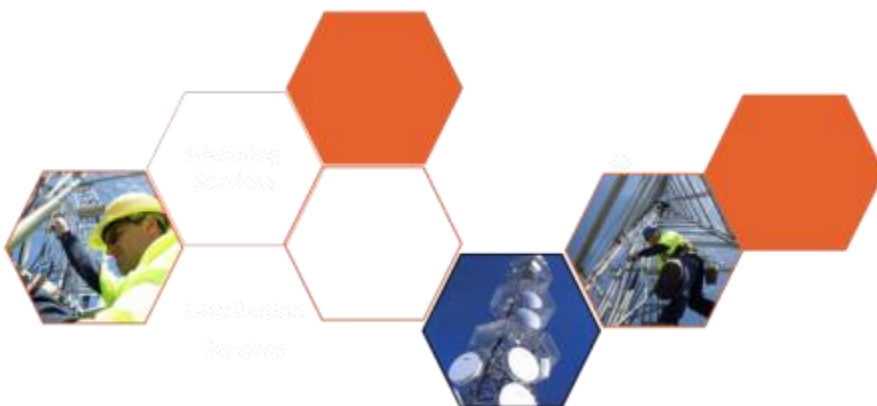


STATEMENT OF ENVIRONMENTAL EFFECTS

**Proposed Telstra Mobile Telecommunications Base Station At:
25 Mitchel Drive East Maitland NSW 2323 Lot 311/ DP
1031540**



Document Control Record

Document Description	SEE: Proposed Telstra Mobile Telecommunications Base Station at 25 Mitchell Dr, East Maitland, NSW, 2323		
Site No.	NA12280.02	Site Name	East Maitland

	Name	Signed	Date
Prepared By	Blake Hender	<i>Blake Hender</i>	24/07/2022

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1 Introduction

1.1 Executive Summary

This Statement of Environmental Effects (SEE) has been prepared by Service Stream – Network Construction on behalf of Telstra Corporation Ltd (Telstra). The proposed site is located at 11 Molly Morgan Drive East Maitland NSW 2323 ('the facility'). The proposed development will enable Telstra as a licensed carrier to provide adequate coverage to their customers in the locality.

The East Maitland area and surrounding Ashtonfield and Metford currently suffer from insufficient mobile coverage and poor capacity. Telstra regularly tests the efficiency of its existing networks and has identified severe shortcomings in East Maitland, worsened by the increasing demand for mobile network services and data capacity as a result of the increase in housing development in the surrounding area over recent years.

Telstra propose to construct a new monopole telecommunication facility at the south eastern corner of the Stockland Greenhills Shopping Complex on a vacant section of land between the existing carpark and the medical offices at unit 4 11 Molly Morgan Drive . The new facility will deliver improved 4G and 5g coverage and capacity to the East Maitland area.

In order to meet radio frequency objectives at this location, the base station will require a 35m monopole with nine panel antennas (total height 36.2m). Radio Equipment will be housed in three (3) out door Unit (ODU) equipment cabinets 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, including businesses operating in the E2 Commercial Centre zone who require mobile and wireless broadband services.

The facility will bring the poor mobile services in East Maitland 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.

1.3 Telstra – Company Profile

Telstra is Australia's leading telecommunications and information services company, with one of the best known brands in the country. Telstra offers a full range of services and competes in all telecommunications markets throughout Australia, and provides 17.7 million retail mobile services, 4.9 million retail fixed voice services and 3.6 million retail fixed broadband services.

Some of Telstra's main activities include the provision of:

- Basic access services to most homes and businesses in Australia;
- Local and long distance telephone calls in Australia and international calls to and from Australia;
- Mobile telecommunications services;
- Broadband access and content;
- A comprehensive range of data and internet services, including through Telstra BigPond®, Australia's leading internet service provider.

One of Telstra's major strengths in providing integrated telecommunications services is its vast geographical coverage through both its fixed and mobile network infrastructure. This network infrastructure underpins the carriage and termination of the majority of Australia's domestic and international voice and data telephony traffic.

For more information about Telstra's company profile, follow this link: [Telstra company profile](#).

2 The Proposed Facility

2.1 Site Location and Surrounds

The site is situated on a disused section of land between the south eastern corner of the Stockland Greenhills Shopping Complex carpark and the medical offices located at Unit 4 11 Molly Morgan Drive.

The site is located in East Maitland commercial area approximately 4.5km south east of the Maitland CBD. The site is located within the Maitland Local Government Area. Located in the Hunter Valley Maitland is approximately 166km north of Sydney by road and approximately 35km north west of Newcastle.

The site is located on the high ground in the area adjacent the flood plain of the Hunter River which is located approximately 3.0km north of the site.

The closest residential property to the site is located approximately 120.0m to the south on Moss Place. The residential properties are separated from the proposal site by a strip of mature vegetation following Two Mile Creek from east to west.

North, east and west of the site is primarily commercial businesses including Stockland Greenhills shopping Centre and businesses along Molly Morgan Drive.



The proposed location for the mobile base station (Lot 311/ DP 1031540Coordinates: -32.76302 151.59311–elevation approx. 25m AHD) is illustrated in **Figures 3 and 4** below.



Figure 2: looking south from Stockland Greehills Shopping Centre car park towards the proposal site.



Figure 3: Proposed location looking east towards the 11 Molly Morgan Drive



Figure 4: Maitland Local Environmental Plan 2011 (MLEP 2011)

The site and immediate surrounds are zoned B3 Commercial core the closest residential land usage is to the south of the site along Knoll Crescent and Moss Place. To the east of the site there is an area of public open space between Molly Morgan Drive and the New England Highway that is zoned RE1 Public Recreation.

2.2 Description of the Proposal

Approval is sought for the use and development of a “telecommunications facility” as defined by the Act, comprising a 35 metre monopole at 25 Mitchel Drive East Maitland NSW 2323 Lot 311/ DP 1031540.

Equipment for the new facility would be housed in small footprint outdoor cabinet 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. The Telstra Cellular Network Engineer responsible for the Maitland area has confirmed an antenna centreline height of 35 metres is the minimum required to meet the coverage objectives for this particular cell. A detailed description of the components of the facility are as follows (also see attached design drawings in **Appendix A**):

Installation details

- One (1) 35 metre monopole with antennas mounted on a triangular headframe (overall height 36.2 metres including the antennas);

- Six (6) panel antennas (dimensions: 2533mm H x 349mm W x 208mm D) and three (3) Panel antennas (dimensions: 717mm H x 408mm W x 189mm D) will be mounted to the monopole via the triangular headframe;
- Three (3) new Telstra Outdoor Equipment Cabinets These will house the necessary electronic equipment required to operate the base station, and will be finished in a neutral non reflective grey colour or a finish requested by council ; and
- Ancillary equipment associated with operation of the facility, including remote radio units, cable trays, cabling, safe access methods, earthing, electrical works and air-conditioning equipment.

Access

Access to the site will be via the existing shopping complex car park and will require the removal of vegetation around the compound area.

In unusual situations where work or maintenance is required on the upper portion of the monopole (e.g. antenna modifications) a cherry picker will be used. Mobile phone base stations are unmanned, of low maintenance and are mostly operated remotely. As such, operational visits to the site will be minimal and approximately only 4-6 times per year for maintenance purposes.

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.

2.3 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.

2.4 Need for proposal

The proposal is intended to improve mobile network coverage and capacity in the East Maitland area, ensuring reliable telecommunications services are available. The facility will provide coverage to many businesses in

the commercial area and assist with meeting the capacity demands in the surrounding residential areas of Metford and Ashtonfield.

The current significant growth in demand for mobile facilities and broadband means establishing a facility at this location is essential. The rapid evolution of the sector resulting in increased usage of smart phones, tablets and other wireless devices continues to place further demand on the network.

To ensure consumers continue to receive high quality services and competitive pricing Telstra requires a facility at East Maitland.

Telstra currently has one macro cell site servicing the general area within 2km from the proposed location:

- **RFNSA Site # 2323001** located on the new England Highway approximately 1.0km to the south;
- **RFNSA Site # 2323002** located at 123 George Street approximately 1.5km north of the proposed site

Both of these facilities are unable to be utilised to provide adequate coverage to the East Maitland area. Both sites are at their structural limits and could not support additional equipment, RFNSA site 2323001 is the closest existing Telstra site to the proposal and does not have the required elevation to meet Telstra coverage requirements in the area. Other existing mobile telecommunications facilities providing service to this area of Lismore are outlined in **Section 3** of this report.

Coverage is the ability for a base station to provide service to an area, whereas capacity is the ability for a base station to deal with mobile traffic, or demand. Voice and data connections are known as traffic and each base station has a limit as to the amount of traffic it can carry. When traffic grows, new technologies and additional technology is added to the existing site. When a site has been upgraded to its technical limit, and when the capacity is tested, often at peak times, customers then experience inconsistent service, call drop outs and/or slow data speeds.

This facility should also assist with providing in-building coverage (depth of coverage indoors) to home-businesses and buildings currently suffering from poor service. The expectation of customers increasingly involves consistent quality and depth of service in any location they wish to use their phone or device, customers no longer accept having to go outside to use their mobile phone or device.

The need to deliver quality service in the local area in conjunction with the exponential growth in the demand of network data and broadband services (such as tablets, smart phones and data cards) means that services will become poor unless the facility at this location is successfully developed.

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.

2.5 Consequences for not proceeding

The consequences of the proposal not proceeding would be:

- Continued poor coverage in East Maitland;
- 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 Telstra's site acquisition procedure, a comprehensive site selection process has been undertaken in order to find an appropriate location for the new facility in East Maitland. This included looking for 'colocation' opportunities, in accordance with Chapter 4 Part 3 Clause 4.13 of the Telecommunications Code of Practice 2018, as well as low impact solutions and new Greenfield sites.

The specific constraints of this project, including the topography, built environment and the coverage target area resulted in limited site options. However the selection process involved a number of stages and entailed identifying potential candidates by assessing each under the following considerations:

Planning

- In accordance with the relevant Acts and Environmental Planning Instruments (EPI);
- Acceptability of the proposal to Maitland City Council and the local community;
- Location in relation to sensitive land uses such as schools, child care centres, hospitals and nursing homes which in some occasions is difficult to avoid
- Visual aspect and amenity;
- Compliance with the EME standards mandated by the Australian Communications and Media Authority (ACMA);
- Opportunities to collocate facilities where possible; and
- Low impact solutions.

Property

- Availability of suitable land and likelihood of the owner entering into a tenure agreement and providing access during construction and operation.

Engineering:

- Feasibility of construction and availability of infrastructure such as access, power and fibre.

Radio frequency coverage and objectives:

- Ability to be linked to the existing Telstra network and meet the radio frequency coverage objectives for the area.

3.1 Options Considered

3.1.1 Opportunities to Collocate

State, Federal and Local government legislation encourages the use of existing telecommunication facilities for the collocation of antennas. As such, Telstra's standard site selection process flags potential collocation options during its initial stage of candidate selection.

Due to the specific coverage constraints, there is a paucity of collocation options. As depicted below in **Figure 6**, the closest available collocation options are unsuitable.

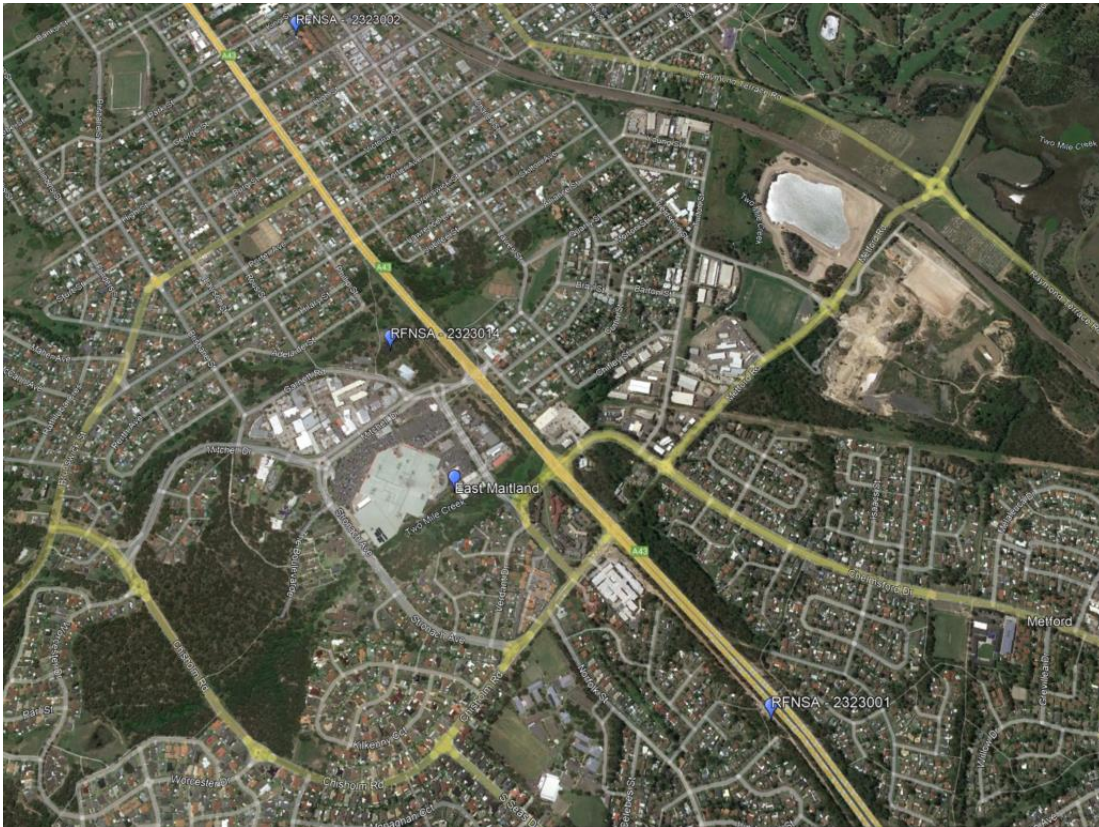
Three sites were investigated as possible collocation opportunities in the vicinity of the proposal, all three were dismissed as viable candidates on the grounds they would not meet coverage objectives in the residential areas south of the proposal site.

In conclusion, as there are currently no suitable sites to cover the target area in East Maitland, as such Telstra proposes to construct a new facility on the subject property.

RFNSA Site Number	Address	Site Details
2323002	123 GEORGE ST EAST MAITLAND NSW 2323	53.3m lattice tower. Existing Telstra site this site is 1.5km away from the target coverage area and could not achieve coverage objectives for the East Maitland area.
2323001	Lot 4 Plan DP251847 New England Highway ASHTONFIELD NSW 2323	29.7m steel monopole. Existing Telstra site , this site is approximately 1.0km south of the proposal. The tower is structurally unable to support additional equipment required to improve coverage.
2323014	1 Garnett Road EAST MAITLAND NSW 2323	30.0m monopole. Optus site approximately 450.0m south of the proposal site. The site does not offer the required elevation to meet Telstra coverage requirements.

Figure 6 below shows the existing facilities considered as potential collocation opportunities.

Figure 6: Opportunities to Collocate



3.1.2 Low Impact Solutions

Once it was understood that a new site was required, an assessment process was undertaken to identify any potential low impact solutions in the area. This process revealed that due to the surrounding built environment and lack of existing high elevation structures, no low impact solutions were viable.

3.1.3 Greenfield Sites

When the site assessment process reveals that a Greenfield site is the only viable option, consideration is given to the most appropriate sites located within Rural, Industrial and Infrastructure land characteristics. Other considerations involve the availability of tenure, the physical and special requirements for the construction of such a facility as well as access for maintenance purposes and access to power and fibre.

Telstra’s site selection process was limited due to the specific coverage constraints meaning the search area was restricted.

Figure 7: Aerial View of Greenfield Options Considered

Below is a detailed discussion of all of the potential Greenfield sites that were considered for the proposal.

Candidate	Site Details	Facility Type	Description
Candidate A	25 Mitchell Drive	35.0m Greenfield monopole	Telstra investigated the installation of a new monopole adjacent to the Stockland Greenhills Shopping Centre car park. The site site is within a commercial zone and well separated from residential land uses.

Candidate B	6 Mitchell Dr, East Maitland NSW 2323	Roof top	A roof top installation at this site was investigated. The property owners were not interested in entering into a lease agreement.
Candidate C	6 Garnett Rd, East Maitland NSW 2323	Greenfield monopole	This site was investigated as a possible location for a new monopole. The property owners were not interested in the proposal.
Candidate D	7 Alfred Cl, East Maitland NSW 2323	Greenfield monopole	This site was investigated as a possible location for a new monopole. The property owners were not interested in the proposal.
Candidate E	Corner Adelaide & Brisbane Streets	Greenfield monopole	This was too far away from the target coverage area to meet Telstra's technical requirements.

3.2 Preferred Option

The site selection process highlighted the following about the proposed site:

- the site is the most practicable solution to addressing the coverage gap and capacity issues in the East Maitland area;
- the site is a vacant patch of land at the rear of a commercial shopping building and is expected to have minimal cumulative impacts during construction and operation;
- it will meet the radio frequency objectives of Telstra's network, giving the required coverage within the area by allowing all three antenna sectors to operate effectively;
- the land use is consistent with a telecommunications facility as it will not impede the use of the site for commercial purposes;

In summary, a thorough examination of potential telecommunications base station sites in the surrounding area has been undertaken. There were no suitable options for colocation, and potential Greenfield sites were ruled out because of either planning or RF issues.

Telstra has concluded that a new facility at the above described location at 25 Mitchell Drive is the most appropriate location to service the East Maitland area. Therefore, on behalf of Telstra, we submit this application for development approval to Maitland City Council.

4 Consultation

4.1 Council

Maitland City Council was contacted and informed of Telstra's intentions to install a new existing facility in February 2022. The duty planner indicated that there were no immediate concerns about the proposal however consideration of the surrounding residential land uses must be made in ensuring minimal negative impacts.

It is to be noted that all Telstra facilities are installed, designed and certified by qualified professionals in accordance with all relevant Australian Standards. This facility is to be operated in compliance with the mandatory standard for human exposure to EME – currently the Radio Communications (Electromagnetic Radiation Human Exposure) Standard 2003 (RPS3).

4.2 Community

As the proposal has not been identified as being in a particularly sensitive location no additional consultation is proposed. The standard DA notification for a proposal of this type undertaken by Council is deemed as being sufficient.

4.3 Other Stakeholders

A local community may often have concerns about particularly sensitive locations in the vicinity of the proposal e.g. schools, childcare centres and aged care facilities. During the site selection process community sensitive locations are identified and avoided wherever possible.

In this instance no additional stakeholders have been identified within 500.0m of the proposal location, however the relevant community stakeholders will be captured by Councils standard notification process.

5 Environmental Assessment

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

5.1 Commonwealth Legislation

5.1.1 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 1997 (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 1997 (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**.

5.1.2 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.

5.1.3 Deployment Code

The ‘Mobile Phone Base Station Deployment Code’ Communications Alliance Ltd Industry Code (C564:2018) 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 on the 17th December, 2018. 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 1 below). No consultation external to that undertaken in the Development Application process is required under the Code, however Telstra have undertaken additional consultation.

Table 1: Application of the Industry Code C564:2018 precautionary approach to mobile phone Radiocommunications infrastructure placement and design

Subclause	Response
Clause 4.1 Site Selection	
4.1. <i>Clause 4.1 applies if a Carrier proposes to select a new site for the deployment of Mobile Phone Radiocommunications Infrastructure.</i>	Clause 4.1 Applies to this proposal
4.1.1. <i>A Carrier must have written procedures for site selection for Mobile Phone Radiocommunications Infrastructure in relation to factors contained in clause 4.1.4 and make them available to the public on request.</i>	Written procedures have been developed and will be made available to members of the public on request
4.1.2. <i>Once the preferred option has been selected, the Carrier must make available to the public on request the summary of the sites considered and the reasons for the selection of the preferred option.</i>	The site selection summary will be made available to any member of the public should they request it
4.1.3. <i>The Carrier must comply with its procedures as per clause 4.1.1.</i>	All procedures have been complied with
4.1.4. <i>The Carrier must ensure that its written procedures for new site selection require it must have regard to:</i>	(i) The primary requirement for installing the base station at the proposed location is to improve service in the East Maitland area. (ii) The power levels of Telstra’s facilities are set as low as possible to meet the required service objective, the facilities also automate their power requirements in response to the demand and number of connections at any one time therefore maximising power efficiency. iii) The proposed base station ensures that long-term, consistent, high quality voice and mobile data services are provided in East Lismore.
(a) <i>the reasonable service objectives of the Carrier including:</i> (i) <i>the area the planned service must cover;</i> (ii) <i>power levels needed to provide quality of service;</i> (iii) <i>the amount of usage the planned service must handle;</i>	
(b) <i>minimisation of EME exposure to the public;</i>	

Subclause	Response
	<p>required service objective, the facilities also automate their power requirements in response to the demand and number of connections at any one time therefore maximising power efficiency and minimising EME emissions. Even at full power (see Section 6.10) exposure limits to the public are no greater than 2.83% of the APRANSA EME Standard (see Appendix B)</p>
<p>(c) <i>the likelihood of an area being a community sensitive location. (Examples of sites which may be considered to be sensitive include, residential areas, childcare centres, schools, aged care centres, hospitals and regional icons);</i></p>	<p>(c) The proposed facility is located on an unused strip of land at the rear of the Stockland Greenhills Shopping Centre.</p> <p>the area around the site is predominantly commercial in nature, there are no sensitive sites identified within 500m of the proposal site.</p> <p>The nearest residential development is approximately 120m from the proposal and separated by mature natural vegetation.</p> <p>In light of this the location is not identified as being community sensitive, however should significant negative feedback be received from the stakeholders involved Telstra will undertake the necessary consultation and engagement activities.</p>
<p>(d) <i>the objective of avoiding community sensitive locations;</i></p>	<p>(d) The avoidance of community sensitive locations was a key factor in determining the proposed location as being suitable for the facility.</p>
<p>(e) <i>relevant state and local government telecommunications planning policies;</i></p>	<p>(e) All relevant state and local government planning policies have been considered regarding the proposal i.e. <i>Environmental Planning and Assessment Act 1979, State Environmental Planning Policy (Infrastructure) 2007, NSW Telecommunications Facilities Guideline including Broadband 2010, MaitlandLocal Environmental Plan 2011</i> – see Section 5.3</p>
<p>(f) <i>the outcomes of consultation processes with Councils and Interested and Affected Parties as set out in clause 6.7;</i></p>	<p>(f) The outcomes of the consultation processes with the identified affected parties have been taken into consideration and addressed as per clause 6.7</p>
<p>(g) <i>the heritage significance (built, cultural and natural);</i></p>	<p>(g) The proposed area is not a listed Heritage Item nor does it contain items of Aboriginal heritage – see Section 6.4</p>
<p>(h) <i>the physical characteristics of the locality including elevation and terrain;</i></p>	<p>(h) Maitland is a rural city located within the Hunter Valley on the banks of the Hunter River. The topography of the area is primarily flat in nature, the proposal site has an elevation of approximately 25m AHD.</p>

Subclause	Response
(i) <i>the availability of land and public utilities;</i>	(i) The proposal is located within a commercial shopping complex and utilises a vacant portion of land within the carpark of the shopping centre. All necessary utilities can be accessed at the site.
(j) <i>the availability of transmission to connect the Mobile Phone Radiocommunications Infrastructure with the rest of the network, e.g. line of sight for microwave transmission;</i>	(j) The facility will utilise existing underground fibre to obtain connectivity to the surrounding Telstra Network.
(k) <i>the radiofrequency interference the planned service may cause to other services;</i>	(k) The proposed location ensures that there will be no interference with any existing services.
(l) <i>the radiofrequency interference the planned service could experience at that location from other services or sources of radio emissions;</i>	(l) The proposed location ensures that there will be no interference with any existing services.
(m) <i>any obligations and opportunities to co-locate facilities; and</i>	(m) Collocation options were either not viable or too far away to meet the objectives of this proposal.
(n) <i>cost factors.</i>	(n) The cost factors are within the normal scope of a standard facility of similar design, location and scale.

Clause 4.2 Mobile Phone Radiocommunications Infrastructure Design

Subclause	Response
4.2. <i>Clause 4.2 applies if a Carrier proposes to design Mobile Phone Radiocommunications Infrastructure.</i>	Clause 4.2 applies to this proposal.
4.2.1. <i>The Carrier must have written procedures for designing Mobile Phone Radiocommunications Infrastructure.</i>	Written procedures have been developed by Telstra.
4.2.2. <i>The Carrier must comply with its procedures as per clause 4.2.1 above</i>	All procedures have been complied with
<p>4.2.3. <i>With the objective of minimising unnecessary or incidental RF emissions and exposure, the procedures must require that, in designing Mobile Phone Radiocommunications Infrastructure, the Carrier have regard to:</i></p> <p>(a) <i>the reason for the installation of the infrastructure, considering – coverage, capacity and quality;</i></p> <p>(b) <i>the positioning of antennas to minimise obstruction of radio signals;</i></p> <p>(c) <i>the objective of restricting access to areas where RF exposure may exceed limits of the EMR standard;</i></p>	<p>(a) The base station is proposed to provide improved coverage and capacity in East Maitland. The base station will ensure capacity is enhanced and that better quality services to customers are retained for the future.</p> <p>(b) The antennas have been positioned to minimise the obstruction of radio signals as required.</p> <p>(c) The antennas will be located atop a 35m monopole with required EME signage.</p>

Subclause	Response
(d) <i>the type and features of the infrastructure that are required to meet service needs including:</i> (i) <i>the need for macro, small scale infrastructure; and</i> (ii) <i>the need for directional or non-directional antennas.</i> (e) <i>the objective of minimising power whilst meeting service objectives; and</i> (f) <i>whether the costs of achieving this objective are reasonable.</i>	(d) (i)-(ii) The site requires a macro cell with directional antennas to meet its coverage objectives. (e) Telstra facilities automate power in response to the demand and number of connections. (f) The cost of achieving the objective is reasonable.
4.2.4. <i>The Carrier must make site EME assessments for Mobile Phone Radiocommunication Infrastructure in accordance with the ARPANSA prediction methodology and report format (as referenced in Appendix B)</i>	The supplied EME report (Appendix B) meets the APRANSA EME Report requirements.
4.2.5. <i>The ACMA may request a copy of the site EME estimate, and the Carrier must provide the estimate to the ACMA within two weeks of the request being made.</i>	Any requests will be complied with within two weeks of the request being made.

5.2 State Legislation

5.2.1 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, providing 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 clause 115 (1), which states:

“Development for the purposes of telecommunications facilities, other than development in clause 114, 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, equipment, apparatus, tower, mast, antenna, dish, tunnel, duct, hole, pit, pole or other structure in connection with a telecommunications network.”

Clause 116 and 116A allow 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.

Clause 115 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 site is zoned E2 Commercial Centre under the Maitland Local Environmental Plan 2011. Telecommunications facilities in this zone are considered permitted with consent under the provisions of the MLEP 2011.

5.2.2 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 2 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
Principle 1: A telecommunications facility is to be designed and sited to minimize visual impact.	
<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>(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) <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>(d) The ancillary facilities will be placed in three (3) small footprint outdoor equipment cabinets, finished in a neutral colour or as requested by Council.</p>
<p>(e) <i>A telecommunications facility should be located and designed to respond appropriately to its rural landscape setting.</i></p>	<p>(e) The facility is not located in a rural setting, however it has been designed and sited to respond to its surrounding landscape context.</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>(f) The proposed site is not within any heritage conservation area identified by the heritage branch of NSW or the MLEP 2011.</p>

Principal	Response
<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>(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 involves the clearing of of shrubbery along in the area adjacent the carpark. This vegetation is not identified as being of any significance to the environment or surrounding area.</p> <p>Council will be consulted as part of this development application.</p>
	<p>(i) N/A</p>
	<p>(j) The proposal will comply with the BCA and complies with relevant Industry Design Guides.</p>
Principle 2: Telecommunications facilities should be co-located wherever practical.	
<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 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>(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, as previously noted, was only selected after co-location opportunities on existing telecommunications facilities had been totally exhausted.</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) Telstra have conducted an exhaustive assessment of prospective co-location options, as identified in section 3 of this report.</p>
	<p>(f) N/A</p>

Principal	Response
Principle 3: Health Standards for exposure to radio emissions will be met	
<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 Appendix 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 C564:2018 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 Appendix B.</p>
Principle 4: Minimise disturbance and risk, and maximise compliance	
<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 Defence navigational or communications equipment, including the Morundah Communication Facility, Riverina.</i></p> <p>(c) <i>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>(d) <i>The telecommunications facility is not to affect the structural integrity of any building on which it is erected.</i></p> <p>(e) <i>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>(f) <i>The carrying out of construction of the telecommunications facilities must be in accordance with all relevant regulations of the Blue Book – ‘Managing Urban</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 the relevant OLS maps show it is of a permissible height.</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> <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 (refer Section 6.6)</p>

Principal	Response
<p><i>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 & 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>(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 Section 6.5)</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 has been disturbed previously by construction and is within a shopping centre car park. The vegetation being removed is not naturally occurring and has been planted as part of the landscaping associated with the shopping complex and has no significance to local flora and fauna. 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) the proposal is not anticipated to impact any threatened flora and fauna as it is located with in an area that has been heavily disturbed by previous construction.</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 (Appendix C). The area has 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>
	<p>(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.</p>

5.3 Site Specific Legislation

5.3.1 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 is approximately 11.5km south east of the Maitland Airport and 23km west of the Williamstown RAAF base the site does not penetrate the OLS restrictions for either airport.

5.3.2 Local Environmental Plan (LEP)

The proposed location is subject to land use controls under the Maitland Local Environment Plan 2011 (MLEP 2012). Under the MLEP 2011 the proposed site is zoned E2–Commercial Centre. Telecommunications facilities are permitted only with consent from Maitland City Council.

Table 3 below sets out the objectives of the zone and an assessment of the proposal against these objectives.

Table 3: Assessment of proposal against objectives outlined in MLEP 2011 Land Use Table

Objective	Assessment
To strengthen the role of the commercial centre as the centre of business, retail, community and cultural activity.	Increased access to mobile and data coverage will benefit businesses within the commercial centre. The improved communication opportunities and uninterrupted access to Telstra’s mobile data and voice network will lead to increased opportunities for businesses to connect with customers.
To encourage investment in commercial development that generates employment opportunities and economic growth.	Improved mobile communications will help promote and generate economic growth and activity in the area for residents and visitors to the region.
To encourage development that has a high level of accessibility and amenity, particularly for pedestrians.	The proposed development is situated on a disused strip of land at the rear of the existing carpark. The proposal will not impede pedestrian access in any way.
To enable residential development only if it is consistent with the Council’s strategic planning for residential development in the area.	The proposal does not involve residential development.
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 proposal is located at the rear of the Stockland Greenhills Shopping complex and will not impact on any street frontages. Improved mobile and data coverage will improve the visitor experience to the shopping centre through increased access to information about the variety of businesses within the commercial zone.
To recognise Council’s preferred hierarchy of activity centres and precincts, by ensuring that existing and future development—	A) the proposal will not impact the Councils preferred hierarchy of activities. The proposal will be situated on a small area of the shopping complex that that is

(a) at Greenhills—reinforces the regional significance of this retail precinct, and	unusable for any other purpose. The proposal will not impede access to or the function of any businesses within the commercial zone.
(b) at Central Maitland—promotes business development to reinforce Central Maitland’s significance as a major regional centre.	The proposal will provide visitors to Greenhills significantly improved data and mobile coverage within the shopping complex which will improve the visitors overall experience.

This development will not have any adverse impacts on the overall nature of the area nor will it significantly affect the purposes of its subject land.

Part 4.3 Height of Building

(1) The objectives of this clause are as follows—

- a) to ensure that the height of buildings complements the streetscape or the rural character of the area in which the buildings are located,
- b) to protect the heritage character and significance of buildings and avoid an adverse effect on the integrity of heritage items,
- c) to ensure that the height of buildings protects the amenity of neighbouring properties in terms of visual bulk, access to sunlight, privacy and views.
- d)

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

The building height restriction for the proposed site is 24.0m as indicated on the Council Height of Buildings Map, the proposal height of 35.0m does exceed this.

The height of the proposed facility is necessary as the nature of telecommunications facilities requires them to protrude above surrounding vegetation and structures. In order to operate effectively, a ‘line of sight’ needs to be established between antennas and receivers with a minimum of obstacles or interference. The more interference there is, the poorer the quality of the signal will be.

Telstra has modelled the proposed site and locality to determine what antenna height they require to provide the necessary coverage to meet the current demand in the area.

Typically, telecommunication facilities exceed the height limits prescribed in LEPs. It is very common exemptions to be granted as it is generally recognised that these heights are necessary.

In summary, the proposal meets the above objectives of the MLEP 2011:

- Is technically feasible in this location and can achieve Telstra’s network objectives for the area, resulting in the provision of good telecommunications services for local residents and businesses.
- Results in minimal impact on businesses within and visitors to the commercial area. Environmental, ground and visual disturbance impacts at the site will be minimal, given the nature of the facility and its small footprint and .
- The proposed facility is considered to be an appropriate land use within its zoning, given it will not compromise the use of the property for its current or future purposes, while also providing significant benefit to the surrounding community.
- The site is not within an environmentally or culturally significant location, and does not retain any heritage significance.

6 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

6.1 Visual Impact

6.1.1 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 site is suitably separated and visually screened from the closest residential properties to the south east of the site and is in a underutilised area of the shopping centre carpark



Figure 7: View looking south west towards the proposal from Molly Morgan Drive. The top of the monopole and antennas will be visible from Molly Morgan Drive

As can be seen in the above image, existing buildings and trees will screen the lower part of the monopole resulting in a reduced visual impact on the overall character of the area.

6.1.2 Screening

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

The proposal is located at the rear of the Stockland Greenhills Shopping Centre and is visually screened to the north and west by the shopping centre its self. The site is screened to the east by the commercial businesses off Molly Morgan Drive and the south by the vegetation running along Two Mile Creek.

The visual impacts of the proposal are determined to be minor due to the combination of existing screening and the unused nature of the location. There is no residential housing immediately surrounding the proposal

and the site is well separated from active street frontages along Mitchell and Molly Morgan Drive, the combination of these factors resulting in no significant views being affected.



Figure 8: View towards the site looking east from the Stockland Greenhills shopping centre

6.1.3 Design



Figure 9: View looking South towards the proposed facility from the rear of The George Tavern



Figure 10: View looking from the Stockland Greenhills Carpark to the proposed site

As can be seen in the above photographs several steps have been taken to reduce the visual impact of the proposed facility. The first is the design of the facility – Telstra have utilised the smallest tower design possible capable of achieving a feasible level of service. A monopole lower than 35m cannot provide a suitable solution for this area exacerbated by the mature trees surrounding the facility and the multi-level commercial buildings in the vicinity of the proposal site.

The location was chosen as it minimises any visual impacts on adjacent residential land uses and will not impede the operation of any commercial businesses in the vicinity of the proposal site.

The monopole is proposed to be finished in a recessive colour in order to blend the facility into the background so it is not a dominant feature in the landscape.

In terms of the potential visual effects of the upper section of the proposed facility, it is important to note that the antennas need to have “line of sight” to the area that they are servicing (i.e. they need to be visible to the devices in the area they service) in order to function effectively – this is an inherent feature of cellular technology. Antennas cannot be placed below a topographical line, or surrounded by trees or tall buildings, otherwise they will not be effective in providing the service to the user. It is a result of the technology that telecommunications facilities must be visible in order that they operate effectively.

While it is acknowledged that the upper section of the pole and antennas would have a visual presence in the surrounding area, Telstra has designed the facility sympathetically thus minimising negative visual impacts of the facility as much as possible while still achieving acceptable levels of coverage. The antennas are mounted via a Telstra standard triangular headframe designed to achieve optimum performance without appearing too oversized. The chosen design still achieves the desired coverage objectives while having a negligible impact on the surrounding area.

6.1.4 Conclusion

From the discussion outlined above in 6.1, 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 East Maitland;
- Recessive colouring and a slimline monopole design lessens the potential visual impact;
- Views of the proposed facility are limited predominantly to within close proximity to the site in the surrounding commercial zone, care has been taken to situate the site in a location that minimises any visual impact on residential areas;
- 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.

6.2 Socio – Economic Considerations

The proposed facility will enable excellent mobile network capability, which has now become expected in urban areas to be provided.

These services allow communities to enjoy:

- Greater business accessibility and flexibility, especially for commuters, tradespeople and home-based business;
- Reliable personal safety – maintaining a mobile phone for critical communications and emergencies.
- As an industry telecommunications including mobile broadband has experienced exponential growth for many years now.

The proposed development will enable carriers to remain competitive and increase the choice of mobile telephone services available to consumers. Increased competition in the market brings direct economic benefits for individual consumers and the community as a whole. The development is consistent with the objectives of the TA 1997, namely:

- To promote *“the efficiency and international competitiveness of the Australian telecommunications industry”* (s.3(1)); and
- To ensure that telecommunications services *“are supplied as efficiently and economically as practicable”* (s.3(2)(a)(ii)).

Providing telecommunications services will allow home-based businesses to operate and grow their services. Diversify in both the services they offer, and how these services are marketed – the ability to reliably use social media for promotions is particularly beneficial for local businesses. A strengthened telecommunications network will also allow the local workforce to explore opportunities which were not previously possible, including home businesses and telecommuting.

Telstra are also responsive to public safety issues. High quality telecommunications services significantly benefit community safety by providing a vital 'first response' tool for emergency services. A strong mobile network is highly beneficial in an emergency situation, as well as more general public safety.

Telstra believe that it is in the public interest to provide a strong, resilient mobile network that, in turn, provides a high quality of service to local communities across Australia. Given the demand for the service, and the benefits noted above, we believe there is a strong justification for the telecommunications site at this location to be constructed.

The proposed facility will thus have a positive impact on the social and economic environment of the locality.

6.2.1 Effect on Surrounding House Values

Although property values are not an area of consideration by a consent authority, local residents sometimes ask questions on this topic. To date, there is no evidence of any negative impact telecommunications facilities have on property prices. With the many thousands of facilities located all around the country, if an impact was likely it is expected it would be apparent by now. With the increase of wireless devices, including smart phones, tablets and mobile data devices the number of fixed line connections is decreasing, to ensure customers have access to high quality services in their home a telecommunications facility cannot be placed outside of the area requiring service. In addition the proposal is located reasonably far away from residential housing and in an area of the car park that is not currently being used and is unsuitable for any other use.

6.3 Flora and Fauna

The proposal involves the trimming of the existing vegetation at the site to make room for the fenced compound. The proposed vegetation to be removed pictured below is not naturally occurring and forms part of the landscaping of the shopping centre carpark. The vegetation to be removed is not considered to be significant to local flora and fauna found in the area.

The vegetation adjacent the site would be maintained and trimmed so as not to impact the operation of the facility.



Figure 11: Proposed vegetation to be trimmed back to make space for the telecommunications facility.

6.4 Heritage and Cultural Values

6.4.1 Indigenous Heritage

The site is in an area that has been disturbed by previous construction and it is not anticipated to find any items of indigenous Cultural significance. The site has not been identified as a site containing items or as an area of Aboriginal Significance (please refers to **Appendix C**).

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.

6.4.2 Non-indigenous Heritage

As part of Telstra's site selection process, 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 CLEP 2011.

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.

6.5 Traffic and Access – Parking and public transport

The facility will not adversely affect the safety and efficiency of roads in the vicinity of the site or the Stockland Greenhills carpark. Access to the site will be via the Stockland Greenhills carpark, the most direct access route to the site for construction equipment and materials will be via the Molly Morgan Drive entrance to the west of the site.

Operational access will be via the same route.

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 adjacent 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.

6.6 Soil Erosion and Landscape Provision

The site is not known to be affected by any contamination. No signs of land contamination were observed during the site inspection. As such, it is unlikely that the proposed works would encounter any contaminated soils.

However, any contaminated soils encountered during the proposed works will be managed in accordance with the relevant guidelines.

The subject site has been identified by Maitland City Council mapping as potentially containing Acid Sulphate Soils Class 5. If it is found during construction, any works beyond 2 metres below the natural ground surface require consent. 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 relevant requirements of the Blue Book – ‘Managing Urban Storm water: Soils and Construction’ (Landcom 2004), or its replacement.

6.7 Bushfire Prone Land

The proposed facility is not located on land identified as bushfire prone.

6.8 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.

6.9 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.

Given the current use and nature of the land it is unlikely that there would be any noise related impacts on residences in the area. The only noise generated during its operational stage is that from the cooling systems incorporated into the equipment cabinets. This cooling 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.

6.10 Health and Safety

Mobile phone base stations emit electromagnetic energy (EME). It is mandatory that mobile network operators in Australia comply with current and future Australian Radiation protection and Nuclear Safety Agency

(ARPANSA) standards for the operation of the proposed facility. The Australian Communications and Media Authority are the regulatory body for compliance with this standard. The current standard is the Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300 GHz (RPS 3 - 2002). This standard maintains a significant safety margin to prevent adverse health effects.

In accordance with RPS 3, an estimate has been made of the maximum cumulative radiofrequency (RF) electromagnetic energy (EME) levels at ground level emitted from the proposed mobile base station. Estimates of RF EME levels are provided for 360° circular bands at 0-50, 50-100, 100-200, 200-300, 300-400 and 400-500m from the base of the antenna.

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 2.83 percent 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 is:

"Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects".

Further information on EME and mobile base stations can be found in **Appendix B**.

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

6.11 Other Impacts During Construction

6.11.1 Air Quality

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

Given the current land use and the substantial separation from residential properties, any dust related impacts on surrounding residential properties are considered negligible.

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.

6.11.2 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.

6.12 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 the rear carpark area of the Stockland Greenhills shopping centre. The top portion of the monopole and antennas will be partially visible from businesses along Molly Morgan Drive. The antennas may be visible from some view points in the residential area south of the site along Verdant Drive and Knoll Crescent.

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.

7 Conclusion

Telstra propose to construct a new telecommunications facility at 1 Molly Morgan Drive East Maitland 2323. The proposal is considered to be permissible under provisions of the ISEPP within the E2 Commercial Centre Zone 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 East Maitland are brought to the acceptably high standard residents and businesses have come to expect in urban 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;
- The proposal although visible to varying degrees, is largely out of the public view. Significant screening is offered by existing vegetation and existing structures surrounding the proposal and the top part of the monopole is considered to have an acceptable visual impact in an urban setting.
- The proposed installation will have minimal impact on the general use of the land. This proposal does not impact the operation or access to any businesses adjacent the subject site and does not result in adverse environmental impact.
- 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 East Maitland area, ensuring businesses in the commercial core zone experience uninterrupted access to what is now considered an essential service. This will in turn enable socio-economic benefits to the community;
- The facility will comply with all Government health standards outlined by 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

AHIMS Heritage Search



