

# Statement of Environmental Effects for Maitland City Council



**Proposed Telstra Mobile Telecommunications Base Station At:**

**32 Kiah Road Gillieston Heights NSW 2321 (Lot 181 / DP 1282386)**

## Document Control Record

<b>Document Description</b>	SEE: Proposed Telstra Mobile Telecommunications Base Station at 32 Kiah Road Gillieston Heights (Lot 181 / DP 1282386)		
<b>Site No.</b>	<a href="#">NA13113.01</a>	<b>Site Name</b>	<u>Gillieston Heights</u>

	Name	Signed	Date
<b>prepared by</b>	Blake Hender	<i>Blake Hender</i>	06/06/23
<b>File Location</b>	\\servicestream.local\dfs\MC3\Telstra\_Sites\Gillieston Heights Unselected - xxxx - xxxxx\2021-12 NA13113.01 New Macro Amplitel\01 SAED\06 Planning\DA		
<b>Document Status</b>	Draft		

Prepared for	Prepared by:
	Service Stream – Network Construction Contact: Blake Hender Level 7, 25 Smith Street Parramatta 2150 Ph: 0456745624 <a href="http://www.servicestream.com.au">www.servicestream.com.au</a>

*This report has been prepared as a supporting document to the Development Application. The report relies upon data, surveys, measurements and results taken at or under particular times and conditions specified herein. Any findings and conclusions or recommendations only apply to the aforementioned circumstances. Service Stream does not accept any responsibility for the use of this report by any parties other than Shaulhaven City Council without its prior written permission.*

## Contents

<b>1 Introduction</b>	<b>4</b>
<b>1.1 Executive Summary</b>	<b>4</b>
<b>1.2 Purpose of the Development Application</b>	<b>4</b>
<b>2 The Proposed Facility and Background</b>	<b>5</b>
<b>2.1 Description of the Proposal</b>	<b>5</b>
<b>2.2 Construction of the Facility</b>	<b>6</b>
<b>2.3 Need for proposal</b>	<b>6</b>
<b>2.4 Consequences for not proceeding</b>	<b>6</b>
<b>3 Site Selection and Justification</b>	<b>7</b>
<b>3.1 Process of Site Selection</b>	<b>7</b>
<b>3.2 Site and Surrounds</b>	<b>9</b>
<b>4. Environmental Assessment</b>	<b>12</b>
<b>4.1 Commonwealth Legislation</b>	<b>12</b>
4.1.1 Telecommunications Act 1997	12
4.1.2 Telecommunications Code of Practice 2018	12
4.1.3 Deployment Code	12
<b>4.2 State Legislation</b>	<b>12</b>
4.2.2 Environmental Planning Regime	13
4.2.3 NSW Telecommunications Facilities Guideline including Broadband 2010	13
<b>Site Specific Legislation</b>	<b>17</b>
4.2.4 Civil Aviation Safety Regulations 1998	17
4.2.5 Local Environmental Plan (LEP)	17
<b>5. Environmental Impact Assessment</b>	<b>18</b>
<b>5.1 Visual Impact</b>	<b>18</b>
5.1.1 Siting and Location	18

5.1.2 Screening	21
5.2 Socio – Economic Considerations	22
5.3 Flora and Fauna	23
5.4 Heritage and Cultural Values	23
5.4.1 Indigenous Heritage	23
5.4.2 Non-indigenous Heritage	23
5.5 Traffic and Access – Parking and public transport	23
5.6 Soil Erosion and Landscape Provision	24
5.7 Bushfire Prone Land	24
5.8 Utility Services	26
5.9 Noise and Vibration	26
5.10 Health and Safety	26
5.11 Other Impacts During Construction	27
5.11.1 Air Quality	27
5.11.2 Waste Minimisation and Management	27
5.12 Cumulative Environmental Effects	27
<b>6 Conclusion</b>	<b>27</b>

---

## 1 Introduction

### 1.1 Executive Summary

This Statement of Environmental Effects (SEE) has been prepared by Service Stream on behalf of Amplitel, part of the Telstra group. The proposed site is located at 32 Kiah Road Gillieston Heights NSW 2321 ('the facility'). The proposed development will enable Telstra as a licensed carrier to provide adequate coverage to their customers in the locality.

The Gillieston heights area seen a significant increase in residential development in recent years on land within the Gillieston Heights Urban Release Area. The increase in the number of people working and living in the area has highlighted deficiencies of the exiting Telstra mobile and data coverage in the Gillieston Heights precinct.

Telstra regularly tests the efficiency of its existing networks and has identified severe shortcomings in Gillieston. The shortcomings are worsened by the increasing demand for mobile network services and data capacity.

Amplitel propose to construct a new monopole telecommunication facility to host Telstra equipment at 32 Kiah Road. The new facility will deliver improved coverage and capacity to Telstra customers living and working in the Gillieston area.

In order to meet radio frequency objectives at this location, the base station will require a 40m monopole with nine panel antennas. Radio Equipment will be housed in a new ground level equipment shelter located in a secure compound.

This Development Application has been prepared in accordance with relevant statutory and regulatory requirements. Potential impacts associated with this development are expected to be minimal due to the small footprint and minimal disturbance of the area caused by the facility.

In this instance, the socio-economic benefits to the local community outweigh the perceived impact of such development and include:

- Providing good network coverage and capacity, including in-building coverage, to the community.
- Meeting the community's increasing demand for quality and reliable mobile phone service.
- Providing infrastructure to meet the community's social, business and educational needs.
- Improving the reliability of Telstra's incoming and outgoing services to Emergency services organizations and road users to assist in the event of an emergency.
- Increasing the level of competition in the Telecommunications, resulting in competitive prices, economic efficiency and increased consumer choice.

### 1.2 Purpose of the Development Application

This SEE accompanies a Development Application (DA) for the installation of a mobile phone base station ('the facility').

The proposed base station will improve coverage and capacity to the local community and home businesses in the area who require mobile and wireless broadband services.

The facility will bring the poor mobile services in Gillieston Heights up to date with the majority of urban areas in the state, where reliable mobile coverage has become a basic expectation. In turn this will enable Telstra to continue to enhance and expand its mobile services to customers in the area.

## 2 The Proposed Facility and Background

### 2.1 Description of the Proposal

Approval is sought for the use and development of a “telecommunications facility” as defined by the Act, comprising a 40 metre monopole at 23 Kiah Road Gillieston Heights).

Equipment for the new facility would be housed in small footprint equipment shelter coloured pale eucalypt.

The proposed design represents the best solution available to Telstra, incorporating the minimum height necessary to achieve the coverage objectives, and the most sympathetic design to reduce visual impact. An extensive design process has been undertaken to ensure that the height of the proposed facility is the minimum required to ensure the network coverage objectives are achieved. A detailed description of the components of the facility are as follows (also see attached design drawings in **Appendix A**):

#### Installation details

This application seeks a development approval for:

- The installation of a 40m Amplitel Monopole;
- The installation of a triangular headframe onto the proposed monopole bringing the total height of the monopole to including headframe and antennas to 43.6m; confirm OLS lighting
- The installation of nine (9) Telstra panel antennas onto the proposed headframe;
- The installation of a Telstra ground-based equipment shelter;
- The installation of a Telstra compound security fence and double access gate;
- The installation of ancillary equipment including feeder cables, antenna mounts, remote radio units, GPS antenna, electrical works and cable trays.

#### Access

Access to the site will be via a proposed new cross over point off Kiah Road directly opposite the fenced compound area, approximately 180.0m east of Figtree Lane.

This will offer a direct access point for construction vehicles to access the site during construction and the operational phase of the installation.

It is anticipated there will be 4 to 6 maintenance visits each year, having a separate access point will ensure maintenance vehicles will be off the roadway while maintenance activities are undertaken and will allow access to the site in all weather conditions.

#### Power and Fibre

It is proposed to obtain power supply to the site via an underground route from the nearby electricity substation. **Appendix A** shows the site design and layout plan along with the indicative power and fibre route. The exact power source and route will be confirmed during the detailed design stage of the proposal.

#### Colours and Materials

The monopole will be finished in a bare galvanised steel finish, this finish is long lasting and low maintenance. The galvanised steel is non reflective and blends in well with most backdrops from a distance.

The head frame and panel antennas will be finished in a non-reflective grey colour intended to blend in with the monopole and surrounding backdrops.

The equipment shelters will be finished in a dull non reflective grey colour which was selected to blend in with the colour of the existing shopping centre building and the monopole and fencing proposed at the site.

The compound ground surface is comprises a 40mm aggregate covering a water permeable weed matting that is designed to be low maintenance and long lasting.

## 2.2 Construction of the Facility

Construction activities will involve the following:

- Excavation of the monopole foundation;
- Delivery and pouring of concrete on site for the monopole and equipment shelter footings;
- Installation of conduit within trenches, followed by installation of cables within conduits;
- Delivery of the monopole sections to site;
- Separate installation of each monopole section;
- Attachment of antenna mounts, headframe, cables, cable ladder to units and antenna on to the monopole;
- Installation of the earth grid and connection of the base station to the electrical supply and optical fibre cables;
- Installation and commissioning of the base station radio equipment;

The daily construction process will require three to six workers on site and an average of four to six vehicle movements. The general construction timeframe, weather dependent, is approximately 5 weeks.

## 2.3 Need for proposal

The new developments and growing mobile use in Gillieston requires servicing from a new mobile phone base station facility. The proposal is intended to improve mobile network coverage and capacity for the current and future residential developments in the area.

In some areas surrounding the proposed facility users will currently see they have coverage via the “bars” on their phone. However, this relates solely to the ability to make/receive a call. Devices are data hungry; users are now demanding more services, from more locations for indoor and outdoor coverage along with indoor video data streaming. Users also demand the ability to travel without mobile voice and data interruptions. There is such high demand for these services that the provision of telecommunications infrastructure can struggle to meet these demands. If this issue remains unresolved communities will continue experiencing slower download and upload speeds/internet browsing and inability to make/receive calls.

Mobile networks are like roads, when traffic increases, upgrades are needed to relieve congestion. Congestion is relieved by making changes to existing base stations or adding new base stations in areas with coverage issues. Once Telstra identifies the need for improved network performance in an area, the optimisation of existing Telstra facilities throughout the region is explored and undertaken where required. In some cases, this option resolves network deficiencies in an area. However, in this situation the optimisation of surrounding facilities does not achieve a satisfactory outcome for the network. Telstra have undertaken investigations into the use of other Carrier facilities within the area. In this instance existing facilities were too far away to provide coverage objectives for the given area. Alternative candidates are addressed in Section 3.1 of this report.

Telecommunications carriers such as Telstra must continue to provide a level of service that customers have come to expect. This development is therefore required to meet the obligation of licensed telecommunications carriers to provide adequate coverage and service to its customers. The new facility will alleviate service issues in the Gillieston area.

## 2.4 Consequences for not proceeding

The consequences of the proposal not proceeding would be:

- Continued poor coverage in Gillieston that will continue to decline as the population increases;
- Continued poor telecommunications services in general locality, including slow data speeds, poor reception and unexpected call drop outs;
- Lack of improvement in most up-to-date mobile network services including mobile broadband in the area; and
- Reduced competition in the telecommunications industry, potentially resulting in uncompetitive practices, increased costs to consumers and reduced levels of service to customers.

### 3 Site Selection and Justification

As part of Amplitel's site acquisition procedure, a comprehensive site selection process has been undertaken in order to find an appropriate location for the new facility in Gillieston. The specific constraints of this project, including the topography, built environment and the coverage target area resulted in limited site options.

#### 3.1 Process of Site Selection

Site selection occurred on the basis of the following:

- The site is appropriately located and sited to minimise visual impact on the immediate and surrounding area;
- The site will achieve the required coverage objectives for the area;
- The proposal operates within the regulatory framework of Commonwealth, State and Local Government;
- The facility operates within all current and relevant standards and is regulated by the Australian Communications and Media Authority.

As Planning for a new telecommunications facility is a complex process, site selection is also based on a number of key issues including:

- Radiofrequency coverage;
- Low-impact and co-location opportunities;
- Availability of suitable sites;
- Planning, environmental and heritage considerations;
- Engineering criteria; and,
- Construction considerations.

A number of alternative sites were examined within the search area with regard to each site's ability to meet the coverage objectives and site considerations listed above. Following extensive scoping, the subject site was selected as it successfully met key objective criteria. Figure 1 highlights alternate sites considered. The main reasons the alternate sites were not chosen is detailed in Table 1 below.





**Figure 1 - All potential site candidates, including the successful candidate shown as 'Prime Candidate**

Carriers seek to avoid residential areas and sensitive land uses where it is possible to do so, although this must be weighed against build implications and coverage feasibility provisions. In this case, .

Table 1 lists the considered candidates and the reason the sites were discounted.

Table 1 – Site Selection Candidates	
Site	Opportunities and Constraints
<b>Candidate A: Monopole – Cartwright Street, Gillieston Heights 2321 (-32.75842, 151.52420)</b> Zone: RE 1 Recreation	Candidate A proposed 45.0m monopole at the Roy Jordan Sports complex. Maitland City Council was not interested in the proposal.
Candidate B: 333 Cessnock Rd, Gillieston Heights NSW 2321 (-32.763155 151.528809) Zone: R1 - Residential	Candidate B was discounted as candidate as the property owners were not interested in entering into an agreement.
Candidate C: 412 Cressnock Road, Gillieston Heights 2321 ( -32.767951 151.526491) Zone: B4 – R1 Residential	Candidate C was discounted as candidate as the property owners were not interested in entering into an agreement.
Candidate D: 258 Cressnock Road, Gillieston Heights NSW 2321 (-32.754764, 151.533769) Zone: RU2 Rural Living	Candidate D was discounted as candidate as the property owners were not interested in entering into an agreement.

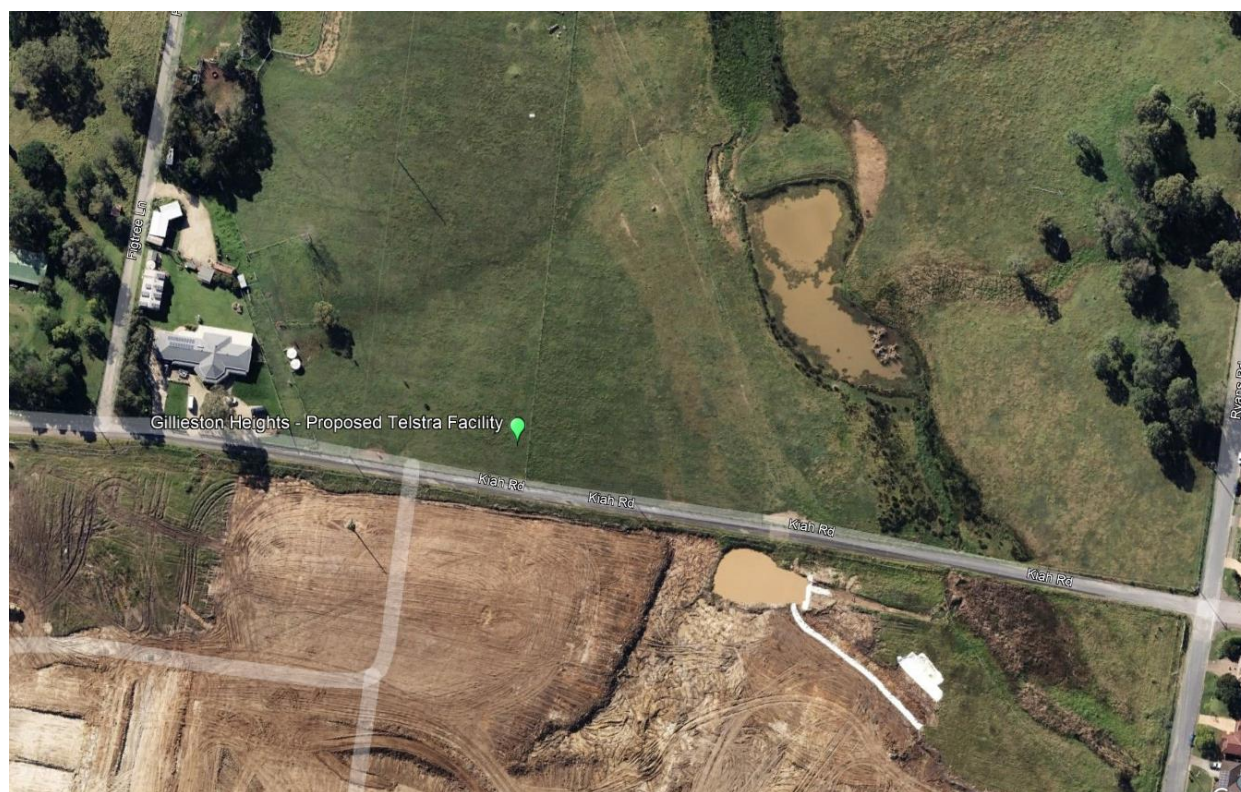
<p>Proposed Candidate: 32 Kiah Str Gillieston Heights NSW 2321 ( -32.756297 151.526578) Zone: R1 Residential</p>	<p>Proposed candidate- meets Telstra coverage objectives</p>
--	--

Co-Location Opportunities

During the site selection process, opportunities for co-location of Telstra equipment were considered. The closest existing telecommunications facility is 1.5km north- east of the proposed maitland Telstra facility. This existing location at 18 Gillieston Road Maitland is too far away from the target coverage area to meet Telstra’s coverage requirements for the area.

**3.2 Site and Surrounds**

The Mobile Phone Base Station is proposed to be located at 32 Kiah Road lot 181 in DP 1282386 just north of the Gillieston Valley State development.



**Figure 2 – Proposed Location of subject site at 32 Kiah Road**

The site is zoned RU2 Rural Landscape and is a residential property. The proposed telecommunications facility is sufficiently separate from the residential building on the property and will have a separate access off Kiah Road. The construction and operation of the telecommunications facility will not have a negative impact on the property or impact the current and future use of the lot or the rural nature of the area.

The proposed facility is located in such a way that it is not silhouetted on the ridgeline to the west of the site. The proposed site will provide mobile voice and data coverage to the Gilleston area and surrounds and as such it is essential to locate the facility within the suburb. **Figures 3-6** illustrate the context and appearance of the subject site.

The subject site is zoned RU2: Rural Landscape according to the Maitland Local Environmental Plan 2011, this is shown in Figure 3 below.

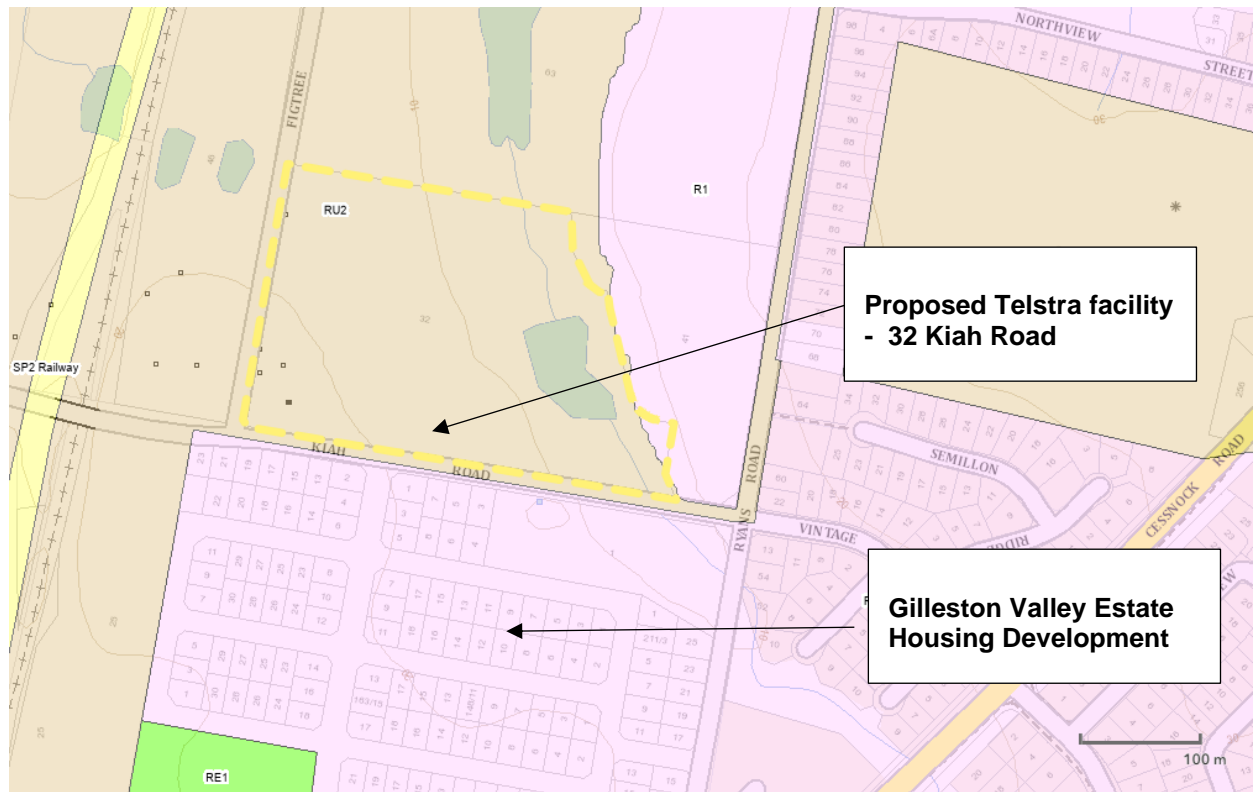


Figure 3 – Proposed Site Zoning

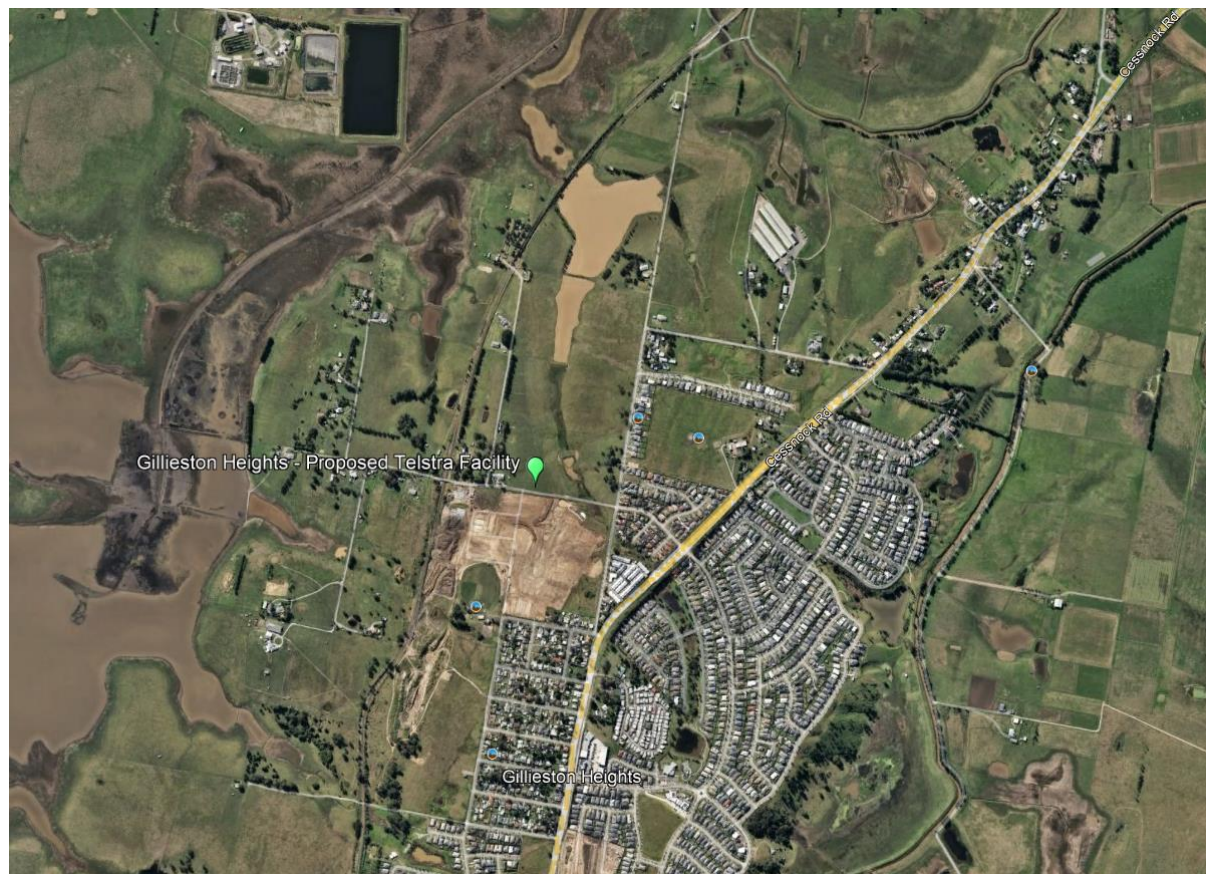


Figure 4 demonstrates the subject site's location in the context of the wider area.

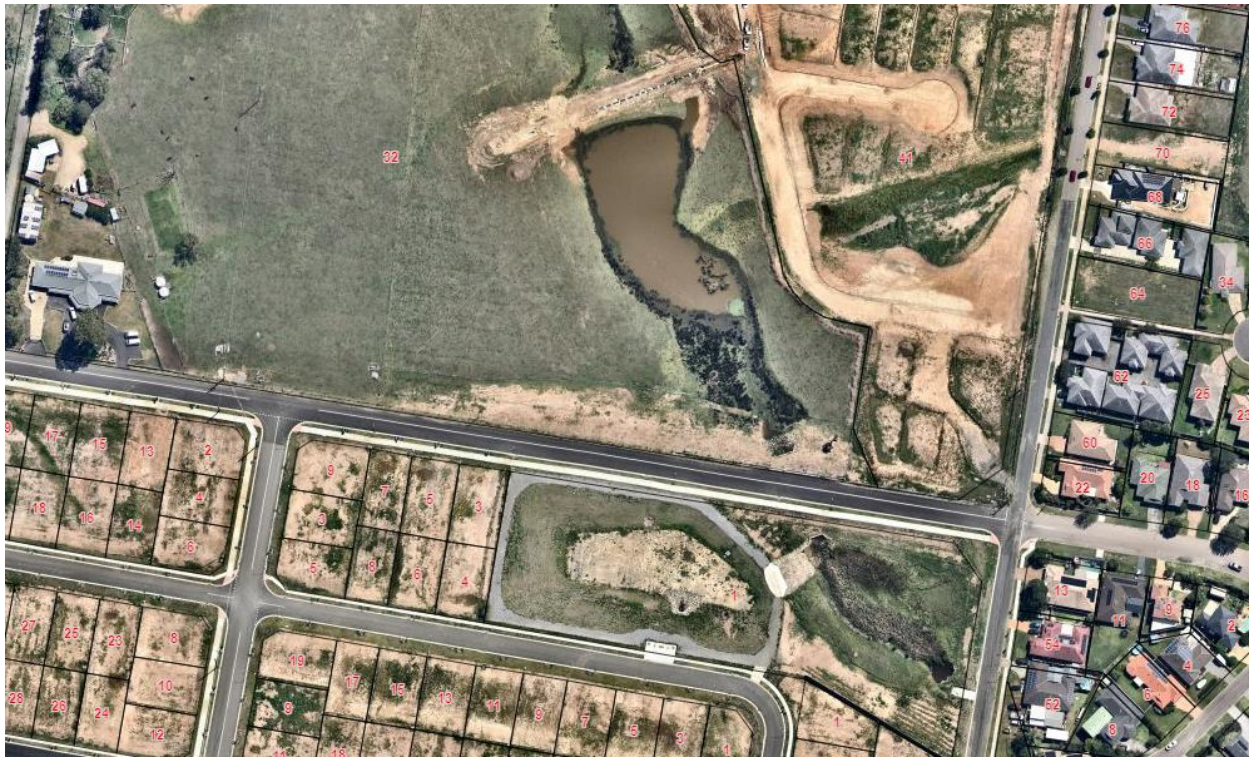


Figure 4: Subject Site in the context of the subject area.



Figure 5 – Closest Residences to proposed facility are located approximately 95m north of site (Source: Google Earth)

## 4. Environmental Assessment

Federal and State legislation and guidelines have been created to guide the development of telecommunications infrastructure in Australia.

### 4.1 Commonwealth Legislation

#### 4.1.1 Telecommunications Act 1997

The *Telecommunications Act 1997* (TA) came into operation in July 1997. The TA sets up a framework for regulating the actions of telecommunications carriers and service providers. Telstra is a licensed carrier under the TA.

Schedule 3 – Carriers’ powers and immunities, of the TA, specifies ‘authorised activities’ that a carrier is empowered to carry out without approval under NSW legislation. These activities include the inspection of land, and the installation and maintenance of certain facilities.

A Carrier’s power to install a facility is contingent upon:

*“the facility being a low-impact facility (as defined by the Telecommunications (Low-Impact Facilities) Determination 2018 (as amended))”.*

In this case, the proposal involves the installation of a new monopole structure, and therefore does not constitute a low-impact facility under the Telecommunications (Low-Impact Facilities) Determination 2018 (as amended). As the proposed facility does not meet the criteria mentioned above, Telstra is therefore not empowered to undertake the proposed works without approval under NSW State legislation and must obtain development consent from the consent authority.

The consent authority in this instance is Maitland City Council.

#### 4.1.2 Telecommunications Code of Practice 2018

Under the *Telecommunications Act 1997* the Government established the Telecommunications Code of Practice 2018, which sets out the conditions under which a carrier must operate. Section 2.11 of the Telecommunications Code of Practice 2018 sets out the design, planning and installation requirements for the carriers to ensure the installation of facilities is in accordance with industry ‘best practice’. This is required to:

*“... minimise the potential degradation of the environment and the visual amenity associated with the facilities.” [Section 2.11(3)]*

Best practice also involves the carrier complying with any relevant industry code or standard that is registered by the Australian Communications Authority (ACA) under Part 6 of the Act.

The siting and design of this proposal has taken place in accordance with Section 3 (Planning and Siting) of the Australian Standard, Siting of Radiocommunications Facilities (AS 3516.2). The proposed site and design was selected after extensive search and analysis of potential candidates and the site was considered to provide an optimal environmental and network solution. The proposed design achieves minimal visual impact while meeting the technical coverage requirements for the site.

On balance it is considered that the proposed site is an appropriate planning solution in accordance with site selection criteria expressed in the Telecommunications Act 1997, and the relevant legislative and regulative requirements of federal, state and local authorities.

#### 4.1.3 Deployment Code

The ‘Mobile Phone Base Station Deployment Code’ Communications Alliance Ltd Industry Code (C564:2020) is a code developed by a working committee with representatives from carriers, various levels of government, an industry group and a community action group. The Code came into effect in December, 2020. The Code is designed to:

- Allow the community and councils to have greater participation in decisions made by carriers when deploying mobile phone base stations; and
- Provide greater transparency to local community and councils when a carrier is planning, selecting sites for, installing and operating Mobile Phone Radiocommunications Infrastructure.

The carriers’ activities are published on the internet based Radio Frequency National Site Archive (RFNSA) as well as information relevant to each site such as EME Reports.

In the site selection and design stages of this proposal, the precautionary approach outlined in the Deployment Code has been considered (see table 2 below). It is noted, no consultation external to that undertaken in the Development Application process is required under the Code.

## 4.2 State Legislation

### 4.2.2 Environmental Planning Regime

The *Environmental Planning and Assessment Act 1979* (the Act) is the primary statute regulating the environmental planning and development in NSW.

Telecommunications facilities are not Designated Development under Schedule 3 of the Environmental Planning & Assessment Regulation 2000, and consequently do not require the preparation of an Environmental Impact Statement.

However under the provisions of Part 4 of the EP&A Act, a DA and accompanying SEE must be lodged with the consent authority.

Section 4.15(1) of the EP&A Act outlines the issues that are to be addressed in this SEE. Section 4.15 is a reference tool designed to assist planning authorities and developers in the preparation and assessment of DAs and specifies exactly which issues must be considered by the consent authority when assessing the application.

Compliance with the requirements of 4.15(1) is discussed in this Chapter and the potential impacts of the proposal on the environment, natural and human is discussed in Chapter 6 of this SEE.

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

The SEPP (Transport and Infrastructure 2021) **State Environmental Planning Policy (Transport and Infrastructure) 2021**, previously referred to as The State Environmental Planning Policy (Infrastructure) 2007 provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. Division 21 of the SEPP applies to telecommunications and other communication facilities, establishing the approval regimes for telecommunications in NSW. Division 21 classifies certain telecommunications development that is permitted without consent, with consent and exempt from local environmental approvals. Reference is made to section 2.143 (1), which states:

*“Development for the purposes of telecommunications facilities, other than development in section 2.141 or development that is exempt development under section 2.20 or 2.144, may be carried out by any person with consent on any land.”*

Telecommunications facility is defined to mean:

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

Section 2.145 allows for greater flexibility in installing new towers and facilities. Under this amendment, new telecommunications towers required to deliver broadband or mobile phone access in certain rural or industrial zones would be allowed as complying development subject to amenity and safety issues such as height limits and separation from residential areas. This proposal does not meet the requirements of exempt or complying development under this SEPP, therefore a DA is required.

Section 2.143 has the effect of overriding any of Council's Local Environmental Plans and zonings where telecommunications facilities are prohibited, and allows for a development application for a telecommunications facility to be assessed on its merits. In this case, the subject land is zoned B4: Mixed Use under the SLEP 2014. Telecommunications facilities in this zone are considered prohibited however Amplitel is utilising section 2.143 of the SEPP in the lodgement of this application.

### 4.2.3 NSW Telecommunications Facilities Guideline including Broadband 2010

The NSW Telecommunications Facilities Guideline including Broadband has been issued by the Director General. Section 2.2 of the Guideline must be taken into consideration. Table below assesses the proposal's consistency with these principles.

*Table 2: Responses to principles 1- 4 Section 2.2 of the NSW Telecommunications Facilities Guideline including Broadband*

Principal	Response
<b>Principle 1: A telecommunications facility is to be designed and sited to minimize visual impact.</b>	

Principal	Response
<p>(a) <i>As far as practical, a telecommunications facility that is to be mounted on an existing building or structure should be integrated with the design and appearance of the building or structure.</i></p> <p>(b) <i>The visual impact of telecommunications facilities should be minimised, visual clutter is to be reduced particularly on tops of buildings, and their physical dimensions (including support mounts) should be sympathetic to the scale and height of the building to which it is to be attached, and sympathetic to adjacent buildings.</i></p> <p>(c) <i>Where telecommunications facilities protrude from a building or structure and are predominantly backgrounded against the sky, the facility and their support mounts should be either the same as the prevailing colour of the host building or structure, or a neutral colour such as grey should be used.</i></p> <p>(d) <i>Ancillary facilities associated with the telecommunications facility should be screened or housed, using the same colour as the prevailing background to reduce its visibility, including the use of existing vegetation where available, or new landscaping where possible and practical.</i></p> <p>(e) <i>A telecommunications facility should be located and designed to respond appropriately to its rural landscape setting.</i></p> <p>(f) <i>A telecommunications facility located on, or adjacent to, a State or local heritage item or within a heritage conservation area, should be sited and designed with external colours, finishes and scale sympathetic to those of the heritage item or conservation area.</i></p> <p>(g) <i>A telecommunications facility should be located so as to minimise or avoid the obstruction of a significant view of a heritage item or place, a landmark, a streetscape, vista to minimise or avoid the obstruction of a significant view of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land.</i></p>	<p>(a) (b) and (c) These principles relate to facilities that are located on an existing building or structure and are not directly applicable to a freestanding monopole such as proposed in this instance.</p> <p>(d) The ancillary facilities will be placed in a small footprint outdoor equipment shelter, finished in a neutral colour or as requested by Council.</p> <p>(e) The facility has been designed and sited to respond to its surrounding landscape context.</p> <p>(f) The proposed site is not subject to any heritage significance of Local, State and Commonwealth concern.</p> <p>(g) Care has been taken to minimise the negative impact of the proposal on surrounding sightlines.</p>
<p>(h) <i>The relevant local government authority must be consulted where the pruning, lopping, or removal of any tree or other vegetation would contravene a Tree Preservation Order applying to the land or where a permit or development consent is required.</i></p> <p>(i) <i>A telecommunications facility that is no longer required is to be removed and the site restored, to a condition that is similar to its condition before the facility was constructed.</i></p> <p>(j) <i>The siting and design of telecommunications facilities should be in accordance with any relevant Industry Design Guides</i></p>	<p>(h) The proposal does not involve the pruning, lopping or removal of any existing trees.</p> <p>(i) N/A</p> <p>(j) The proposal will comply with relevant Industry Design Guides.</p>
<p><b>Principle 2: Telecommunications facilities should be co-located wherever practical.</b></p>	
<p>(a) <i>Telecommunications lines are to be located, as far as practical, underground or within an existing underground conduit or duct.</i></p> <p>(b) <i>Overhead lines, antennas and ancillary Telecommunications facilities should, where practical, be co-located or attached to</i></p>	<p>(a) The fibre and power network connections will be taken from the nearest available points underground to the facility.</p> <p>(b) The current proposal was only selected because co-location opportunities on existing</p>

Principal	Response
<p><i>existing structures such as buildings, public utility structures, poles, towers or other radio communications equipment to minimise the proliferation of telecommunication facilities and unnecessary clutter.</i></p> <p>(c) <i>Towers may be extended for the purposes of co-location.</i></p> <p>(d) <i>The extension of an existing tower must be considered as a practical co-location solution prior to building new towers.</i></p> <p>(e) <i>If a facility is proposed not to be co-located the proponent must demonstrate that co-location is not practicable.</i></p> <p>(f) <i>If the development is for a co-location purpose, then any new telecommunications facility must be designed, installed and operated so that the resultant cumulative levels of radio frequency emissions of the co-located telecommunications facilities are within the maximum human exposure levels set out in the Radiation Protection Standard.</i></p>	<p>structures were too far away to meet the objectives of the proposal.</p> <p>The proposal has been designed to retain the smallest, slimmest and neatest visual profile possible to minimise any visual amenity impacts on the surrounding area while achieving the required coverage.</p> <p>(c) N/A</p> <p>(d) N/A</p> <p>(e) Collocation options were too far away to meet the objectives of this proposal. Refer to <b>section 3</b> of this report for a list of considered candidates.</p> <p>(f) N/A</p>
<p><b>Principle 3: Health Standards for exposure to radio emissions will be met</b></p>	
<p>(a) <i>A telecommunications facility must be designed, installed and operated so that the maximum human exposure levels to radiofrequency emissions comply with Radiation Protection Standard.</i></p> <p>(b) <i>An EME Environmental Report shall be produced by the proponent of development to which the Mobile Phone Network Code applies in terms of design, siting of facilities and notifications. The Report is to be in the format required by the Australian Radiation Protection Nuclear Safety Agency (ARPANSA). It is to show the predicted levels of electromagnetic energy surrounding the development comply with the safety limits imposed by the Australian Communications and Media Authority and the Electromagnetic Radiation Standard, and demonstrate compliance with the Mobile Phone Networks Code.</i></p>	<p>(a) The proposed facility will comply with the ARPANSA standard in relation to human exposure to EME. An EME report has been completed and is found in <b>Appendix B</b>. This report demonstrates compliance with the ARPANSA standard for the operation of a radio communications facility in Australia.</p> <p>(b) The proposal is for a mobile phone network and is subject to the requirements of the Industry Code C564:2020 Mobile Phone Base Station Deployment with regard to the design, siting and notification. An EME report has been completed as per the required ARPANSA format and is found in <b>Appendix B</b>.</p>
<p><b>Principle 4: Minimise disturbance and risk, and maximise compliance</b></p>	
<p>(a) <i>The siting and height of any telecommunications facility must comply with any relevant site and height requirements specified by the Civil Aviation Regulations 1988 and the Airports (Protection of Airspace) Regulations 1996 of the Commonwealth. It must not penetrate any obstacle limitation surface shown on any relevant Obstacle Limitation Surface Plan that has been prepared by the operator of an aerodrome or airport operating within 30 kilometres of the proposed development and reported to the Civil Aviation Safety Authority Australia.</i></p> <p>(b) <i>The telecommunications facility is not to cause adverse radio frequency interference with any airport, port or Commonwealth</i></p>	<p>(a) The provisions of the Civil Aviation Regulations 1988 and the Airports (Protection of Airspace) Regulations 1996 were considered during the design and siting process.</p> <p>The site is not expected to be an aviation hazard and is not identified on any relevant OLS maps.</p> <p>(b) Telstra will operate the radio facility within its own frequency spectrums and the facility will not cause any interference with other networks. All operating antennas will use the frequencies assigned to Telstra.</p>



Principal	Response
<p><i>Defence navigational or communications equipment, including the Morundah Communication Facility, Riverina.</i></p> <p><i>(c) The telecommunications facility and ancillary facilities are to be carried out in accordance with the applicable specifications (if any) of the manufacturers for the installation of such equipment.</i></p> <p><i>(d) The telecommunications facility is not to affect the structural integrity of any building on which it is erected.</i></p> <p><i>(e) The telecommunications facility is to be erected wholly within the boundaries of a property where the landowner has agreed to the facility being located on the land.</i></p> <p><i>(f) The carrying out of construction of the telecommunications facilities must be in accordance with all relevant regulations of the Blue Book – ‘Managing Urban Storm water: Soils and Construction’ (Landcom 2004), or its replacement.</i></p> <p><i>(g) Obstruction or risks to pedestrians or vehicles caused by the location of the facility, construction activity or materials used in construction are to be mitigated.</i></p> <p><i>(h) Where practical, work is to be carried out during times that cause minimum disruption to adjoining properties and public access. Hours of work are to be restricted to between 7.00am and 6.00pm, Mondays to Saturdays, with no work on Sundays and public holidays.</i></p> <p><i>(i) Traffic control measures are to be taken during construction in accordance with Australian Standard AS1742.3-2002 Manual of uniform traffic control devices – Traffic control devices on roads.</i></p> <p><i>(j) Open trenching should be guarded in accordance with Australian Standard Section 93.080 – Road Engineering AS1165 – 1982 –Traffic hazard warning lamps.</i></p> <p><i>(k) Disturbance to flora and fauna should be minimised and the land is to be restored to a condition that is similar to its condition before the work was carried out.</i></p> <p><i>(l) The likelihood of impacting on threatened species and communities should be identified in consultation with relevant state or local government authorities and disturbance to identified species and communities avoided wherever possible.</i></p> <p><i>(m) The likelihood of harming an Aboriginal Place and / or Aboriginal object should be identified. Approvals from the Office of Environment &amp; Heritage (OEH) must be obtained where impact is likely, or Aboriginal objects are found.</i></p> <p><i>(n) Street furniture, paving or other existing facilities removed or damaged during construction should be reinstated (at the telecommunications carrier’s expense) to at least the same condition as that which existed prior to the telecommunications facility being installed.</i></p>	<p>(c) The facility will be established and operated within the applicable specifications (if any) of the manufacturers.</p> <p>(d) N/A</p> <p>(e) The proposed facility will be erected wholly within the boundaries of the property.</p> <p>(f) The activities associated with construction and installation will be conducted in accordance with sediment controls, erosion controls, stormwater controls and other controls outlined in the Blue Book.</p> <p>(g) The majority of construction activities will take place within the lot. There will be no risks to traffic or pedestrians during the operation of the proposal. Traffic management shall be employed during construction where necessary and any necessary permits from Council will be obtained.</p> <p>(h) All work associated with the development and installation of the facility will be between 7.00am and 6.00pm, Mondays to Saturdays, with no work on Sundays and public holidays and/or as conditioned in the consent by Council.</p> <p>(i) Where required, a Traffic Management Plan will be developed and implemented during construction and installation activities. The procedures and mitigation measures in the plan will ensure compliance with Australian Standard AS1742.3-2002 Manual of uniform traffic control devices – Traffic control devices on roads (refer <b>Section 5.5</b>)</p> <p>(j) Any required trenching associated with the proposal will be covered or filled so that it is not open overnight.</p> <p>(k) The site is not identified as having any terrestrial biodiversity significance. All land surrounding the proposal will be restored to a condition that is similar to its condition before the work was carried out.</p> <p>(l) No threatened species are identified as occurring in the area and any disturbance to locally occurring fauna is expected to be minimal as the works proposed are of a small scale (<b>Appendix E</b>).</p> <p>(m) A search of the AHIMS has been completed and there are no known items or places of archaeological significance on the site or in the immediate surrounding area (<b>Appendix G</b>). The area has not been highly disturbed. Notwithstanding, if any suspicious items or objects are found during excavation, work will cease immediately and the OEH will be consulted and works will not re-commence until OEH have granted their consent.</p>

Principal	Response
	(n) 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.

## Site Specific Legislation

### 4.2.4 Civil Aviation Safety Regulations 1998

Under the Civil Aviation Safety Regulations (CASR) 1998 – 139.355 an aerodrome operator is required to have established an Obstacle Limitation Surface (OLS), CASR – 139.350 requires an aerodrome operator to notify the Civil Aviation Safety Authority (CASA) of any obstacles that affects the airspace within the vicinity of the aerodrome.

Any proposed facility should not penetrate any relevant Obstacle Limitations Surface Plan that has been prepared by the operator of an aerodrome or airport operating within 30 kilometres of the proposed development and reported to the Civil Aviation Safety Authority.

The site has not been identified as penetrating any relevant Obstacle Limitation Surface Maps.

### 4.2.5 Local Environmental Plan (LEP)

The proposed location is subject to land use controls under the Maitland Local Environmental Plan 2011 (SLEP 2014). Under the MLEP 2011 the proposed site is zoned RU2 – Rural Landscape.

Table below sets out the objectives of the zone and an assessment of the proposal against these objectives.

Table 2: Assessment of proposal against objectives outlined in MLEP 2011 Land Use Table

Objective	Assessment
To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.	<p>Enhanced access to Telstra mobile and data coverage will support local businesses and will improve connectivity between producers, suppliers and wholesalers and the general public.</p> <p>The facility has been situated to minimise visual impact to the surrounding residential and rural zones and to ensure significant views are not impacted by the proposal.</p>
To maintain the rural landscape character of the land.	The rural nature of the area has been taken into consideration in the design of the facility. The scale and visual impact of the facility has been reduced as much as possible, while still meeting Telstra network requirements in the area.
To provide for a range of compatible land uses, including extensive agriculture.	<p>Enhanced mobile and data coverage in the area supports agricultural businesses through faster and more reliable access to information such as weather forecasts, market trends and communication with customers.</p> <p>The improved Telstra network will not only benefit Gillieston, it will be benefit residents, businesses and visitors in the wider Maitland area.</p>

<p>To provide for a range of non-agricultural uses where infrastructure is adequate to support the uses and conflict between different land uses is minimised.</p>	<p>Mobile telecommunications have become an essential part of everyday life and access to quality mobile and data coverage is expected by residents across Australia in residential and rural areas.</p> <p>The recent increase in residential development in the Gillieston area has highlighted the inadequacies of the Telstra network in the vicinity and the need for a new Telstra mobile base station to ensure residents and businesses have access to reliable Telstra coverage.</p>
--	---

## 5. Environmental Impact Assessment

Section 4.15 (1) of the EP&A Act requires that the following issues be considered when assessing the potential impact of a proposal:

- Visual Impact
- Social and economic impacts
- Flora and Fauna
- Heritage and Cultural Values
- Traffic Generation
- Soil Erosion and Landscaping provision
- Fire Prone Land
- Utility Services
- Noise
- Health and Safety
- Electrical Interference

### 5.1 Visual Impact

#### 5.1.1 Siting and Location

The site selection process (Section 3 above) identified several factors that limited the potential locations for this type of development.

The positioning of the proposed monopole on the subject property is considered appropriate. Critical to the site selection and decision-making process was the potential impact of the structure on the visual landscape. The subject land parcel and proposed site location is in a position that benefits from the existing characteristics of the locality.

The position of the site is on the geographical high point in the area and is the optimum location to provide the highest quality coverage to the Gillieston residential area including recent development area to the south.

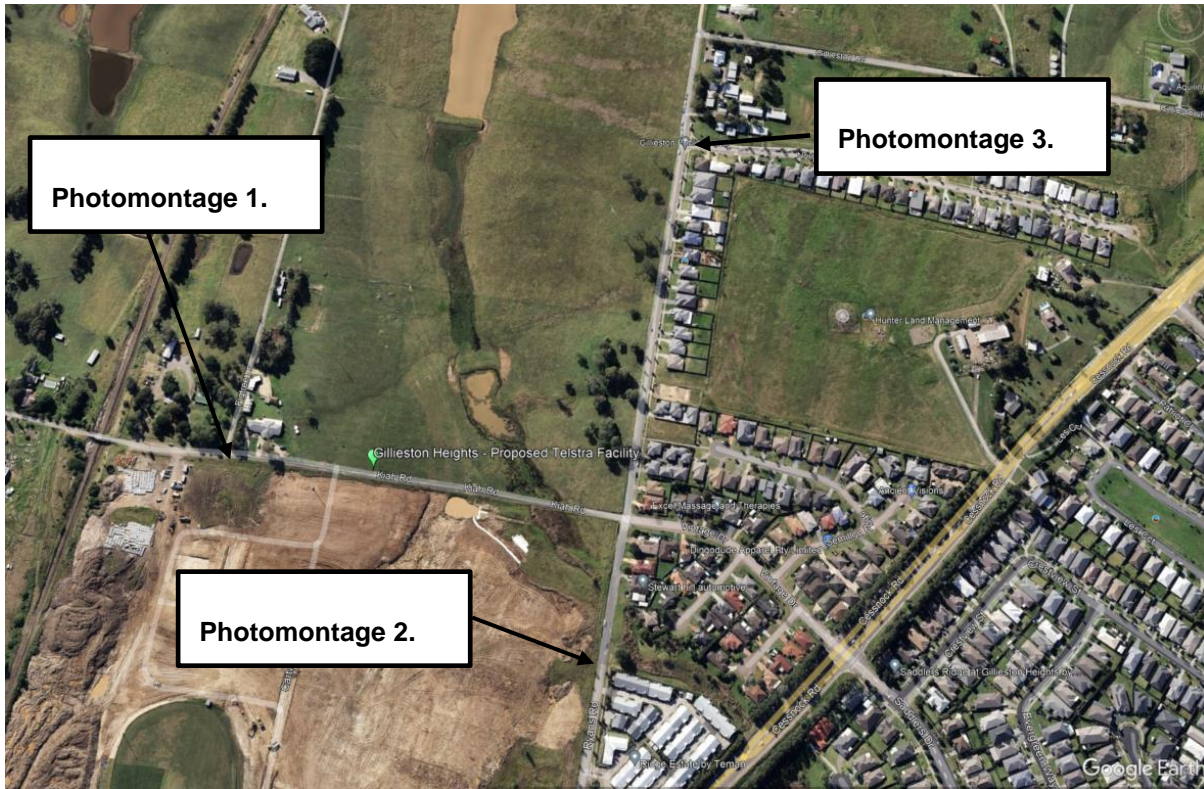
The nature of telecommunications networks requires infrastructure to be located where there is a demand for coverage in this instance it is necessary to locate the infrastructure adjacent a residential area.

Amplitel and Telstra have taken all possible measures to limit the scale and visual presence of the site while still meeting the coverage requirements of the area.

The site has been situated in a rural zone adjacent existing electrical infrastructure along Kiah Road and the ridgeline to the west of the site.

Amptel and Telstra acknowledge that the site cannot be totally hidden and will have a visual presence in the environment from some perspectives close by. To address the visual presence of the proposed facility, **Figure 6** illustrates numerous assessment points taken to assess the site's presence and visibility against its visual fit within the context of the surrounding settings:

**Figure 6: Aerial view showing locations used for visual impact assessment.**



**Figure 7: Photomontage of the proposed site looking east from Figtree Lane**



**Figure 8: Photomontage of the proposed site viewed from the corner of Liberation Avenue and Ryans Road**



**Figure 9: Photomontage of the proposed site viewed from the corner of Ryans Road and Northveiw Street.**



The proposed telecommunications facility will be the tallest structure in the area and will have a significant visual presence in the immediate area surrounding the site demonstrated in figure 7. It is difficult to minimise the visual presence of the proposal viewed from up-close. Telecommunications infrastructure has become a part of everyday life and is found across Australia in all landscapes and land uses where there is a concentration of people who need access to telecommunications networks.

The visual presence of the site rapidly reduces with distance, viewed from approximately 300.0m away in figure 8 and 500.0m in figure 9 the facility blends in with existing street lighting and electrical infrastructure.

### 5.1.2 Screening

Mobile base stations are commonplace in today's urban landscape – thousands of mobile telecommunications facilities are in operation across Australia, over a variety of land uses and environments.

It is acknowledged the site will be visually prominent in the surrounding landscape

From the discussion outlined above in 5.1, a number of conclusions have been made apparent concerning the proposed facility:

- The proposed facility has been designed and will be finished to have minimal visual impact on surrounding environment without undermining its viability to meet the coverage and capacity requirements of Gillieston;
- Recessive colouring and a slimline monopole design lessens the potential visual impact;
- The nature of the technology determines that telecommunications facilities require direct line of sight to the areas that they are serving, subsequently the antennas need to be visible to these areas in order that they provide effective service to the user;
- Telecommunication facilities are an accepted part of the peripheral landscape and an expected component within the built environment. Much like essential services such as power lines and street lights, telecommunications facilities are now part of the expected streetscape in built areas. With the expectation of

having mobile phone coverage, there is an acceptance that facilities that provide the coverage will be visible. Over time these facilities become part of the background and are no longer noticed.

## 5.2 Socio – Economic Considerations

As new technologies arise and the demand for this service grows exponentially, so does the demand for improved telecommunications infrastructure and reliable services.

According to the Australian Communication and Media Authority (ACMA), the number of mobile service (voice and data) subscriptions in Australia exceeds the Australian population, with 35.9 million voice and data service subscriptions current as at June 2019 – and between June 2017 and June 2018, the number of subscriptions increased by 2.8%, against a reduction of fixed line telephone subscriptions of -4.9% over the same period. These Australian Government statistics demonstrate that consumers have an increasing expectation for reliable, fast and cost-effective mobile phone network services across all areas of Australia. <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19>

Usage of mobile services continues to widen as new technologies become progressively more affordable and accessible. The previous decade saw a significant rise in use of the wireless network for smart devices. Australia has one of the highest penetrations of “smartphone” usage in the world, with reliance on this technology increasing – the abovementioned ACMA study estimates 83% of Australian adults were using smartphones at June 2019, against 79% in May 2018. The amount of data downloaded via mobile phone is greatly increasing on a monthly basis. According to the Australian Bureau of Statistics, the volume of data downloaded via mobile handsets for the three months ended 30 June 2019 was 1,811,362 Terabytes. This was a 34.5% increase in data downloads via mobile handsets when compared with the three months ended 30 December 2017 and a 66% increase in downloads compared to the three months ended 30 June 2017.

<https://www.accc.gov.au/regulated-infrastructure/communications/monitoring-reporting/internet-activity-record-keeping-rule-rkr/june-2019-report>

The mobile network also supports a variety of other wireless capable devices, such as tablets and laptop computers, which have also been designed for increased mobility and accessibility. This has also increased the imperative to eliminate mobile ‘blackspots’ – that is, areas with compromised service.

As indicated throughout this report, the Tasmanian State Government has invested \$3.4 million into the Mobile Blackspot Program to deliver improved mobile coverage along sections the Tasman Highway as part of the State Government’s economic strategy initiative to boost mobile coverage in the region for projected tourism and economic growth also resulting in increased provisions for employment within the state. This projected increase is also directly proportional to the significant demand for improved telecommunications services. Additionally, as noted in Section 3.3 of the report, there are no Optus facilities in the area and there is a significant need for the provision mobile network services. As demand for mobile services continues to increase, exacerbated by the trends described above (and considering the continued increases in tourist numbers each year), there is strong justification for a new facility in the area.

The provision of maintaining communications services in the area will have many beneficial impacts on the people who live, work, visit and travel through the area. Better internet access will improve education, access to media and information, and increase efficiency in the workplace. Businesses will also benefit due to the proposed facility comprising a range of telecommunications network providers. The facility will have significant benefits for the local communities and the public interest would be served by the approval of the proposal due to the benefits of enhanced mobile telephone coverage and the provision of the network in the area. The facility will have benefits for visitors, local residents and businesses in the district. Benefits of telecommunications include:

- Enabling emergency calls and Emergency Services such as the fire department use phones and technology to conduct on-site assessments and send them instantly back to base;
- Medical Benefits – Using the various technology services, vital medical monitoring data can be sent to hospital-based specialists by local doctors or emergency services personnel in the field. This allows for immediate and continuous medical assessments, which were not possible previously;
- Educational benefits such as curriculum sharing, data-sharing, easier links to outside experts via web links, virtual classrooms etc. This is particularly useful at a tertiary education level, however, is now being practised at all educational levels in practice of social distancing to stop the spread of the global pandemic – COVID-19;
- Telecommuting presents another option for workers – with high quality network coverage, workers may be able to work from home instead of travelling to work. This trend is heavily reliant upon wireless communication and is anticipated to continue increasing in popularity. Availability and access to reliable mobile network has been evident during the global pandemic, most employees are working from home;

- Enabling business to conduct correspondence online which saves time, resources and money. Improved telecommunications provisions effectively remove physical distance and travel time as barriers to business; and
- Keeping constant communication and receiving the latest health information available using digital devices.

Lastly, as there are no telecommunications facilities providing service to the intended area making this area isolated in terms of connectivity. A strong mobile network significantly improves public safety – it provides emergency services with a vital, and reliable, method of communication in an emergency situation or natural disaster, as well as for more general public safety in the area.

### 5.3 Flora and Fauna

The proposed development will not result in the removal of any trees or the disturbance of existing vegetation. The general area is already significantly disturbed for suburban and other uses, the overall impact of the proposal on flora and fauna in the locality is considered negligible.

### 5.4 Heritage and Cultural Values

#### 5.4.1 Indigenous Heritage

An AHIMS search was conducted and the site has not been identified as a site containing items or as an area of Aboriginal Significance (please refers to **Appendix C**).

The site forms part of land that has been previously cleared and disturbed during past land use activities. As such, it is unlikely that the proposed works would encounter any items of indigenous heritage.

Notwithstanding, if any items of indigenous heritage are encountered, works would cease and the NSW Office of Environment and Heritage and the National Parks and Wildlife Service will be contacted.

#### 5.4.2 Non-indigenous Heritage

In order to determine any possible natural or cultural values of state or national significance associated with the site, a heritage and conservation register check is undertaken (including listings on the Register of the National Estate, State Heritage Register, Regional and Local Environmental Plans and database of the EPBC Act 1999).

A search of the following databases was undertaken to identify any items of non-indigenous heritage significance or conservation areas within the site or in the immediate vicinity of the site:

- Australian Heritage Database of the Australian Heritage Council;
- Australian Heritage Places Inventory;
- State Heritage Inventory of the NSW Heritage Office; and
- Heritage Items of the SLEP 2014.

Results of all the above heritage searches conclude that the site is not subject to any heritage significance of Local, State and Commonwealth concern. As such, the proposal is not expected to impact upon any items of non-indigenous heritage

### 5.5 Traffic and Access – Parking and public transport

The facility will not adversely affect the safety and efficiency of roads. Access to the site will be via a new road cross over adjacent the site off Kiah Road. A standalone access route to the proposed facility means the site will be accessible for maintenance and inspection during all weather conditions. It will also limit the impact of the proposed facility on the land owner and will ensure the current land use of the property is not impact by the operation of the proposed telecommunications facility.

It is anticipated that the proposed development and ongoing operation would have little impact on the local traffic network, or volumes. The equipment would require maintenance visits approximately 4-6 times per year or as required in the event of an electrical outage or other similar event. Routine maintenance would involve one vehicle per visit and



parking would be available close to the subject site for this purpose. Other maintenance would occur on an as-need basis and would not generate significant traffic movements.

Any resulting impact on the local road system would be considered to be negligible.

## 5.6 Soil Erosion and Landscape Provision

The site is identified as being located under class 5 acid sulphate soils. Any contaminated soils encountered during the proposed works will be managed in accordance with the relevant guidelines. An Acid Sulphate Soil Assessment would be conducted prior to any ground disturbance activities and if necessary an Acid Sulphate Soil Management Plan implemented. Any Acid Sulphate Soils encountered would be suitably dealt with under the Management Plan, if required, during the construction phase.

There are no major surface water bodies in the immediate vicinity of the site.

The nature and scale of the earthworks associated with the construction of the base station are limited to minor grading of the site and footing excavations. Potential impacts related to the erosion of soil from the site compound would be addressed and mitigated with the following soil and water management measures undertaken during construction of the proposed facility:

- Diverting clean water away from the construction areas as necessary;
- Keeping ground disturbing activities to a minimum;
- Implementing appropriate sediment control measures as required, such as the installation of silt/sediment fences and/or sediment traps as necessary; and
- Works not occurring during periods of heavy rainfall.

All sediment and erosion control measures undertaken will be in accordance with the attached Erosion and Sediment Control Report (Appendix D) the relevant requirements of the Blue Book – ‘Managing Urban Storm water: Soils and Construction’ (Landcom 2004), or its replacement.

The proposed site will have a very small surface area that and will not lead to a significant increase of storm water run off the what currently exists at the vacant site. Regular inspections will be undertaken to monitor any changes in the topography / natural flows across the site as specified in Appendix D

## 5.7 Bushfire Prone Land

The proposed site location is within the vegetation category 3 zone of the bush fire overlay. The proposed facility is constructed entirely of non-combustible materials and is considered low risk structure in the event of a bushfire in vicinity. The proposed facility does not increase the fire risk to the adjacent residential properties or any other structure in the area.

The New South Wales Rural Fire Service in their development control practice note 1/11 - Telecommunications Towers in Bush Fire Prone Areas recommends a 10.0m asset protection zone (APZ) for telecommunications facilities

in bush fire prone area. There is extensive existing APZ at the site the exceeds the RFS requirements as such the proposal aligns with the CFS guidelines for telecommunications facilities.

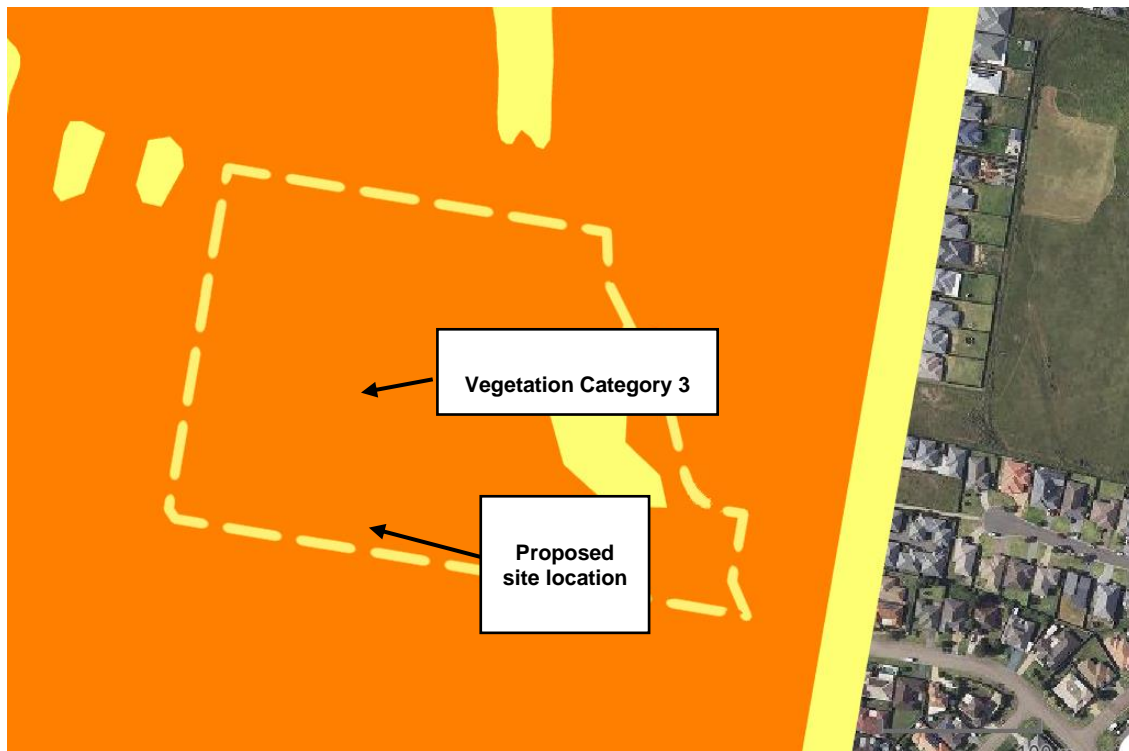


Figure 13 Bushfire Prone Land

## 5.8 Utility Services

Further identification of utilities would be undertaken during the detailed design stage of the proposal, and any impacts assessed and necessary safeguards implemented as required.

The following mitigation measures would be implemented to ameliorate any impacts on existing infrastructure:

- A 'dial-before you dig' search would be undertaken during the detailed design stage;
- Prior to construction, all infrastructure and utilities would be identified;
- If required, prior to construction, relevant utilities and adjacent residents would be notified of any impending disruptions to services.

When operational, the site will be unmanned, and does not require utility services such as telephone, water and sewerage.

All services required for the ongoing operation of the base station are capable of being provided to the facility without impacting on the supply or reliability of these services to any existing consumers in the locality.

## 5.9 Noise and Vibration

Noisy construction activities would be mainly during drilling/excavation of the foundation/footing for the monopole. It is also expected that there would be some noise generation from construction vehicles and machinery.

The only noise generated during its operational stage is that from the air-conditioning unit servicing the equipment cabin. This air-conditioning unit is similar to those used for cooling of residential premises and will comply with the relevant noise emission guidelines.

It is not expected that construction works would create a noticeable vibration impact on the surrounding area.

## 5.10 Health and Safety

Mobile phone base stations emit electromagnetic energy (EME). The facility will comply with ACMA EME regulatory arrangements in relation to emission of electromagnetic energy (EME), this specifically being the Radiation Protection Series S-1 (Rev. 1) - Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz (2021) known as RPS-1

The report, provided at **Appendix B** of this SEE, concludes that the maximum cumulative EME level at 1.5m above ground level is estimated to be 3.92 % of the ACMA mandated exposure limit.

The EME predictions in the Environmental EME Report provided are based on the facility operating at maximum power, these facilities are designed to be low powered and rarely operate at maximum power.

This involves:

- base station transmitters operating at maximum power (no automatic power reduction);
- simultaneous telephone calls on all channels; and
- an unobstructed line of sight view to the antennas.

Further to the above, emission levels produced by 4G and 5G transmitters such as that proposed by this proposal are considered to be lower than other common types of transmitters.

Telstra acknowledges that despite this some people are genuinely concerned about the possible health effects of EME.

The World Health Organisation's current advice (updated 21 February 2020) is:

*"Studies to date provide no indication that environmental exposure to RF fields, such as from base stations, increases the risk of cancer or any other disease"*

ARPANSA's position is:

*"Based on current research there are no established health effects that can be attributed to the low RF EME exposure from mobile phone base station antennas."*

Further information on the predicted EME emissions from the proposed base station and 5G technologies can be found in **Appendix B**.

In summary, the EME emissions from the proposal are well within the ARPANSA standards.

## 5.11 Other Impacts During Construction

### 5.11.1 Air Quality

There is potential for dust generation during the excavation of the pole footings.

During construction all construction areas would be sprayed with water during dry and windy weather to suppress airborne dust generation.

The compound site and surrounds would be appropriately restored after the completion of works to ensure no ongoing dust generation.

### 5.11.2 Waste Minimisation and Management

Due to the relatively minor nature of the works, the generation of waste resulting from construction of the proposed facility is expected to be minimal. The majority of the waste generated is expected to be excess soil as a result of construction of foundations for the monopole and establishment of the site compound area.

Excess soil from the earthworks would be utilised on-site in association with landscaping of the facility, with the remainder disposed of at an approved waste disposal facility.

Other waste such as packaging material will be removed from site.

The operation of the facility will be mostly unmanned and will not generate any waste during the operational phase.

## 5.12 Cumulative Environmental Effects

The key perceived and potential environmental impacts for this proposed development have been identified as: health (perceived); visual impact (potential); and impacts during construction of the proposed facility. Each of these aspects has been considered individually and collectively from a cumulative impact perspective.

The strength of RF fields is greatest at its source, and diminishes quickly with distance. Access near base station antennas is restricted where RF signals may exceed international exposure limits. Recent surveys have indicated that RF exposures from base stations and wireless technologies in publicly accessible areas (including schools and hospitals) are normally thousands of times below international standards. (Electromagnetic fields and public health; WHO Fact Sheet No. 304 May 2006)

The proposed base station will operate within and comply with the standard limits set by the ACMA.

The proposed facility is expected to only be fully visible from directly adjacent to it. The majority of views are expected to be screened by vegetation to the west of site and along Isa Road. In addition mobile telecommunications equipment has become commonplace within the urban context and can be considered as essential infrastructure.

Any environmental impacts during construction are expected to be temporary and mitigated through the implementation of appropriate work practices and management measures specified in this SEE. Consequently, the proposed development is not considered to have an appreciable adverse cumulative impact on the environment.

# 6 Conclusion

---

It is considered that the proposed Amplitel facility, hosting Telstra equipment, has been sited in the most appropriate location. The proposed works comprise a 40m telecommunications monopole and associated headframe, antennas and compound area.

The facility has been strategically sited and designed to minimise visibility within the surrounding environment as much as practicable. The visual impact of the development on the surrounding area has been assessed and given the siting and design, the proposal is considered unlikely to cause any significant harm to the visual amenity or scenic value of the area. Although the proposal may be visible at varying degrees depending on the line of site of the viewer, negative impacts on visual amenity are not deemed to be significant.

There is very minimal vegetation removal anticipated and the proposed development will not have a significant impact on the amenity of the area.

## Gillieston Heights

The proposal is considered to be permissible under provisions of the TI SEPP within the RU2: Rural Landscape zoning of the Maitland Local Environment Plan 2011. Furthermore, it is consistent with the requirements of all other relevant planning instruments, legislation and codes relevant to telecommunications development.

This proposal will ensure that mobile telecommunications services in Gillieston are brought to the acceptably high standard residents and businesses have come to expect in metropolitan areas. Additionally, the increasing demand for mobile services and data will be supported.

The proposal is considered to be the most prudent approach to fulfilling Telstra's mobile telecommunications coverage and capacity requirements. The proposed facility is considered appropriate for the below reasons:

- The proposal has been located to result in the least possible cumulative environmental impact;
- The proposal utilises a slimline monopole design that blends into the environment, decreasing adverse visual impact in the area; and
- The proposal although visible to varying degrees, does not result in unacceptable level of visual impact.
- The proposed installation will have minimal impact on the general use of the land. This proposal does not set any development precedent at the subject site and does not result in adverse environmental impact to the Gillieston area. Furthermore, the proposal will not have adverse impacts on runoff or sedimentation given its small footprint;
- The proposal is also considered the most appropriate solution between the competing demands of planning, coverage, design, property, construction and the expectations of stakeholders;
- The proposal will provide good mobile telecommunication service to the Gillieston area, ensuring residents and businesses in the area experience uninterrupted access to what is now considered an essential service. This will in turn enable socio-economic benefits to the community; and
- The facility will comply with all Government health standards outlined by the *ARPANSA*

We respectfully request that Council considers the limited impacts and expected benefits of this proposed facility in assessing this Development Application.

# Appendix A - Design Drawings

# Appendix B - Environmental EME Report

# Appendix C – EPBC Act Search



# Appendix D – Compound Ground Surface Erosion Information

# Appendix E – Cost of Works Report

# Appendix F – Waste Management Plan

# Appendix G – Owners Consent