.</p>	<p>No existing co-location opportunities were practical, as outlined previously in this report in the analysis of existing facilities and candidates considered as part of this proposal.</p>
<p>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.</p>	<p>Not applicable to this proposal.</p>

<b>NSW Telecommunications Facilities Guideline, Including Broadband</b>	
<b>Principle 3: Meet health standards for exposure to radio emissions</b>	
<b>Principle</b>	<b>Response</b>
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 as being well within below the public exposure limit. Refer to Appendix 3 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 Appendix 3 of this document.  Additionally, the EME Report is a publicly accessible document which can be located on <a href="http://www.rfnsa.com.au/23220039">www.rfnsa.com.au/23220039</a>
<b>Principle 4: Minimise disturbance and risk, and maximise compliance</b>	
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 proposal is compliant with the Civil Aviation Regulations 1988 and the Airports (Protection of Airspace) Regulations 1996. The proposal does not penetrate any identified Obstacle Limitation Surfaces, and CASA has provided a response that there are no implications of the proposal that necessitate lighting or particular colour treatments.
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 will be licensed as per ACMA regulations. As a result, there will be no anticipated 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 will 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 as the proposal is for a standalone structure.
e. Erect the telecommunications facility wholly within the boundaries of a property as approved by the relevant landowner.	The proposed telecommunications facility is to be wholly erected within the boundaries of the lot, in an area to be leased, as agreed with the land owner.
f. Ensure all construction of a telecommunications facility accords with Managing Urban Stormwater: Soils and	Contractors will adhere to the conditions and regulations set out within the Blue Book – 'Managing

Construction – Volume 1 (Landcom 2004), or its replacement.	Urban Stormwater: Soils and Construction' (Landcom 2004).
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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 facility will be fenced off from the public. During construction, appropriate measures will be undertaken to ensure the safety of all involved.
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 as per the recommended hours as stipulated by Council within the conditions of consent. Otherwise between the hours of 7:00am to 5:00pm Monday to Saturday.
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 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.	If required, open trenching will be undertaken in accordance with Australian Standards as is required.
k. Minimise disturbance to flora and fauna and restore land to a condition similar to its condition before the work was carried out	There will be no disturbance to fauna or flora.
l. Identify any potential impacts on threatened species and communities in consultation with relevant authorities and avoid disturbance to identified species and communities where possible.	There are no threatened species located within the subject land holding that will be impacted by the proposal.
m. 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. The proposal will not impact on any known Aboriginal place or object. AHIMS Basic Searches for the subject two lots are included within Appendix 4.
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.	Not applicable. The proposal will not impact on any street furniture, paving or other existing facilities.

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.	Thirteen alternate sites were considered during the site scoping process. Of these, eight property owners declined or did not respond to our request to establish a facility on their property. The remaining five are discussed in detail previously in this report.
<p>b. In addition to the new site selection matters in Section 4 of the Industry Code C564:2020 Mobile Phone Base Station Deployment:</p> <ul style="list-style-type: none"> <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>	Each of the alternate sites were reviewed by all professional disciplines. A cumulative score was given to each site based upon matters such as property tenure suitability, town planning matters (visual impact, heritage considerations, proximity to sensitive uses etc.), access, design and construction challenges, and the suitability of the site from a coverage perspective. This analysis resulted in the prime candidate (the subject site) being chosen to progress to the Development Application stage.



## 6.3 Maitland Local Environmental Plan 2011

### 6.3.1 Zone Provisions

The proposed site is zoned Mixed Use under the Maitland LEP 2011.



Figure 14: Zone map (NSW Planning Portal Spatial Viewer)

Telecommunications facilities are not listed as either a permissible or prohibited use in the Mixed Use zone. Rather, the permissibility of the use is established under clause 2.143(1) of the *SEPP (Transport and Infrastructure) 2021*.

The zone objectives are below. The project is consistent with these objectives.

LEP MU1 – Mixed Use Zone Objectives	
Objective	Response
To encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities.	The proposed facility will provide an essential service not only to residents and visitors but also for business. The proposed facility will provide and improve the wireless telephone and data connections available to the local area.

To ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces.	The proposed facility has been positioned to minimise visual impact on the locality and is not considered to detract from the existing qualities. It is set back a significant distance from major roads, and will be softened and partially screened by adjacent and surrounding mature trees.
To minimise conflict between land uses within this zone and land uses within adjoining zones.	The site is surrounded on most sides by commercial, government, and infrastructure uses, with residential dwellings on the northern side. The proposed facility is not expected to generate any conflict with any of these land uses.
To encourage business, retail, community and other non-residential land uses on the ground floor of buildings.	Not applicable to this proposal.

### 6.3.2 Principal Development Standards

Height of Buildings Objectives	
Objective	Response
to ensure development is compatible with the streetscape and character of the area by providing an appropriate correlation between the size of a site and the extent of any development on that site	The location chosen is a mostly vacant site, with the proposed development occupying a small part (approximately 7m x 7m) of the vacant grassed area. Whilst the development is taller than surrounding structures, the slimline nature of the structure ensures that the scale and bulk of the development is not viewed as out of character with the area.
The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map	Not applicable to this proposal.

### 6.3.3 Miscellaneous Provisions

Heritage Conservation	
Objective	Response
(a) to conserve the environmental heritage of Maitland.	The proposal does not detrimentally impact on the environmental heritage of Maitland.
(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views	The proposal is within the heritage conservation area, but is on the periphery of this area, and well separated from the majority of buildings with heritage value. The immediate surrounds is dominated by more modern buildings such as the police station to the east,

	commercial buildings to the south, a service station to the south west, and an electrical substation immediately adjacent. Dwellings along Denman Street to the north are considered to have mixed heritage values given their mostly heavily modified and modernised nature. Consequently, there are not considered to be any heritage impacts of the proposed siting.
(c) to conserve archaeological sites	No archaeological sites are identified within the area, and no impacts are expected.
(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.	AHIMS Basic Searches have been undertaken for the two lots, with no sites of Aboriginal heritage significance being identified.

<b>Flood Planning</b>	
<b>Objective</b>	<b>Response</b>
(a) to minimise the flood risk to life and property associated with the use of land,	Council's flood data and advice has been utilised to determine the appropriate floor level of critical equipment. All power, communications and processing equipment will be located in equipment cabinets on a steel platform 1.6m above the ground level. This should provide flood immunity for the majority of flood events, ensuring this critical communications infrastructure continues to operate during emergencies.
(b) to allow development on land that is compatible with the flood function and behaviour on the land, taking into account projected changes as a result of climate change,	The proposal includes a 500mm freeboard above the 1% AEP flood level, which provides for future increases in levels that may occur as a result of various factors.
(c) to avoid adverse or cumulative impacts on flood behaviour and the environment,	The development has a negligible footprint at ground level, being essentially just the monopole. Other equipment is elevated and won't impede or alter flood behaviour, and fencing is permeable.
(d) to enable the safe occupation and efficient evacuation of people in the event of a flood.	There is no risk to life as the facility is automated, without the need for staff on-site.
<b>Requirements</b>	<b>Response</b>
Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development— (a) is compatible with the flood function and behaviour on the land, and	The negligible structure footprint will not alter the flood function or behaviour of the land.
(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the	The negligible footprint will prevent detrimental impacts on any other property.

potential flood affectation of other development or properties, and	
(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and	As the facility isn't staffed, there will be no impact on people.
(d) incorporates appropriate measures to manage risk to life in the event of a flood, and	There will be no risk to life due to the unstaffed nature of the facility.
(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.	The facility will be constructed and maintained to the highest standards, and in compliance with all environmental requirements to ensure that the environment isn't negatively impacted.

## 6.4 Maitland Development Control Plan 2011

### 6.4.1 General requirements for new buildings in Historic Areas

4.1 Siting a new building	
Objective	Response
To ensure that siting of new buildings respect the significance and character of the surrounding area.	The proposed facility has been set as far away from heritage listed items as possible. The adjacent dwellings on Denman St have limited historic value due to extensive modifications and additions, which will ensure that they are not detrimentally affected by the proposal. It is noted the numerous examples of newer development surrounding the subject site such as the petrol station, Ausgrid transfer station and Police station.
General requirements	Response
New development should have regard to the established patterns of the locality with regard to the typical location and orientation of buildings on an allotment.	Telecommunications facilities cannot fit into established patterns as they are not typical buildings. They are a unique structure that must be taller than surrounding buildings in order for them to operate effectively within an urban environment.
The siting of a new residential building allowing for a generously sized front garden will usually assist in its successful integration.	N/A not a residential building

New development should be sited behind the building line of any adjoining heritage item	The facility is set back a greater distance than dwellings on Denman St, noting that these aren't heritage items, rather part of the broader heritage conservation area.
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4.2 Scale	
Objective	Response
To ensure the scale of the new building respects the significance and character of the surrounding area and does not detrimentally impact upon an established pattern of development in the vicinity.	A design requirement of this facility is that it is high enough to clear surrounding obstacles that can interfere with its operation. It is noted that there is no established character of development due to the variety of built form, setbacks, building heights and land uses. The locality already exhibits numerous tall vertical built elements by way of power poles and Ausgrid infrastructure.
To ascertain the appropriate scale of new buildings, the following design aspects are of particular importance; <ul style="list-style-type: none"> <li>- Reference to the main ridge line heights of original surrounding buildings;</li> <li>- Natural ground or street levels;</li> <li>- Ensuring different parts of the building are in scale with the whole;</li> <li>- Ensuring the scale of verandahs relate to the scale of those in adjacent buildings.</li> </ul>	These design parameters are not applicable to telecommunications facilities. The facilities need to be higher than surrounding buildings. The more obstacles in the path between the antenna and the user reduces the distance and effectiveness of its operation. Whilst a tall structure, it is narrow, and its visual bulk is greatly reduced.
General requirements	Response
The scale of a new house should be related to the size of the allotments laid out in the historical subdivision pattern of the area. This does not apply to consolidated lots. New buildings should be in scale of surrounding dwellings. Large houses on small allotments will tend to look awkward and dominate the surrounding area.	Not applicable to this proposal.
Large houses may be better located on large allotments in less sensitive areas.	Not applicable to this proposal.
New houses should generally remain at single storey in areas where the majority of buildings are single storey.	Not applicable to this proposal.
Landmark buildings in Conservation Areas which may be heritage items, mansions or public buildings will generally be surrounded by single story buildings, or those of a lesser scale. These landmark buildings should not be used as a precedent for increasing the scale of new buildings. New buildings should relate to the	No landmark buildings are located on adjoining or immediately surrounding allotments.

scale of existing development around the landmark and respect its prominence.	
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4.3 Proportions	
Objective	Response
To ensure that the proportions of the new building respect the significance and character of the surrounding area.	As outlined above, the scale and bulk of the proposal is significantly less than surrounding buildings due to its tall, narrow design.
General requirements	Response
Openings in visible frontages should retain a similar ratio of solid to void as to that established by the original older buildings.	Not applicable to this type of structure.
New buildings should incorporate the typical proportions of surrounding development, even when using modern materials.	This is not possible for telecommunications infrastructure. Additionally, it is considered that the colours and finishes will be sympathetic to the visual background of the environment.
New buildings should establish a neighbourly connection with nearby buildings by way of reference to important design elements such as verandahs, chimneys or patterns of openings.	This is not applicable to, or possible for, telecommunications infrastructure.

4.4 Setbacks	
Objective	Response
To ensure the setback of the new building respects the significance and character of the surrounding area.	The proposed facility has been set as far back from major roads as possible. These are considered to be St Andrews and High Streets to the east, and Ken Tubman Drive to the west. This was partly due to provide separation from underground services, but also to minimise its visual impact from this vantage point. As Denman Street is a no through road, it has far fewer users than St Andrews Street.
General requirements	Response
Where there is a uniform historically based setback, it is generally advisable to maintain this setback in a new building. Where the new building will be obtrusive it should be set well back and heavily screened.	The proposal is closest to the Denman Street road reserve, with buildings on Denman Street mostly built almost on or close to the front boundary. The proposed fenced compound for the development will be 2.5m from this street boundary, which is greater than the majority of buildings.
If the setback varies, the new building should not be set closer to the street than an adjoining	The development will be setback a greater distance than the adjoining dwelling.

historic building (even if it is not an identified heritage item).	
Setback from side boundaries should be consistent with typical buildings in the immediate vicinity.	The setbacks of surrounding buildings are significantly varied. The proposal will have the fenced compound setback 7m from the northern side boundary.

4.5 Form and Massing	
Objective	Response
To ensure the form and massing of new buildings respect the significance and character of the surrounding area.	The proposed structure doesn't detrimentally impact the significance and character of the area. The tall but slimline structure is unique in the built environment and utilises appropriate colours and finishes to fit into the streetscape.
General requirements	Response
New buildings should be designed in sympathy with the predominant form and massing characteristics of the area.	There is a mixture of built form and massing within this mixed use area. The scale and bulk of the proposal is consistent with its purpose, and utilises a slimline design, along with suitable colours and finishes to fit within the area.
Houses generally had ridges of the same height. It is therefore important in new buildings to ensure that the width of wings can maintain a consistent ridge and roof height.	Not applicable to this proposal.

4.6 Landscaping	
Objective	Response
To ensure new landscaping respects the significant characteristics and elements of the surrounding area	No new landscaping is proposed as part of the development. It is already within a landscaped site featuring several mature trees on the property to the south and south east. The softening and screening achieved from these trees is supplemented by a number of them on the site opposite to the west. Given the extent of overhead and underground services on the property, additional plantings would likely cause challenges and negatively impact on such infrastructure.
General requirements	Response
Generous green landscaped areas should be provided in the front of new residential buildings wherever possible. This will almost always assist in maintaining the character of the streets and Conservation Areas.	Not applicable to this non-residential proposal.

New landscaping should not interfere with the appreciation of significant building aspects such as shopfronts or contributory building facades.	No new landscaping is proposed.
Important contributory landscape characteristics such as canopy cover or boundary plantings should be retained in new development.	It is not proposed to remove any vegetation as part of this proposal.

4.7 Detailing	
Objective	Response
To ensure that detailing on new buildings respects but does not imitate original detailing on older surrounding buildings.	The proposed facility is an infrastructure installation, and hence does not present the same opportunities for detailing available to normal buildings. Notwithstanding, the choice of colours and finishes, and slimline design, is sympathetic to the surrounding area.
General requirements	Response
Avoid fake or synthetic materials and detailing. These tend to give an impression of superficial historic detail.	The proposed facility does not include any fake materials or detailing.
Avoid slavishly following past styles in new development. Simple, sympathetic but contemporary detailing is more appropriate. Original materials and details on older buildings need not be copied, but can be used as a reference point.	This proposal is not similar to surrounding developments, and hence the proposed design cannot relate to them in terms of copying their style.

4.8 Building Elements & Materials	
Objective	Response
To ensure that the use of materials and colours of the new building respect the significance and character of the surrounding area.	The monopole, headframe, antennas and ancillary equipment will all be unpainted factory finishes of concrete, steel, and light grey respectively, as these are accepted to blend in the best with the majority of aerial backgrounds. Ground level equipment, fencing, the elevated platform and the like, will all be painted 'Colorbond Pale Eucalypt Green'.
General requirements	Response
4.8.1. Doors and windows a. New doors and windows should proportionally relate to typical openings in the locality. b. Simply detailed four panel doors or those with recessed panels are generally appropriate. c. Mock panelling, applied mouldings and bright varnished finishes should be avoided.	Not applicable to this proposal.



<p>d. Older houses have windows which are of vertical orientation and this approach should be used in new buildings.</p> <p>e. Standard windows often come in modules of 900mm wide. Their use should be limited to single or double format only. The most suitable windows are generally double hung, casement, awning or fixed type.</p> <p>f. If a large area of glass is required, vertical mullions should be used to suggest vertical orientation. A large window could also be set out from the wall to form a simple square bay window making it a contributory design element rather than a void.</p> <p>g. Coloured glazing, imitation glazing bars and arched tops are not encouraged.</p>	
<p>4.8.2 Roofs</p> <p>a. Corrugated galvanized iron (or zincalume finish) is the most appropriate roofing material for new buildings in historic areas. It is also economical and durable. Pre finished iron in grey or other shades in some circumstances may also be suitable.</p> <p>b. Tiles may be appropriate in areas with buildings dating to the 1900's - 1930's. [MAITLAND DEVELOPMENT CONTROL PLAN] December 2011 53   Page Unglazed terracotta tiles are the most appropriate. The colour and glazing of many terra cotta tiles make them inappropriate.</p> <p>c. Other materials to avoid include modern profile steel deck.</p> <p>d. Ogee profile guttering is preferable to modern quad profile. Plastic downpipes should be avoided in prominent positions.</p>	Not applicable to this proposal.
<p>4.8.3 Paving</p> <p>a. Preferred materials for driveways include wheel strips and gravel.</p> <p>b. It is important that the amount of hard driveway material does not dominate the front garden area.</p>	The existing concrete driveway to St Andrews Street will be utilised, with a new gravel access track proposed to connect the compound location to this driveway.
<p>4.8.4 Walls</p> <p>a. Imitation Cladding materials which set out to imitate materials such as brick, stone, and weatherboard should be avoided as they tend to detract from the authentic character of the surrounding original buildings.</p> <p>b. Weatherboard 150mm weatherboards are generally appropriate for historic areas. They</p>	Not applicable to this proposal as no walls are proposed.

<p>should be square edged profile unless the surrounding buildings are post 1920's.</p> <p>c. Brick i. Plain, non-mottled bricks are preferable with naturally coloured mortar struck flush with the brickwork, not deeply raked. ii. Bricks of mixed colours (mottled) should be avoided, as should textured 'sandstock' bricks.</p>	
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## 7. Visual Impact

With many mobile telecommunications base stations in operation around regional New South Wales, they are considered to be ubiquitous, and a common and accepted feature within the landscape. These facilities are not only operated by Carriers such as Optus but also include critical infrastructure assets employed by the emergency services, government agencies (including local government), and other organisations to ensure critical communications are delivered.

The location of the site was selected for the following reasons:

- The use of the site is already for infrastructure purposes. The electrical substation site is a logical location to add further essential community infrastructure in the form of the proposed telecommunications facility. The proposal involves a vertical slimline monopole plus headframe on a location which already features vertical infrastructure in the form of power poles, lightning conductors, and the like. In the context of this commercial operation, the proposed infrastructure facility is unlikely to be considered out of place.
- The facility is well set back from nearby major roads. The closest major road is Ken Tubman Drive to the west, which the proposal will be setback 47m from. The closest semi-major road to the east is St Andrews Street, some 70m away. This reduces the prominence of the facility when viewed from the more highly trafficked roads. Figure 14 details these separations.
- There are substantial mature vegetation buffers within or around the site which assist in either softening or obscuring views of the proposal from numerous surrounding view points, as follows:
  - Mature trees running along the majority of Ken Tubman Drive to the west should completely obscure the view of the facility from this roadway.
  - A combination of this vegetation strip and additional plantings on the western side of Ken Tubman Drive will assist in reducing the visual impact of the facility when viewed from residences on Regent Street across the floodplain.
  - Mature trees within the subject site itself afford some degree of screening and softening from St Andrews Street to the east, and surrounding viewpoints.

- The area is a mixture of uses, including infrastructure, commercial and community uses, including the adjacent service station, and the police station. The proposal should not appear out of place amongst this mixture of uses.



**Figure 15 – Distance from site to major roads (source: Nearmap)**



**Figure 16 – Tree screening around the site (source: Nearmap)**



**Figure 17 – Viewpoint 1 From St Andrews St in front of the Subject Site (looking West)**

This view above demonstrates how the proposal is set well back into the subject site, a significant distance from the road frontage, and within a landscaped setting.



**Figure 18 – Viewpoint 2 Ken Tubman Drive (looking North-East), showing mature trees along the main road.**



**Figure 19 – Ken Tubman Drive (looking South-East), showing mature trees along the main road.**

Viewpoints 2 and 3 above demonstrate that the facility will largely be visually screened from vantage points along Ken Tubman Drive.

A new 30 metre monopole with associated equipment will present a new form within the landscape in the subject part of Maitland. The most likely viewers of the proposed facility would be pedestrians and vehicular traffic in surrounding streets.

Despite dwellings being located relatively close to the facility to the north and south east of the proposed location, residents of these are unlikely to regularly view the facility. This is because none of the dwellings have an aspect towards the facility from either their front or rear facing windows. A resident would need to stand in their rear yard and turn towards the facility to view it. As almost none of the nearby dwellings feature front yards, the potential for viewing is even further reduced. Dwellings to the south east also have their rear yard views towards the site obstructed by mature trees on and adjacent to the subject site.

Given the extent of vegetation buffers along road reserves and property boundaries of many surrounding roads and properties, and due to the visual blocking effects of nearby commercial and community use buildings, including the police station, it is considered that there are limited locations where the proposed facility will be wholly visible. The balance of the local area could expect either partial or completely obscured views.

The photo montages below depict this in greater detail.

**Figure 20** shows an aspect of the facility that was difficult to achieve as most other view points along this stretch of the road are mostly or completely obscured by either the mature trees (shown on the left side of the photo), other vegetation on private property, or buildings and other structures, such as the service station shown on the right side of the photo.



**Figure 20 - From in front of the Service Station on Ken Tubman Dr, looking north-east**

**Figure 21** shows proposed facility will be visible from immediately in front of the subject site from the aspect shown. This location was chosen to represent the appearance of the monopole and headframe within the property, however an aspect from slightly farther north on St Andrews St would find views more obscured by a combination of buildings and trees. The same is true from aspects slightly farther south on this street, with mature trees and a range of buildings featuring along here.



**Figure 21 - Photo Montage 2: From St Andrews St in front of the site, looking west**

Figure 22 shows a prominent structure however observing that it is amongst other slimline vertical infrastructure such as the numerous power poles, and therefore doesn't appear out of place in the skyline.



**Figure 22 - Photo Montage 3: From Corner of Denman Street and Lintott Lane, looking south**



Council requested a photo montage from the major intersection of Ken Tubman Dr, High St, Belmore Road, be included with this report, as it is a heavily trafficked area with a lot of vehicular and pedestrian activity. **Figure 23** show the proposed facility from this location 240m. The proposed facility is only slightly visible in between buildings and is not of significant bulk.



**Figure 23 - Photo Montage 4: From the major intersection of Ken Tubman Dr, High St, Belmore Rd, looking south**

Another viewpoint requested by Council to be included is from the Regent Street area across the floodplain. The closest rear boundary of a residential zoned lot to the west is about 430m. Due to the narrow gaps between dwellings along this road, and a combination of street trees and the heavily landscaped gardens, it was not possible to find any location along this public road where the proposed facility may be visible between buildings. It is not to say that there may not be any views from the rear of any of these residences, however we do not have access to private property and so we are unable to depict this in the form of a photo montage. The closest reference location with a clear view across the floodplain to the subject site, is where Regent St turns to the east and becomes Steam St. The view from this location (**Figure 24**) reflects the considerable distance (600m) from the facility. The facility is visible above trees and buildings from this distance, however it will appear to be a small feature on the skyline.



**Figure 24 - Photo Montage 5: From Steam St, near Regent St, looking north east across the flood plain**

While **Figure 22** demonstrates the visual impact from a road frontage in front of a residence close to the facility, it does not include information on the nature of windows looking towards the proposed facility. **Figures 25 to Figure 31** show the south-facing aspects of residences south of the subject site. These provide evidence that the majority of residences are one storey with few north-facing windows and that most north-facing windows will be obstructed by adjacent buildings. The only two-storey residences in the area are those new dwellings at 6 Little Hunter Street, and only one of these will have visibility towards the tower, with the majority of its balcony area and windows facing east (**Figure 30**).



**Figure 25: View of the south-facing wall of 47 Denman Street, a property adjacent to the subject site. Only two small south-facing windows are in evidence, and these look out on a small outdoor area next to the garage, which is built to the boundary (Source: Google Maps).**



**Figure 26: View of the south-facing wall of 46 Denman Street, a property nearby the proposed facility. Only one small south-facing window is in evidence. The front of the residence is dominated by pines (Source: Google Maps).**



**Figure 27: View of the south-facing wall of 45 Denman Street, a property nearby the proposed facility. Only two small south-facing windows are in evidence, each of which looks directly into the side of the adjacent dwelling, with very minimal setback from the side boundary. (Source: Google Maps).**



**Figure 28: View of the south-facing wall of 46 Denman Street, a property nearby the proposed facility. Several small south-facing windows are in evidence. Given the dwelling is built in close proximity to the property boundary, views are largely dominated by the side of the adjacent dwelling. (Source: Google Maps).**



**Figure 29: View of the south-facing façade of 40 Denman Street. Only two small windows are in evidence. The property has only a narrow side setback, with the majority of outdoor recreation space being aspected west, across Ken Tubman Drive and the rural zoning beyond. (Source: Google maps)**



**Figure 30: View of the southern-most dwelling on 6 Little Hunter Street and the only one with a façade facing the proposed facility. There is a small balcony area facing the proposed facility, but the majority of it, including sliding doors and other windows, is clearly aspected to take in views to the east, and not south towards the proposed facility. This, and the others on the same property, are the only two storey residences in the small residential pocket north of the proposed facility.**



**Figure 31: View of the southern-facing façade of 41 Denman Street. There are only three small windows in evidence facing the proposed facility and the dwelling is built on the boundary with no side yard. The outdoor area of the property facing the proposed facility is dominated by a carport, hot water units and pots and plants..**

The rationale for using a freestanding structure is to ensure effective line-of-site coverage within the target area given the absence of existing tall structures or buildings suitable for this installation. Additionally, the facility's design incorporates several key elements aimed at reducing visual impact while maintaining the required functionality. These design considerations include:

- The choice of a monopole structure, which has a slimline appearance not dissimilar to other vertical infrastructure within urban environments, and especially the subject location, including power poles, antennas, lightning conductors, lighting towers, and the like. This is a much less conspicuous design from some alternative structures used for telecommunications facilities, such as lattice towers, which can have a wider/ bulkier visual appearance, and therefore often a greater visual impact.
- The proposed colour scheme, being non-reflective unpainted concrete for the monopole, factory light grey for the antennas, and unpainted steel headframe and mounts. These factory, or unpainted, finishes are widely accepted as the most inconspicuous when viewed against the majority of sky colours.
- Given the immediately area surrounding the proposed location is a combination of grass and vegetation, it is proposed to paint the outdoor equipment cabinet, elevated platform, compound fence, and other ground level equipment, in a 'Colorbond Pale Eucalypt Green'

colour. It is considered that this will be the most suitable colour to most blend in with the local environment.

The proposed site location on the periphery of the urban area ensures that it is a reasonable distance from the main residential areas, and locally significant parks. Additionally, given the number of locally significant heritage places, and the overall heritage overlay affecting mainly the areas to the north and east, it is considered that unreasonable visual impact upon that character has been avoided by the chosen location.

## 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. The radio waves to which the general public is exposed from telecommunications are not hazardous to human health.*

### **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 **1.45%** of the Australian maximum standard.

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

CPS Technology & Infrastructure, on behalf of the Indara Group, is seeking development consent to install a new telecommunications facility at 22-30 St Andrews Street, Maitland NSW 2320. The new facility is proposed to improve mobile services in the Maitland 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 a visual impact that has been minimised as much as possible.

The development represents a significant public benefit for the business community in particular, as well as for surrounding residents. Accordingly, it is requested that development consent be granted to undertake this important project.

# Appendix 1: Certificate of Title

## Appendix 2: Proposal Plans

# Appendix 3: ARPANSA EME Report

## Appendix 4: AHIMS Basic Searches

# Appendix 5: Owner's Consent