From: "Daniel Park" <Daniel.Park@ventia.com>
Sent: Thu, 14 Apr 2022 22:05:33 +1000
To: "Info (Shared)" <info@msc.qld.gov.au>
Cc: "Ryan O'Leary" <Ryan.OLeary@ventia.com>
Subject: Lodgement of development application - 114 Mines Road, Mareeba - Telecommunications Facility [SEC=Internal]
Attachments: MS - Owner's consent.pdf, MS - Planning Report.pdf, Appendix A - Proposal plans.pdf, Appendix B - EME Report.pdf, Appendix C - DATSIP report.pdf, Appendix D - Planning scheme code assessment.pdf, Appendix E - Guide to EME Report.pdf, MS - Current title.pdf, MS - DA Form 1.pdf

Good Evening Mareeba Shire Council,

Please find attached a development application for a Telecommunications Facility over Lot 22 on SP323208, 114 Mines Road, Mareeba QLD 4880.

I will make payment of the required fee via credit card. Please contact me for payment over the phone.

Kind regards,

Daniel Park
Senior Planner

Ventia
Level 1, 10 Browning Street
West End QLD 4101

M 0437 318 759

E daniel.park@ventia.com
W www.ventia.com.au

A list of Ventia Group entities can be found here

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To Whom it may concern

RE – CONSENT OF LANDOWNERS

I refer to the application to obtain planning/building approval for a Telecommunications Facility (or similar) over the land known as 114 Mine Road, Mareeba QLD 4880 more fully described as (Lot 12 on SP323208) ("**the Application**").

The Application is made by Amplitel Pty Ltd c/- Ventia Pty Ltd in its capacity as planning consultant.

The following persons are recorded as the owner/s of the land:

Myles Kenneth Gostelow

.....

Debra Ann Gostelow

.....

We, hereby consent to the Application being made in relation to the land described above.

Name	*Signature*	*Date*
Ken Gostelow	K Gostelow	8/3/2022
Name	*Signature*	*Date*
Debra Gostelow	DGostelow	8/3/2022

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

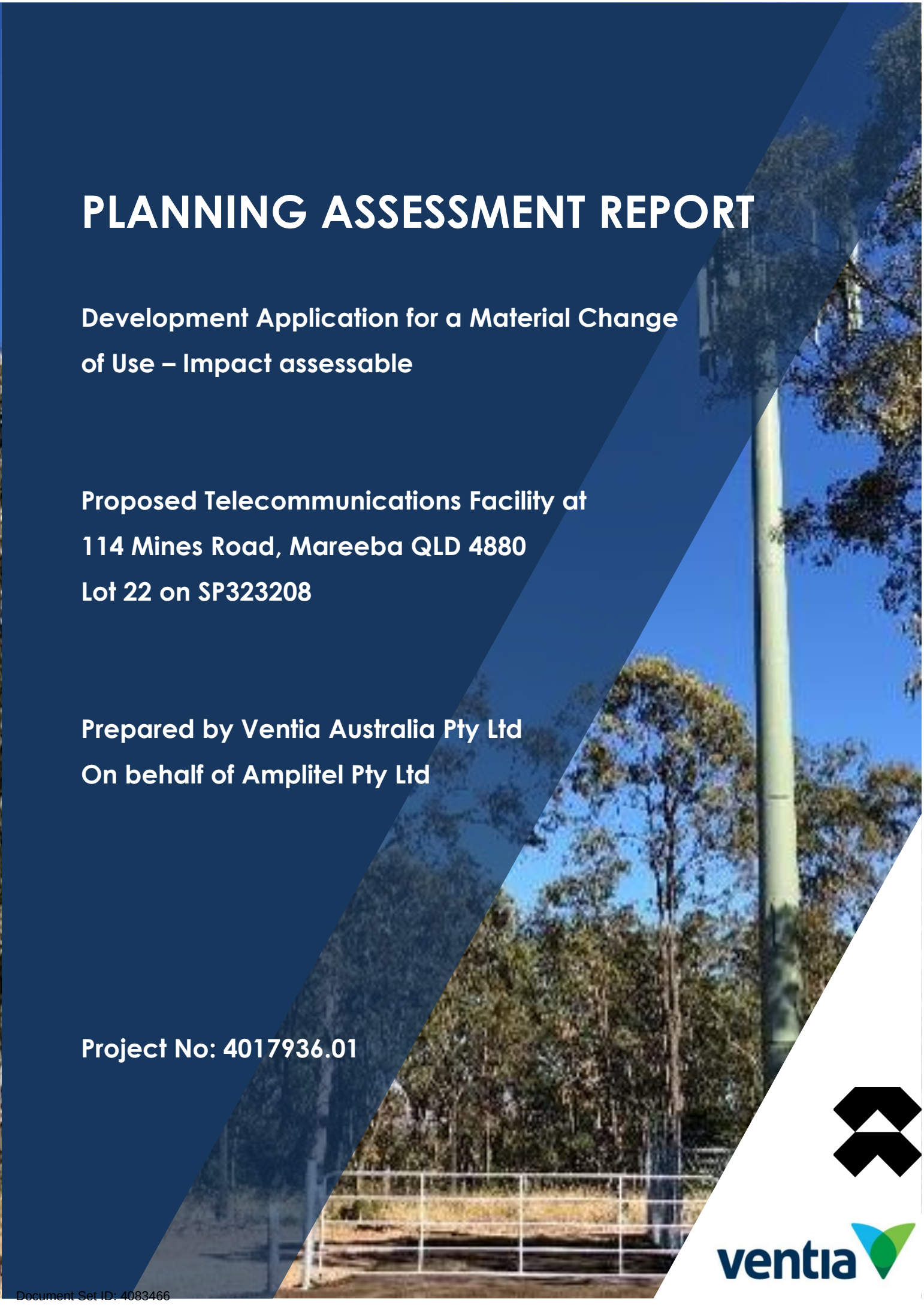
PLANNING ASSESSMENT REPORT

Development Application for a Material Change of Use – Impact assessable

Proposed Telecommunications Facility at
114 Mines Road, Mareeba QLD 4880
Lot 22 on SP323208

Prepared by Ventia Australia Pty Ltd
On behalf of Amplitel Pty Ltd

Project No: 4017936.01



Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

DOCUMENT QUALITY CONTROL

This Planning Assessment Report is prepared by:

Ventia Australia Pty Ltd

ABN 51 603 146 676

Postal Address:

Level 1, 10 Browning Street

WEST END QLD 4101

M 0437 318 759

E Daniel.park@ventia.com

W www.ventia.com

Document Control				
Rev	Date	Status	Prepared by	Reviewed by
1.0	21/02/2022	Draft Planning Assessment Report	DP	DP
1.1	14/04/2022	Finalise Planning Assessment Report	DP	DP

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Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

CONTENTS

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

1.0 EXECUTIVE SUMMARY

Site Address	114 Mines Road, Mareeba QLD 4880
Real Property Description	Lot 22 on SP323208
Coordinates	Latitude -17.03963° Longitude 145.42821°
Site Area	20.17ha
Registered Owner	Myles Kenneth Gostelow - Debra Ann Gostelow
Proposal	Ventia, on behalf of Amplitel Pty Ltd, seeks to establish a telecommunications facility for a mobile phone base station at the above site. The proposed works include installing: • Establishing a 40m monopole on the site (note antennas will protrude to 41.4m above ground level); • Installing nine (9) new panel antennas mounted on a triangular headframe attached to the monopole at an elevation of 40m (centerline); • Installing associated ancillary equipment mounted on the monopole headframe, including remote radio units, diplexers, tower mounted amplifiers, combiners, feeders, cables and other ancillary equipment as required; and • Installing Telstra equipment shelter at the base of the monopole to accommodate proposed equipment. • The above elements within a 12m x 10.0m security fenced and padlocked compound. • Installing solid metal fencing around the exterior of the compound
Site Selection	The site has been identified as the most appropriate location for the new facility given the site-specific coverage objectives of the facility.
Planning Scheme	Mareeba Shire Council
Use Definition	Telecommunications Facility
Zone	Rural residential (4,000 Square Metre Precinct)
Local Plan Area	Not within a local plan area
Overlays	Airport Bushfire Hazard
Application Seeking	Development permit for a material change of use
Level of Assessment	Impact assessable
Referral Agencies	N/A
Applicant	Amplitel Pty Ltd c/- Ventia Australia Pty Ltd **Contact:** Daniel Park **Phone:** 0437 318 759 **Email:** Daniel.park@ventia.com
Reference No.	4017936.01 Mareeba South

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

2.0 INTRODUCTION

This development application has been prepared by Ventia Australia Pty Ltd (**Ventia**), on behalf of Amplitel Pty Ltd (**Amplitel**), and seeks a development permit for a Material Change of Use to allow the installation of a new telecommunications facility at 114 Mines Road, Mareeba QLD 4880, formally known as Lot 22 on SP323208.

Amplitel, a new company part of the Telstra Group is currently undertaking work across Australia to support and expand the new mobile phone infrastructure and coverage for Telstra and other Carrier to improve customer experience through faster and more reliable voice and data services.

Due to an industry-specific network requirement, Amplitel have identified the need to install a telecommunications facility on the site to improve both voice and data services within the surrounding area. Furthermore, the facility will provide 4G and 5G services to the surrounding Mareeba area.

All mobile phone network operators are bound by the operational provisions of the federal *Telecommunications Act 1997 ("The Act")* and the *Telecommunications Code of Practice 2018.* The proposed telecommunications facility installation is not defined as a low-impact facility and is therefore subject to relevant State and local planning provisions.

An extensive site selection process has been completed prior to selecting the subject site as the nominated candidate for a new Telecommunications Facility. This site selection process included considering a variety of factors including planning scheme considerations technical and coverage objectives, cost considerations, land tenure, visual impact and engineering/design criteria. The site was selected as the most appropriate location based on the above considerations, which are outline in **Section 2** of the report.

Pursuant to the *Planning Act 2016* (**PA**), the proposal constitutes a Material Change of Use (**MCU**) and requires a development application to be made to Mareeba Shire Council (**Council**) for approval.

The proposal is subject to the Mareeba Shire Planning Scheme (the **local planning scheme**). The proposal has addressed the applicable provisions of the planning scheme in **Section 11** of this report.

Under the planning scheme, the proposal is defined as a Telecommunications Facility. The site is within the Rural Residential Zone and is subject to a number of overlay features. In accordance with the relevant table of assessment, the proposed Telecommunications Facility is subject to impact assessment as per Part 5, Table 5.5.10 of the local planning scheme.

This Planning Assessment Report demonstrates compliance of the proposal against the Rural Zone Code and the applicable overlay provisions.

Based on the above, the proposed impact assessable MCU application to install a Telecommunications Facility at 114 Mines Road, Mareeba QLD 4800 is considered appropriate for the site and warrants favourable consideration by Council.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

3.0 THE PURPOSE OF THE PROPOSAL

To cater for the growing demand for mobile services, Telstra has embarked on a nationwide rollout to deliver an improved, reliable telecommunications network to the Australian public. The rollout will provide improved mobile coverage and enhanced services in metropolitan, regional and rural areas throughout Australia. This rollout consists of the upgrade of existing telecommunications facilities and where required the installation of new mobile base stations to expand the coverage footprint and offer seamless mobile services.

Additional base stations are required where surrounding facilities cannot provide sufficient coverage to a target area. New facilities are also required when existing base stations are fully utilised and cannot serve additional users in the area. Amplitel and Telstra have undertaken analysis of the Telstra mobile network in Mareeba and has identified areas where coverage and network quality needs to be improved. These includes residential areas as well as the future residential areas to the north-west. If this investment is not made, the following main issues will arise:

1. Users may have difficulty connecting to the mobile network or the call may drop out. This impacts businesses, residents, visitors to the area and the ability of the user to contact emergency services.
2. Users may experience reduced data speeds, longer download times and poor network performance at busy times of the day with data intensive and time sensitive applications (e.g. newscasts, social media, mobile banking, weather forecasts, sports highlights etc).

As noted above, the dearth of Telecommunications Facilities in the southern areas of Mareeba does not only deprive existing users of signal, including those new high-quality residences in ongoing developments to the north-west of the subject site, but also puts at risk the availability of 21st century services to facilitate residential expansion to the south.

Once a need for improved network performance has been identified, the optimisation of existing 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 has not been able to achieve a satisfactory outcome for the network south of Mareeba. Further investigations into the use of other Carrier and broadcast facilities within the area has also been completed. This is discussed in the Site Selection Process of this report.

4.0 THE NEED FOR THE PROPOSAL

Access to wireless services is a critical requirement in the modern era. While Australia has among the fastest mobile networks speeds across the globe, there is an identified coverage disparity between urban and rural areas. This disparity is due to the population concentration in urban areas, with existing wireless services covering 99% of the population but only 33% of the total landmass. As a result, major transport routes and large landholdings miss out on the critical wireless services available in urban areas.

While satellite services for mobile phone and data are available in some rural areas, the steep cost for landholders, unreliability and low data caps are all significant impediments to their daily use.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

The 2018 Regional Telecommunications Review (the **Edwards Review**) brought these issues into clear focus, with important findings relating to:

- economic benefits; and
- social benefits

The Edwards Review found that economic benefits in regional areas are increasingly linked to wireless services, with regional businesses in a weak position to take advantage of new digital applications and economic opportunities. The Australian Government Response to the review strengthened this argument, stating that "*digital agriculture could increase the gross value of Australian agricultural production by $20.3 billion, a 25% increase over 2014-15 levels. The greatest gains are expected to come from remote monitoring, automation, better tailoring of inputs such as fertiliser and seed, and environmental benefits such as efficiencies in water and pest management*".

Tourism is often touted as a key asset to Australia as a whole, with the emerging areas of agri-tourism and eco-tourism combining with the rich and unique history and experiences available in outback areas to provide new economic opportunities for regional areas. Connectivity is a driver of such economic opportunities, even in rural areas. Data from Tourism Australia shows that 289 million visitor nights were spent in regional Australia in 2017, up from 234 million in 2012. The Edwards Report includes first-hand examples from regional tourism operators on the challenges they have faced and how technologies have or could improve their businesses.

The education opportunities in regional areas of Australia have lagged behind those in urban areas for several decades (Karmel. 1973 and Lamb et al. 2014). The need to send children and young adults to cities to obtain the education available in urban areas was long seen as a necessity. The advent of digital education services has proven a boon in ensuring that families in regional areas can stay together while still receiving a high-quality education. Irrespective of students being educated via distance or at local schools, education is increasingly digital. With video being a key component of lessons, access to wireless services is essential.

Social cohesion and connectivity is another important aspect of the digital age. Expanded wireless services allow for regional and rural communities more options to communicate with each other and with relatives and/or friends in other cities and countries. Additionally, rural and remote communities are less likely to have access to a range of health care services (Rural Health Standing Committee, 2016: National Strategic Framework for Rural and Remote Health). Given the natural hazards such as drought, bushfires and floods that are a frequent and ongoing occurrence in Australia, access to mental health services can be of critical importance. Wireless services allow for more communications opportunities in regional areas and opens additional avenues for mental health services (National Mental Health Commission, 2018).

Wireless services are also important for safety reasons, particularly in relation to the aforementioned natural hazards present in Australia. The 2017-2018 ACMA Communications Report showed that in 2017-2018 there were nine (9) millions calls made to emergency services numbers, and increase of 4.8 per cent from 2016-2017, with the majority made from mobile phones. This increase in emergency numbers calls from mobile phones is a continuing trend, with the share increase by approximately 2-3% on average every year from 2012-2014. In regional and remote communities, where potentially dangerous tasks are undertaken on a daily basis, but where neighbours or family-members are oftentimes out of earshot, the ability to call for assistance from a mobile phone can be critical.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

The proposal is an important aspect of bridging the digital disparity between denser urban area and regional communities, and in doing so better supporting their communities in a range of areas, including economic, education, social and safety.

4.0 MOBILE TELECOMMUNICATIONS NETWORKS

A mobile telecommunications network is made up of multiple base stations covering a geographic area. They work by sending and receiving low power radio signals from their antennas to mobile phones and other mobile devices such as tablets, wireless dongles etc. Base stations are designed to provide service to the area immediately surrounding the base station – can be up to several kilometres. Depending on the technical objectives of a base station, the physical characteristics of each telecommunications facility; such as its height, number and size of antennas, equipment, cabling etc. will vary.

As a general rule, the higher the antennas at a base station, the greater it's range of coverage and its ability to relieve capacity issues. If this height is compromised, additional facilities, and thus more infrastructure will be required for any given locality. The further a facility is located away from its technically optimum position, the greater the compromise of service. This may result in coverage gaps and require additional or taller base stations to provide adequate service.

Each base station transmits and receives signals to and from mobile devices in the area. As the mobile device user moves around, their device will communicate with the nearest base station/ facility to them at all times. If they cannot pick up a signal, or the nearest base station is congested (already handling the maximum number of phone calls or maximum level of data usage) the user may not be able to place a call, experience a call "drop out" or a slowing data rate while attempting to download content.

There are three main factors that can cause the above:

- You may be too far away from a facility to receive a signal, or there may be objects blocking the signal from the nearest facility; such as, hills, large trees or even buildings. To ensure optimum service the radio signals transmitted between the facility antennas and mobile devices need to be unimpeded, maintaining a "line-of-sight" between them.
- The facility may be handling as much data download and calls as it can handle – call drop-outs and slower data rates can occur when too many users are connected to a facility at once.
- The depth of coverage (which affects the ability to make calls inside buildings), may be insufficient in some local areas.

The current proposal will form part of Telstra's network to Mareeba and surrounding areas and will deliver essential mobile services (voice calling, SMS), as well as live video calling, video-based content including; news, finance and sports highlights, and high-speed wireless internet–wireless broadband. With a coverage footprint of more than 2.1 million square kilometres and covering more than 99% of the Australian population. Telstra's network is Australia's largest and fastest national mobile broadband network and as such requires more network facilities, located closer together to ensure a high-quality signal strength to achieve reliable service and the fastest possible data transfer rates.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

5.0 SITE SELECTION

Amplitel commences the site selection process with a search of potential sites that meet the network's technical requirements, with a view to also having the least possible impact on the amenity of the surrounding locality. Amplitel applies and evaluates a range of criteria as part of this site selection process.

Telstra and Amplitel assess the technical viability of potential sites through the use of computer modelling tools that produce predictions of the coverage that may be expected from these sites as well as from the experience and knowledge of the radio engineers.

There are also a number of other important criteria that Telstra uses to assess options and select sites that may be suitable for a proposed new facility. These take into account factors other than the technical performance of the site, and include:

1. The potential to co-locate on an existing telecommunications facility.
2. The potential to locate on an existing building or structure.
3. Visual impact and the potential to obtain relevant town planning approvals.
4. Proximity to community sensitive locations and areas of environmental heritage.
5. The potential to obtain tenure at the site.
6. The cost of developing the site and the provision of utilities (power, access to the facility and transmission links).

In making the proposal for this site at Mareeba, Amplitel has carefully weighed all of the aforementioned criteria. This analysis is detailed in the next section.

6.0 CANDIDATE SITES

Amplitel carefully examined a range of possible deployment options in the area before concluding that a new mobile base station at 114 Mines Road, Mareeba QLD 4880 would be the most appropriate solution to provide necessary mobile phone coverage to the Mareeba locality.

Accordingly, this section of the report will demonstrate the following:

- Colocation opportunities and existing telecommunications infrastructure within proximity to the proposed installation; and
- An analysis of the locations considered when determining an appropriate location for a new telecommunications installation within the required coverage area.

6.1 Colocation Opportunities

The Communications Alliance Ltd. (formerly Australian Communications Industry Forum Ltd. - ACIF) Industry Code C564:2020 – Mobile Phone Base Station Deployment promotes the use of existing sites in order to mitigate the effects of facilities on the landscape. It should also be noted that as a first preference, Amplitel attempts to utilise, where possible, any existing infrastructure or co-location opportunities. Co-location is the beneficial reuse of an existing tall structure to negate a need for a new tower in the area, with antennas and equipment being placed on the existing tall structure and the immediate ground area. Co-locations will commonly include an

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

existing Telecommunications Facility, but can include tall residential buildings, radio towers, or government assets such as water tanks.

Figure 1 shows all existing tall infrastructure and existing and proposed telecommunications facilities surrounding within the surrounding area.

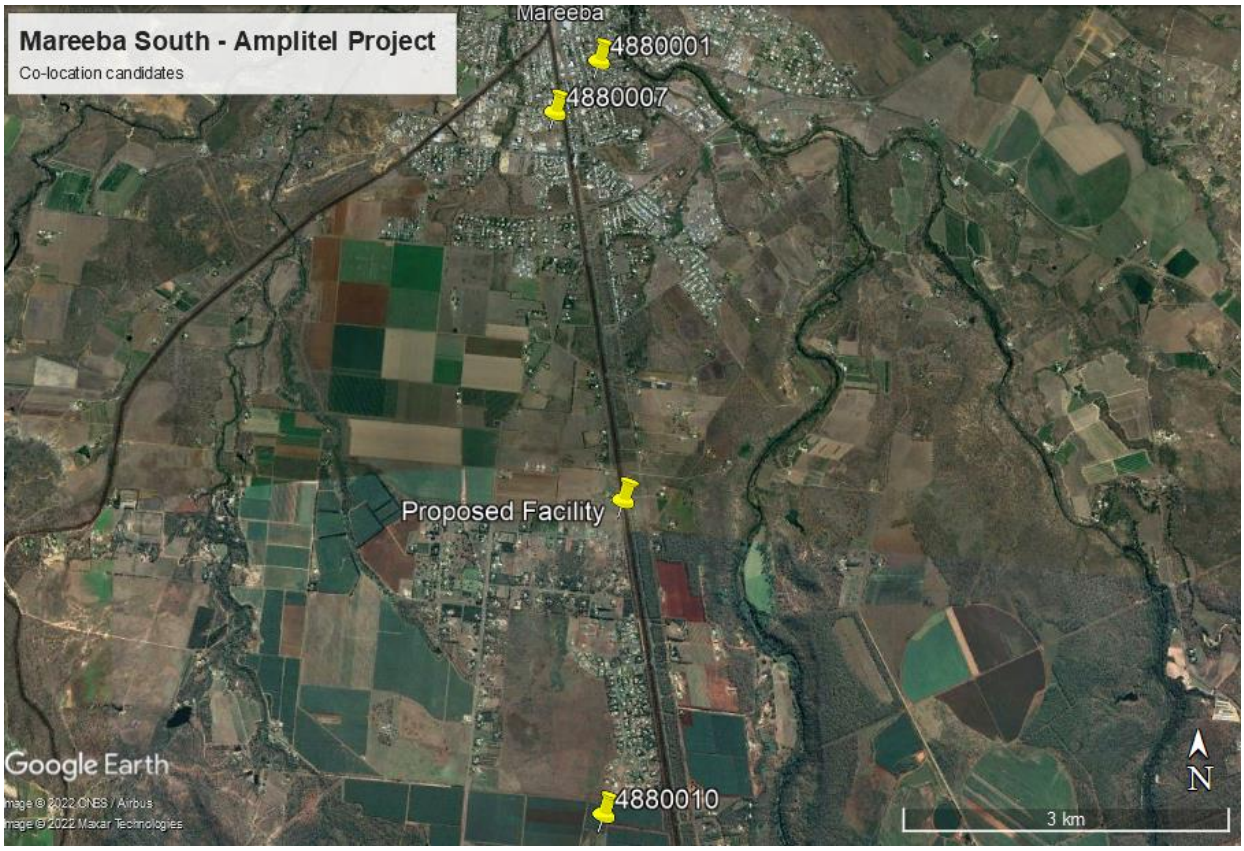

Figure 1: Location of nearby existing telecommunications facilities – (Source: www.rfnsa.com.au)

Table 1: Details on potential co-location candidates

Address	RFNSA Site No.	Reason for exclusion
130 Constance Street MAREEBA QLD 4880	4880001	Site is further away from coverage target area than the existing NBN tower co-location opportunity at site 4880007.
137 Mason Street MAREEBA QLD 4880	4880007	Site is a 40m NBN lattice tower. This site is over 3.5km from the target coverage area and so co-location on it would not provide the coverage sought by Telstra. with regards to colocation and is unable to accommodate any further facilities.
94 Vicary Road MAREEBA QLD 4880	4880010	This site is a 40m NBN monopole. The facility is 2.9km from the target coverage area and so would not provide the coverage sought by Telstra.

As indicated in figure, the closest existing telecommunications facility to the target coverage area is a 40m NBN facility at 94 Vicary Road

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

MAREEBA QLD 4880. Given the significant distance from the proposed Amplitel Facility and its target coverage area, any co-location on this facility would not reduce the need for a new facility to cater for residences surrounding the proposed facility, including new residential developments to the north-west.

Of the remaining other potential telecommunication facility co-location opportunities identified through an examination of identified RFNSA sites, all are further away from the target coverage area than the aforementioned 40m NBN monopole and so would not provide the necessary coverage.

6.2 Non-colocation candidates considered

The site selected is deemed to be the most optimal location to achieve the required coverage for Telstra in this area and requires a 40m tower and associated structures on the subject site. These non-colocation candidates are shown in **Figure 2**, with additional detailed provided in

Table 2.

Figure 2: Non co-location candidates assessed during site selection process – (Source: www.rfnsa.com.au)

Table 2: Summary of non-colocation candidates considered

Candidate	Location	Comments

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

A	189 Ray Road, Mareeba QLD 4880 46/SP210288	Site is undergoing development as part of the approved Mareeba lifestyle residential development. No response from landowner and despite telecommunications service being critical to residential expansion in area, accommodation on smaller sites is unrealistic.
B	161 Ray Road, Mareeba QLD 4880 101/SP292876	Owner agreeable to Amplitel proposal. Site would be in clear view of existing residences part of Mareeba Lifestyle development and the second stage which is approved but not yet constructed. Site fibre and power extension not unfeasible and low environmental hazards. Site not preferred from radio-frequency/coverage position. Potential backup site.
C	103 Ray Road, Mareeba QLD 4880 4/RP707932	Owner agreeable to Amplitel proposal. Site would be within 50m of dwelling on adjacent land, with this contributing to amenity impacts. Mareeba lifestyle development approximately 240m to south would have the advantage of some screening immediately south of proposed site. Site fibre and power extension not unfeasible and low environmental hazards. Site not preferred from radio-frequency/coverage position. Potential backup site.
D	34 Jennings Road, Mareeba QLD 4880 11/RP714124	No response from landowner. Site located on outer edge of target coverage area and so would not provide ideal coverage. Site is 150m from nearest exiting residence but would be 90m from second stage of Mareeba lifestyle development to south. Existing agriculture use would not provide much screening given it occurs mainly to west of proposed site.
E	246 Ray Road, Mareeba QLD 4880 2/RP720985	No response from landowner. Site located on outer edge of target coverage area and so would not provide ideal coverage. Site is 120m from nearest exiting residence but would be 50m from second stage of Mareeba lifestyle development immediately to east and 170m from the existing first stage which has dwellings built. Existing agriculture use would not provide much screening given it occurs mainly to west of proposed site.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

F	163 Martin Avenue, Mareeba QLD 4880 1/RP736514	Site is on outer periphery of target coverage area and so would provide sub-optimal coverage, particularly along Norman Street, Gallo Drive and parallel section of Ray Road. Existing lease covers entirety land area to the benefit of the Mareeba Motor Inn, making accommodating an additional lease area for the Amplitel proposal very difficult. Site would be within 70m of large residential dwelling and curtilage to south with little visual obstruction.
G	153 Martin Avenue, Mareeba QLD 4880 1/RP721116	Site is on outer periphery of target coverage area and so would provide sub-optimal coverage, particularly along Norman Street, Gallo Drive and parallel section of Ray Road. Site would be within 50m of Mareeba Motor Inn, though to rear of main entrance area. No visual obstruction to Motor Inn or to dwelling 105m south of site.
H	155 Martin Avenue, Mareeba QLD 4880 21/SP237080	No response from landowner. Site is on outer periphery of target coverage area and so would provide sub-optimal coverage, particularly along Norman Street, Gallo Drive and parallel section of Ray Road. Site would be within 100m of Mareeba Motor Inn, though to rear of main entrance area. No visual obstruction to Motor Inn or dwelling 150m south of site, with some mature tree visual obstruction to dwelling 130m to west.
I	5141 Kennedy Highway, Mareeba QLD 4880 1/RP720060	Initial responses from landowner but did not respond to later communications. Site is on outer periphery of target coverage area and so would provide sub-optimal coverage, particularly to residences nearest the intersection of George Fabris Road and Ray Road. Site is 187m from nearest residence with some screening.
J	62 Mines Road, Mareeba QLD 4880 1/RP711399	Landowner confirmed not interested in proposal.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

K	74 Mines Road, Mareeba QLD 4880 11/SP298317	Relatively central site to coverage area but ideal coverage solution on property would place proposal in close proximity to multiple existing and future dwellings as part of Mareeba Lifestyle development, with no trees to offer obstruction. Location would also require long access track. Location closer to existing roadfront would place it 120m from nearest residence. Given K provides better coverage and lower amenity impacts, candidate was considered a potential backup.
L	92 Mines Road, Mareeba QLD 4880 12/SP298317	Relatively central site to coverage area but ideal coverage solution on property would place proposal in close proximity to multiple existing and future dwellings as part of Mareeba Lifestyle development, with no trees to offer obstruction. Location would also require long access track. Given K provides better coverage and lower amenity impacts, candidate was considered a potential backup.
M	112 Mines Road, Mareeba QLD 4880 21/SP323208	Site is best of all candidates for potential coverage, being central to coverage area. Site would not require the clearing of any trees and only a short access track. Site is approximately 180m from nearest residence, with eight (8) residences within 400m. Site has excellent screening to east and moderate screening to south, where a moderately dense area of rural residential properties is. Site provides an approximate 740m separation from the Mareeba Lifestyle development, the highest density area of dwellings in the area.
N	32 Mines Road, Mareeba QLD 4880 6/RP708737	No response to attempted contacts with landowner. The site is in the northern part of the target coverage area and so this would restrict coverage to the southern rural residential properties in the area. The site would be approximately 130m from the nearest residence with little obstructing vegetation. Site would also be approximately 360m from the future Mareeba Lifestyle development area, also with no obstructing vegetation. Site access would not be excessive length.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

O	14 Mines Road, Mareeba QLD 4880 21/RP748222	No response to attempted contacts with landowner. The site is in the far northern part of the target coverage area and so this would restrict coverage to the southern rural residential properties in the area. The site would be approximately 180m from two (2) residences with little obstructing vegetation. Site would also be approximately 360m from resi1 future Mareeba Lifestyle development area, also with no obstructing vegetation. Site access would not be excessive length.
P	8 Mines Road, Mareeba QLD 4880 20/RP748222	No response to attempted contacts with landowner. The site is in the far northern part of the target coverage area and so this would restrict coverage to the southern rural residential properties in the area. The site would be approximately 180m from two (2) residences with little obstructing vegetation. Site would also be approximately 360m from resi1 future Mareeba Lifestyle development area, also with no obstructing vegetation. Site access would not be excessive length.
Q	Lot 2 Ray Road, Mareeba QLD 4880 2/RP747077	Site is in far northern target coverage area and so is not optimal from a coverage consideration. Site is owned by Council and so would require long acquisition timeframe. Site would require vegetation clearing for tower and construction area and a significant fibre and power extension. Dependent on final location, some clearing may be required within Category B regulated vegetation area. Given lack of historic clearing over site, site may require a cultural heritage agreement with Traditional Owners.
R	199 Martin Avenue, Mareeba QLD 4880 1/RP720925	Landowner confirmed not interested in proposal. Site is on outer periphery of target coverage area and so would provide sub-optimal coverage. Site is 150m from nearest residence with minimal screening and with direct views downslope towards facility.
S	205 Martin Avenue, Mareeba QLD 4880 2/RP735702	Site is on outer periphery of target coverage area and so would provide sub-optimal coverage. Site is 150m from nearest residence with minimal screening and with direct views downslope towards facility. Site would require over 1.5km of fiber extension, including under Kennedy Highway.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

T	5187 Kennedy Hwy Mareeba QLD 4880 2/RP720060	Landowner confirmed not interested in proposal. Site is on outer periphery of target coverage area and so would provide sub-optimal coverage. Site is 150m from nearest residence with minimal screening and with direct views downslope towards facility.
U	5187 Kennedy Hwy Mareeba QLD 4880 2/RP720060	Landowner confirmed not interested in proposal. Site is on outer periphery of target coverage area and so would provide sub-optimal coverage. Site is 150m from nearest residence with minimal screening and with direct views downslope towards facility.

As aerial imagery of the area shows, Ventia spoke to a large amount of landowners and assessed a large area of land to find the best candidate to progress a new tower in the area. The area was particularly challenging due to:

- the proximity to existing and approved residential developments in the area;
- the long fibre runs for many candidates;
- the coverage needs for the area, which is generally typified by large land parcels and singular dwellings; and
- a need to avoid areas particularly close to the airport due to interference with airport safety measures.

Of the candidates who were open to the proposal, most had a preference for the tower to be a distance from their existing dwellings or proposed future dwellings. Of all potential candidates, Candidate M had what was considered a balance between all considerations.

6.3 Nominated Candidate

A preferred nominated candidate was selected for the proposed facility based on the radiofrequency objectives, planning and environmental issues, potential community sensitive uses and engineering criteria. In this case, **Candidate M** was considered the best option. This was based on the following:

- The site is technically feasible and can achieve Telstra's coverage and capacity objectives by installing the new monopole facility;
- The site will provide high-quality coverage to the Mareeba area, which provide an important first response tool in emergency situations;
- The site is within the Rural Residential Zone, which is a suitable location for the proposed facility where vegetation clearing is not required and the existing and future use of the land will not be impacted;
- The proposed facility maintains what is considered to be appropriate separation from surrounding sensitive land uses;
- The landowner is supportive of the Telstra proposal;
- The site is not located within an environmentally or culturally significant area;

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

- The site is appropriately serviced and can be supplied with power and access with relatively few and minor impacts;
- The facility will allow for co-location by other Carriers, reducing the need for duplicative facilities in the area;
- The costs associated with delivering the site and constructing the facility are considered by Amplitel to be reasonable.

7.0 SUBJECT SITE & SURROUNDS

7.1 Site details

Site Details	
Site address	114 Mines Road, Mareeba QLD 4880
Real property description	Lot 22 on SP323208
Coordinates	Latitude -17.03963° Longitude 145.42821°
Site area	21.7ha
Registered owner	Myles Kenneth Gostelow - Debra Ann Gostelow
Existing land use	The existing use of the land is a dwelling
Vegetation	The overall land area outside the dwelling area and its immediate surrounds is sparsely vegetated, with native grasses the general ground-cover. There are several ornamental trees of 2-3m located west of the facility.
Topography	The site topography is flat, at 444m AHD.
Services	The site has one (1) existing crossover for the dwelling. The site does have an unformed crossover in the south-eastern corner of the subject site, adjacent to a pump tower. The site has nearby access to power, while fibre will be extended 1490m to the proposed facility.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

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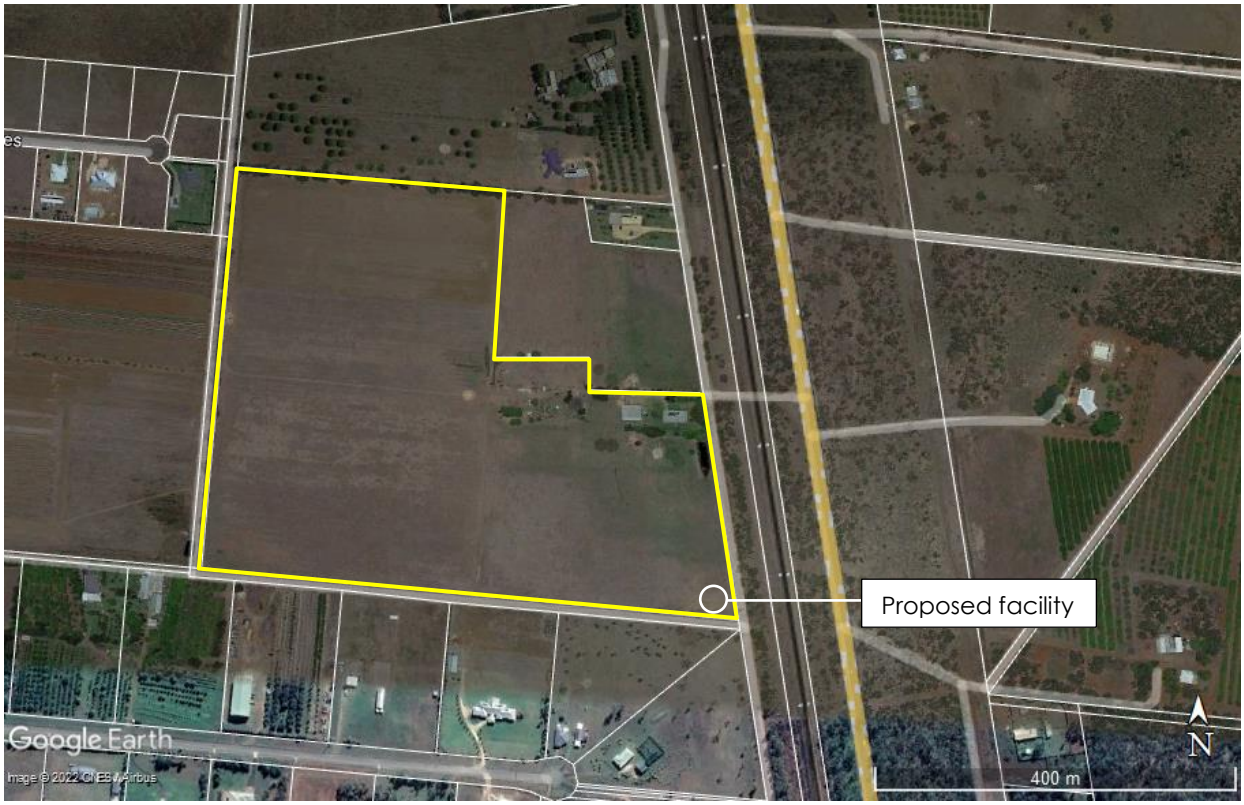
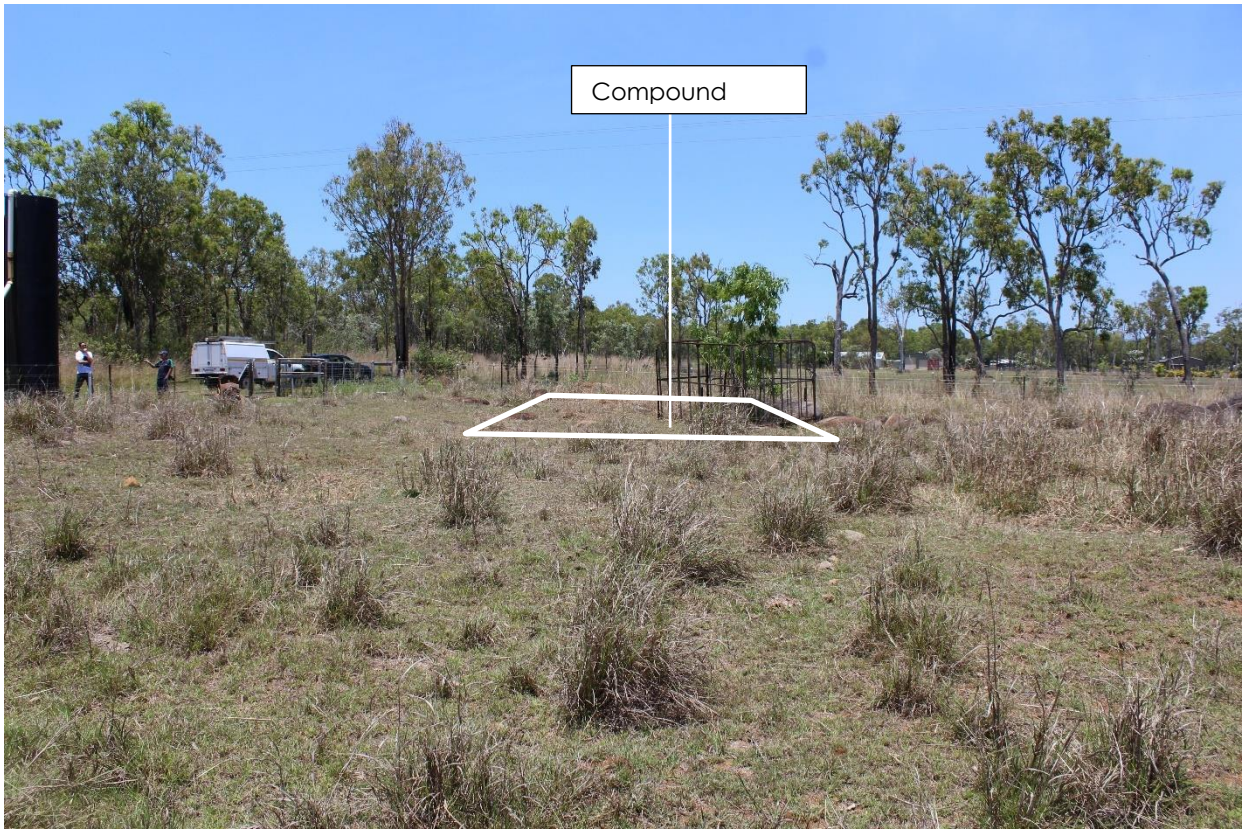


Figure 3: Aerial view of the site (Source: Google Earth 2021)



Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 4: The proposed compound area looking south-east(Source: Ventia 2021)

Figure 5: Photo of secondary site access and water pump (Source: Ventia 2021)

7.2 Surrounding area

The proposed facility location is approximately 4.75m south of the centre of the Mareeba townships, 3.3km north of the Mareeba Airport and 125m west of the Kennedy Highway. (**Figure 6** and **Figure 7**). The subject property (12 on SP323208) is situated north of a rural residential style area with blocks generally 2 hectares in size, at the southern extent of a rural/agricultural area. The subject site is 700m south-west of the closest property making up part of the Mareeba Lifestyle residential development, comprised of parcels averaging 4000m^2.

North	Due to the irregular shaped of the subject site there are two (2) northern parcels, both of which are rural. One (1) parcel, Lot 21 on SP323208, is a vacant parcel while the other, Lot 12 on SP298317 is improved by a dwelling.
East	To the east of the property is Mines Road, beyond which is a service road and the Kennedy Highway. Between each of these elements is mature vegetation including trees up to 12m in height and relatively dense shrubbery 3-4m in height.
South	To the south of the subject site are several rural lots, each containing a dwelling.
West	The western boundary is adjoined by Lot 6 on 720057, a thin 12m wide parcel held under a perpetual lease for utility services. Beyond this, due to the length of the western boundary, there are two (2) adjoining parcels, one (1) parcel, Lot 2 on RP745183 is a large agricultural property improved by a dwelling while the other, Lot 34 on SP210288 is a small residential parcel part of the Mareeba Lifestyle development which is improved by a dwelling.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

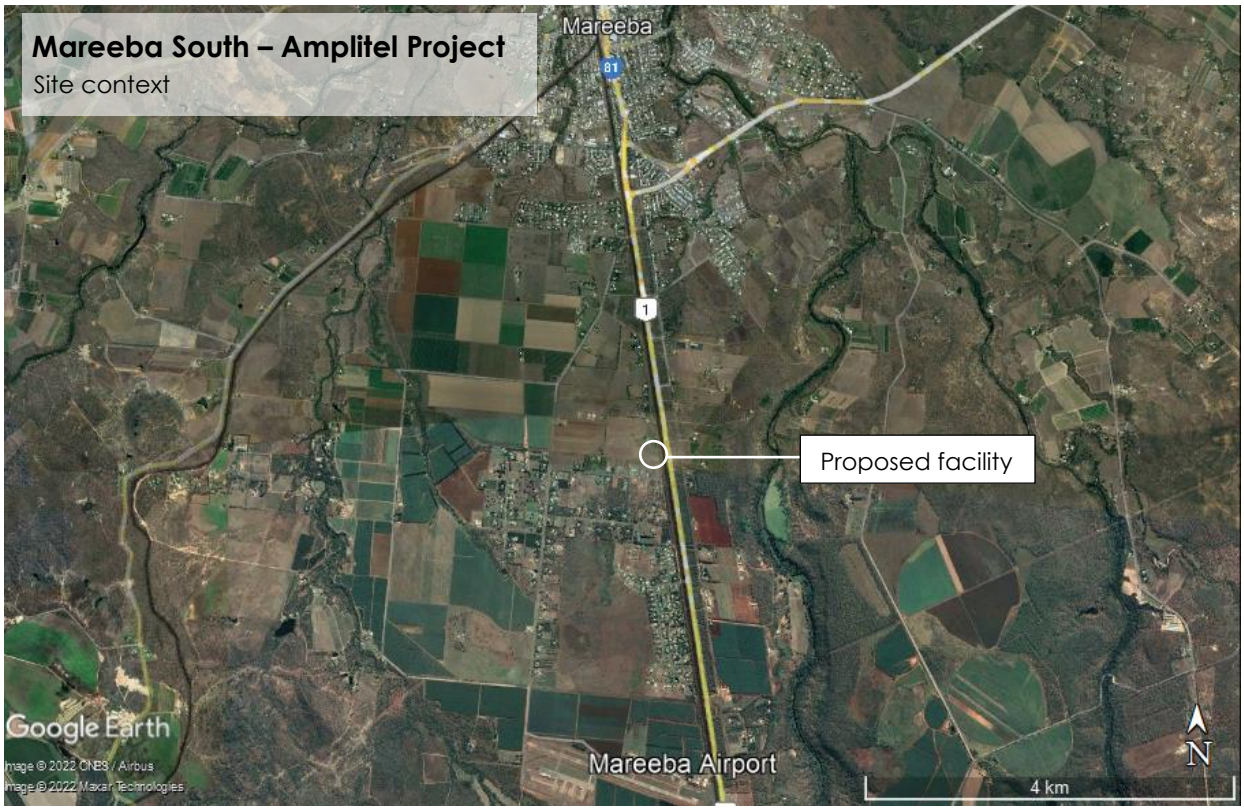


Figure 6: Context view of subject site (source: Google Earth 2021)

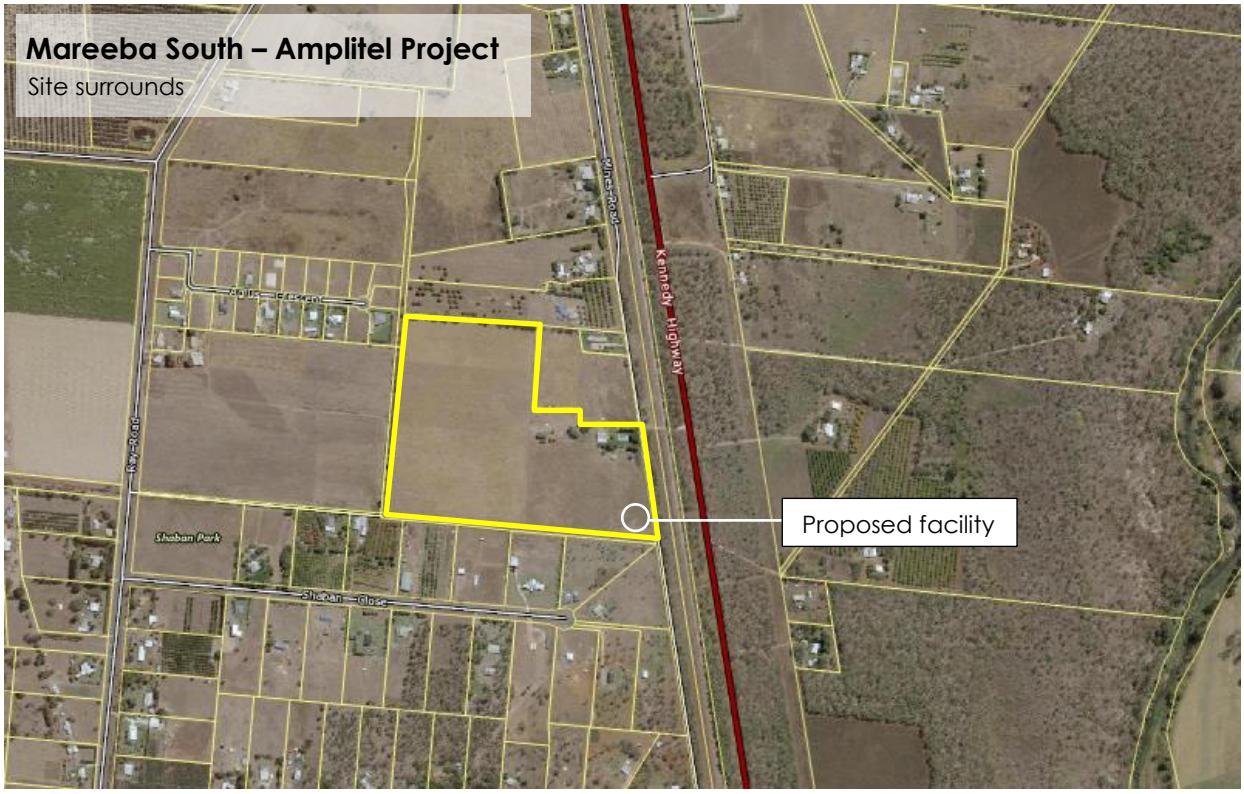


Figure 7: Aerial view of the surrounding area (source: Google Earth 2021)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

7.3 Pre-lodgement advice

As part of its due diligence Ventia requested pre-lodgement advice from or a meeting with Council to discuss the proposal. To ensure the advice/meeting was targeted, Ventia provided a preliminary set of plans, site photos and a list of matters to discuss. Council provided its pre-lodgement advice on 31 January 2022. In its advice Council was supportive of the proposal, stating that with the exception of potential CASA requirements, "*Council officers have no other siginificant town planning concerns with the proposed development*". Council was also supportive of the use of a solid fence to surround the facility in lieu of landscaping.

8.0 PROPOSAL

The following proposal is necessary to provide improved 5G, 4G and voice telecommunications services from Telstra within the Mareeba locality and allow for co-location by other Carriers.

8.1 Facility and Equipment Overview

The proposed telecommunication installation requires the following works:

- Establishing a 40m monopole on the site (note antennas will protrude to 41.4m above ground level);
- Installing nine (9) new panel antennas mounted on a triangular headframe attached to the monopole at an elevation of 40m (centerline);
- Installing associated ancillary equipment mounted on the monopole headframe, including remote radio units, diplexers, tower mounted amplifiers, combiners, feeders, cables and other ancillary equipment as required; and
- Installing Telstra equipment shelter at the base of the monopole to accommodate proposed equipment.
- The above elements within a 12m x 10.0m security fenced and padlocked compound.
- Installing solid metal fencing around the exterior of the compound

The proposed installation is proposed to be a factory standard concrete finish which will integrate with contrasting colours on the subject property and the neutral sky backdrop.

The proposal is demonstrated through the proposed plans, attached in **Appendix A**.

The proposed installation will be an unpainted/untreated concrete grey in colour (**Figure 8**) Colour treatment to an array of colours is available, including white or earth-tones (full colour array provided under AS2700 colour-scheme). Colour treatments for towers and tower-mounted equipment are generally undertaken to allow for the tower to better blend into vegetated backdrops, hillsides or other tall structures Figure **9**). Colour-treatments can create a structure that is more noticeable against the skyline and as a result, is not recommended in this instance.

The proposal is demonstrated through the proposal plans, attached in **Appendix A**.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

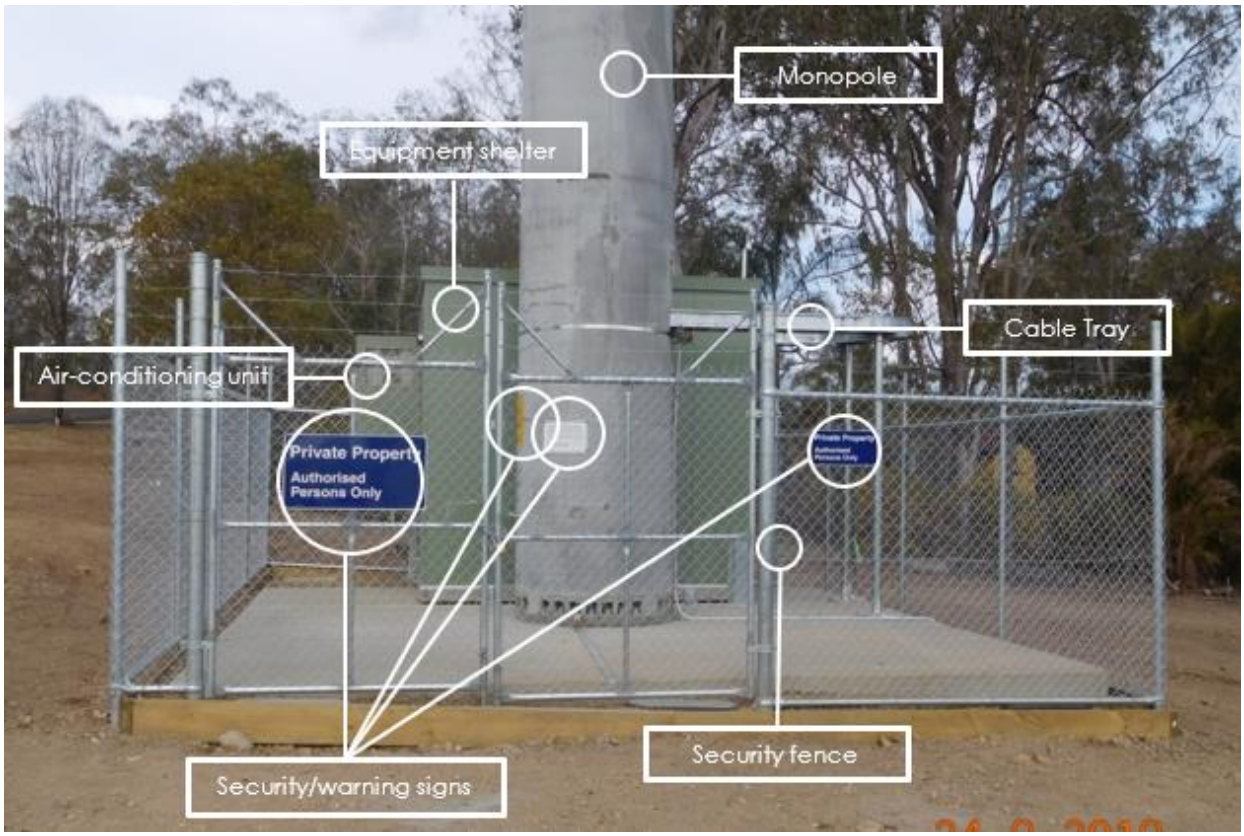


Figure 8: Image of example compound with security fence, equipment shelter cable tray and concrete pole (no-colour-treatment and example does not include solid coloured fencing surrounding compound) (Source: *Ventia*, 2020)

Figure 9: Image of example 40m monopole with headframe and antennas all colour-treated mist-green. Note that image does not include solid coloured fencing surrounding compound (Source: *Ventia*, 2020)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

8.2 Transport, access and parking

Access to the facility is proposed to be taken off Mines Road via a new crossover. This is due to the existing rural crossover being insufficient in width and being unable to be widened to a sufficient width due to the existing pump station.

The new crossover will :

- require the removal of existing boundary fencing;
- be located approximately 35m north of the south-eastern corner of the property parcel;
- be in accordance with standard drawing Rural Allotment Access, dated 27/08/2020, reference S1105, version F of the FNQROC-Development-Manual-Version 8 (2019), including being 4.8m in width at the property boundary and 3.5m in width at the property boundary
- incorporate a manual and locked swing gate on the subject site to prevent access and usage by member of the public

The gate will be padlocked with a key retained by Telstra personnel.

The internal access route is proposed to be crushed gravel 3m in width and will be approximately 20m in length.

The location of the proposed access route and crossover is indicatively shown on the proposal plans attached in **Appendix A**.

Mobile phone base stations require only infrequent maintenance visits (i.e. only two (2) to four (4) times per year). Furthermore, the site will operate on a continually unmanned basis. As such, the proposal will not be a significant generator of vehicular and/or pedestrian traffic.

Therefore, the proposed access provisions will provide appropriate access to the use for the infrequent maintenance inspections. Furthermore, dedicated parking spaces are not considered necessary for the site given the very low traffic generation of the use and the unmanned nature of the site. There is sufficient space adjacent to the facility to allow for maintenance parking when necessary.

During the construction of the facility, a truck will be required to deliver necessary equipment to the site and a crane will be used to establish the facility. Traffic associated with the construction phase will be temporary in nature and will not affect existing traffic flows of the surrounding area.

8.3 Utilities

The proposal will require the extension of power and fibre to the subject site. The fibre extension will be approxim 1490m in length, while power will be taken from the existing house power pole, an extension of 220m. The unmanned nature of the proposed mobile base station removes the need for connection to water or sewer services.

Furthermore, the proposal incorporates very minimal hard surfaces and therefore will generate insignificant stormwater runoff from the site, which currently runs as overland flow.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

8.4 Construction schedule

The construction of the proposed mobile phone base station primarily consists of the following processes:

- Site preparation and foundation earthworks – Including site clearing and access track preparation
- Tower foundation installation – Concreting of foundations and installation of underground conduits.
- Tower assembly including head frame and equipment shelter – Crane on site for duration of tower assembly
- Installation of new equipment using an EWP and laying of cabling – reflective of the scope of works outlined within this Development Application; and
- Network Integration – Ensuring that the mobile phone base station can connect with both end users and other sites within the Telstra network.

No road closures will be required for the erection and installation of equipment, as all construction equipment can be set-up on the subject property.

Noise and vibration emissions associated with the Telstra Mobile Base Station Facility will be limited to the construction phase.

8.5 Acoustic

Noise and vibration emissions associated with the proposed facility would be limited to the construction/demolition phase outlined above. The works are to be concluded in a timely manner, so that residents and visitors to the Mareeba area should not inconvenienced in the long term.

During normal operation the noise emanating from the air- conditioning equipment would be similar to those used in domestic situations and will comply with the background noise levels given in Australian Standard AS 1055.

9.0 RELEVANT FEDERAL LEGISLATION

The following information provides a summary of the Federal legislation relevant to telecommunications deployment.

As a licensed telecommunications carrier, Telstra must operate under the provisions of the *Telecommunications Act 1997* and the following supporting legislation:

- The Telecommunications Code of Practice 2018;
- The Telecommunications (Low-impact Facilities) Determination 2018 (as amended);
- Mobile Phone Base Station Deployment Code; and
- The Environment Protection and Biodiversity Conservation (EPBC) Act 1999.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

9.1 Telecommunications Act 1997

The *Telecommunications Act 1997* (the Act) is the principal Act that governs the activities of telecommunications carriers. The aim of the *Telecommunications Act 1997* is to provide a regulatory framework that promotes:

- The long-term interests of end users of carriage services or of services provided by means of carriage services; and
- The efficiency and international competitiveness of the Australian Telecommunications Industry.

The proposal is required to comply with the requirements of the *Telecommunications Act 1997*.

9.2 Telecommunications Code of Practice 2018

The *Telecommunications Code of Practice 2018* (The Code) authorizes a carrier to enter land, inspect land and install and maintain a facility. The Code emphasizes "best practice' for the installation of facilities, compliance with industry standards and minimization of adverse impacts, particularly in terms of degradation of the environment and visual impact. The proposal is considered to comply with "best practice" given the proposal will:

- Provide improved telecommunications and wireless internet coverage in the Mareeba area;
- Be located within a rural zone, which maximizes separation to more dense residential areas; and
- Comprises the smallest configuration possible for the site to reduce the visual impact of the proposal, while providing appropriate coverage to the surrounding area.

9.3 The Telecommunications (Low-impact Facilities) Determination 2018

The Telecommunications (Low-impact Facilities) Determination 2018 identifies both the type of facilities that can be "Low-impact", and the areas in which these facilities can be installed.

The proposal is for a freestanding monopole, associated antennas and equipment. Therefore, the facility **cannot be considered to be a Low-impact facility.** Accordingly, the proposal is not exempt from State and local planning laws and therefore the provisions of the Act 2016 and the Mareeba Shire Council Planning Scheme are applicable.

9.4 Mobile Phone Base Station Deployment Code

The Communications Alliance Limited – *Mobile Phone Base Station Deployment C564:2020* (the Deployment Code) is an industry code of practice registered by the Australian Communications and Media Authority. All licensed telecommunications carriers must abide by the Deployment Code provisions.

The code does not change any regulations at a local, State or Federal level, but supplements these regulations applying to telecommunications carriers, including Telstra. The code sets guidelines for site selection, community consultation, design, installation and operation of telecommunication facilities.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Sections 4.1, 4.2 and 8.0 of the Deployment Code are specifically relevant for the new installation. These sections require completion of precautionary approach checklists for site selection, infrastructure design and site operation. Furthermore, it is a requirement for an electromagnetic energy (EME) report to be prepared for all new sites.

In accordance with the Deployment Code requirements, the precautionary approach checklists have been duly completed and an EME report has been prepared for the site. The information is attached to this report in **Appendix B**.

9.5 Environment Protection and Biodiversity Conservation Act 1999

The *Environmental Protection Biodiversity Conservation Act* (the EPBC Act) controls matters of national environmental significance. The key objectives of the EPBC Act include:

a. *"To provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; and*
b. *To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and*
c. *To promote the conservation of biodiversity; and*
d. *To provide for the protection and conservation of heritage…"*

Amongst other aspects, the EPBC Act relates to matters of national environmental significance, including world heritage areas, natural heritage places (including declared RAMSAR wetland areas), listed threatened species in communities, listed migratory species, protection of environment on nuclear actions, and environment matters.

The proposal is **not** identified as having a significant impact on any of the above matters of national environmental significance. Therefore, the proposal will not require referral to the Government Minister for the Environment for assessment.

9.6 Native Title Act 1993

The *Native Title Act 1993* (the **Native Title Act**) was given effect on 1 January 1994 and recognises the rights and interests of Aboriginal and Torres Strait Islander people in land and waters according to their traditional laws and customs. The Native Title Act also sets out processes through which development as a Future Act can proceed with regards to the rights and interests of Traditional Owners.

The subject site is identified on a site that is not the subject of any registered native title claim, noting that the only claim for the area (QC2021/003) (**Figure 10**), was not accepted. As provided through the Native Title Tribunal, procedural rights are given to specific parties only where a claim has been accepted for registration.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 10: Excerpt of Native Title Tribunal Vision showing relevant Native Title dealings in area surrounding subject site (Source: *Native Title Tribunal Vision*, 2020)

10.0State Planning Assessment

10.1 Aboriginal Cultural Heritage Act 2003 and Torre Strait Island Cultural Heritage Act 2003

The *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003* (the Cultural Heritage Acts) set out the duty of care requirements for land use activities with respect to identified or potential items or matters of cultural heritage. To assist with the interpretation of the Cultural Heritage Acts, the Queensland Government prepared and published the Cultural Heritage Due Diligence Guidelines (the **Duty of Care Guidelines**). The Duty of Care Guidelines assist development proponents with understanding their responsibilities and requirements with regards to the Cultural Heritage Acts.

An assessment of the Duty of Care Guidelines has been undertaken, including undertaking a cultural heritage report search through the Department of Aboriginal and Torres Strait Islander Partnerships (**Appendix C**). The cultural heritage report for the area showed no Aboriginal of Torres Strait Island cultural heritage search points or polygons in the area surrounding the

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

proposed facility (

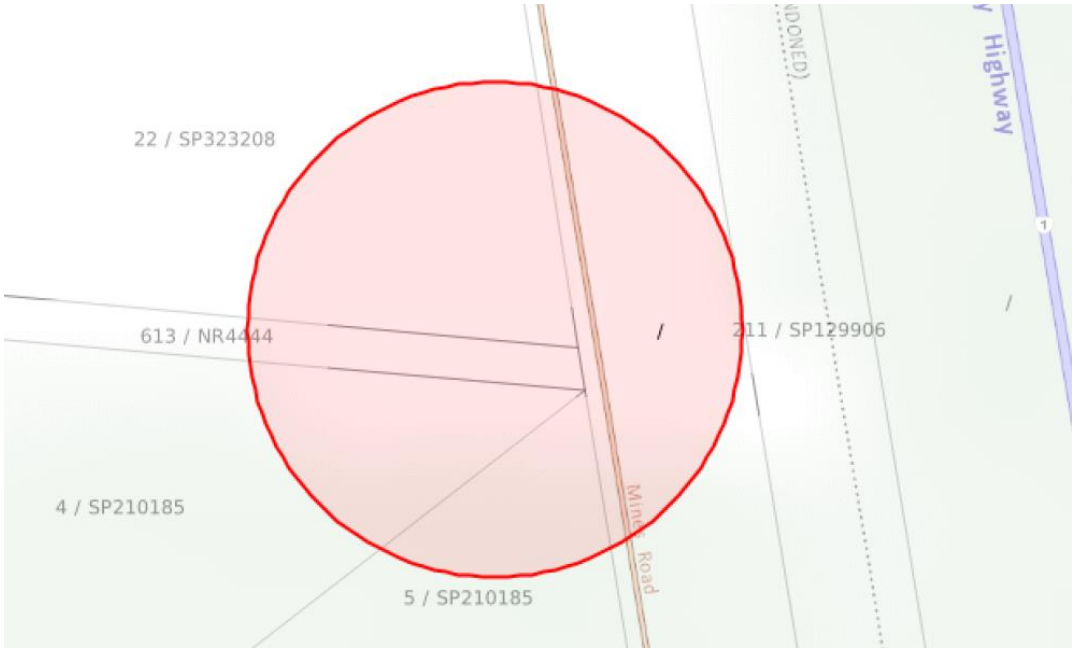


Figure 11).

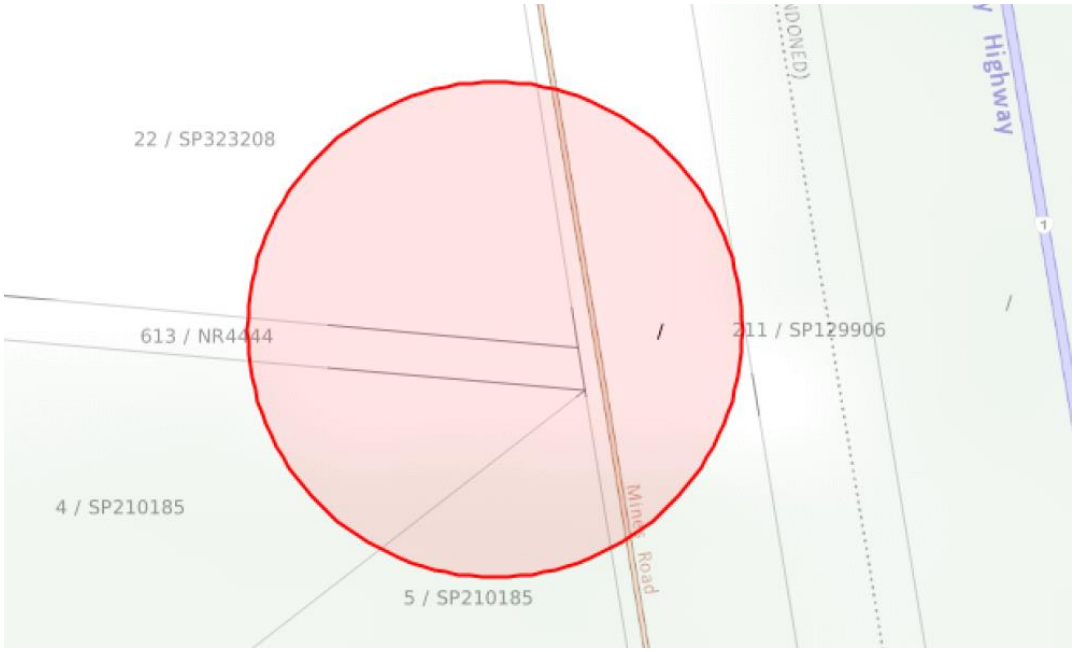


Figure 11: Report except showing that land is not situated on or near any Aboriginal or Torres Strait Islander heritage points (Source: Queensland Government Department of Aboriginal and Torres Strait Islander Partnerships)

Accordingly, the works are considered to be able to proceed on the subject site with the duty of care with regards to potential finds during works. In the event of any potential find:

- all works on the site will cease;
- the Traditional Owners or their representative/s will be contacted;
- if the find includes bones the Queensland Police will also be contacted; and
- works will not resume until given approval to by the Traditional Owners or their representatives and where relevant, the Queensland Police.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

10.2 Planning Act 2016

The proposed telecommunications facility is not considered a low-impact facility and is therefore subject to the *Planning Act 2016* and *Planning Regulation 2017*. The proposal is for the start of a new use and therefore requires a development permit for a material change of use (MCU) prior to the commencement of the use on the site.

Assessment against Council's planning scheme identifies the proposed use as requiring Impact assessment. Pursuant to section 43 of the Planning Act 2016, the application must therefore be assessed against assessment benchmarks which include the:

- State planning policy;
- Regional plan; and
- Local planning instruments.

10.3 State Planning Policies

On 3 July 2017, the Queensland Government adopted its new single State Planning Policy (SPP). The SPP replaces the previous multiple policies in existence. The SPP sets out policies on matters of state interest in relation to planning and development and provides a key framework for the government's broader commitment to planning reform.

The SPP identifies the state's interests in planning and development and how these are to be dealt with in planning instruments, Council development assessment processes and in designating land for community infrastructure.

All aspects of the SPP have been integrated with the *Mareeba Shire Council Planning Scheme*. As such, assessment against any applicable policies will be covered in the planning scheme assessment.

10.4 Regional Planning

The in-force regional plan for the subject site is the Far North Queensland Regional Plan 2009-2031. This plan includes the following local government areas:

- Cairns Regional Council
- Tableland Regional Council
- Mareeba Shire Council
- Cassowary Coast Regional Plan
- Yarrabah Aboriginal Shire Council
- Wujal Wujal Aboriginal Shire Council

The proposed facility will support the limited residential expansion proposed by the regional plan within the rural residential zone and assorted precincts in the area Given the lack of dedicated Telecommunications Facilities in the area, proposed residential expansion without such a dedicated facility would not only contribute to the existing 'black spot' but would also decrease coverage from other facilities as they struggle from a capacity standpoint to cover residences in their immediate vicinity and those emerging around the subject site.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

10.5 Local Planning Instruments

The site is subject to the requirements of the Mareeba Shire Planning Scheme. Full compliance with all Council planning instruments is detailed through Section 9 of this report.

11.0 LOCAL PLANNING FRAMEWORK

11.1 Overview of Assessment

Pursuant to the Mareeba Shire Planning Scheme, the proposal is defined as a Telecommunications Facility. The site is located within the Rural Residential Zone (4000m^2 Precinct) and is subject to the provisions of only a limited number of overlays outlined below. In accordance with the relevant table of assessment, the proposed telecommunications facility is subject to **Impact Assessment**.

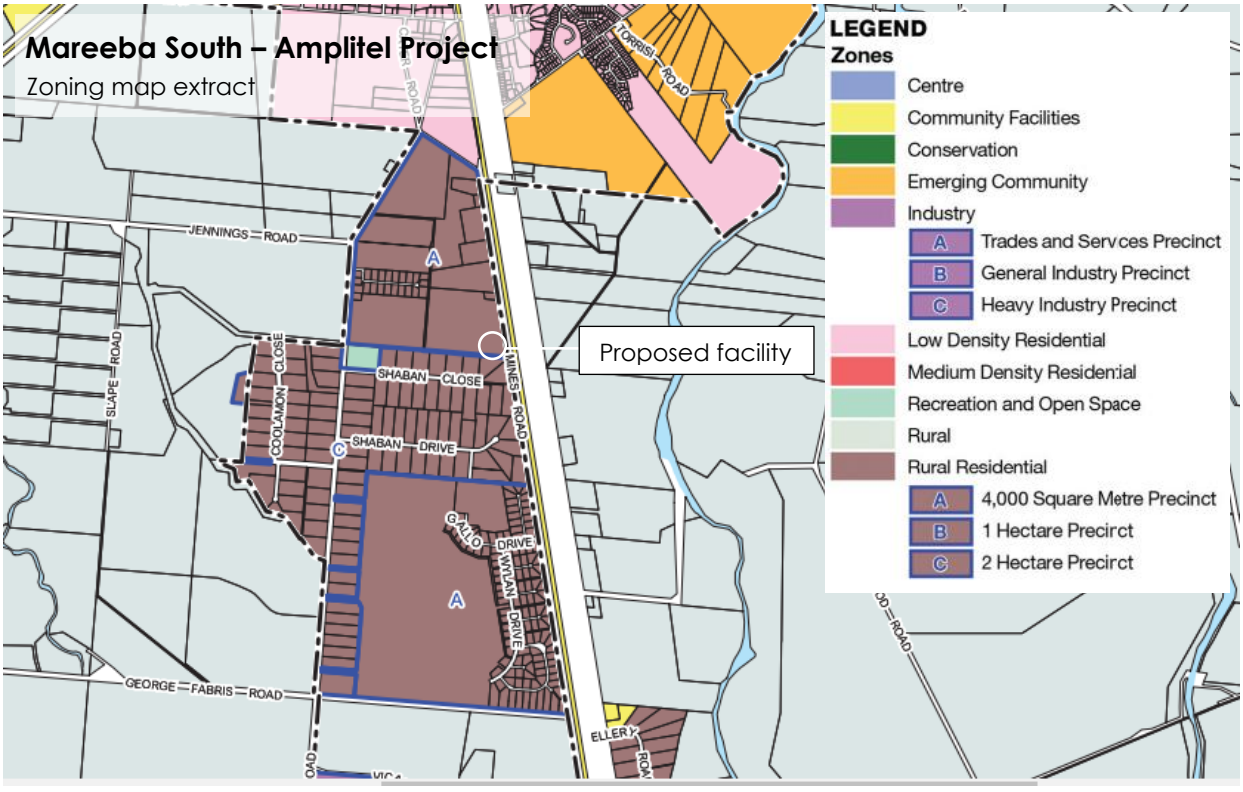
11.2 Use Definition

The planning scheme defines a Telecommunications Facility as:

"*Premises used for systems that carry communications and signals by means of radio, including guided or unguided electromagnetic energy, whether such facility is manned or remotely controlled*".

11.3 Zone

The site is included in the Rural Residential Zone (4000m^2 precinct) under the planning scheme, as shown in **Figure 12** below.



Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 12: Zoning Map (Source: MSC Planning Scheme)

The subject property is considered to be an appropriate location for the proposed Telecommunications Facility as it does not impact the current or future uses of the land, , and will provide additional services which will benefit the surrounding rural residential area.

Compliance with the Rural Residential Zone Code is demonstrated in **Appendix D**.

11.4 Local Plan

The site is not located within a local plan area.

11.5 Overlay code and development codes

Following a review of the planning scheme overlays and codes, the following overlays and codes are applicable to the proposed development.

11.5.1 Airport – Bird and Bat Strike Zones and Light Intensity

The proposed telecommunications facility is located within the Bird and Bat Strike Zones and Light Intensity areas under Overlay Map OM002b (**Figure 13**). Specifically the subject site is identified within the:

- Bird and Bat Strike Zones Airport Environs: Distance from Airport – 8 kilometres; and
- Light Intensity Airport Environs: Distance from Airport – 6 kilometres (Maximum Intensity of a Light Source 3º Above the Horizon

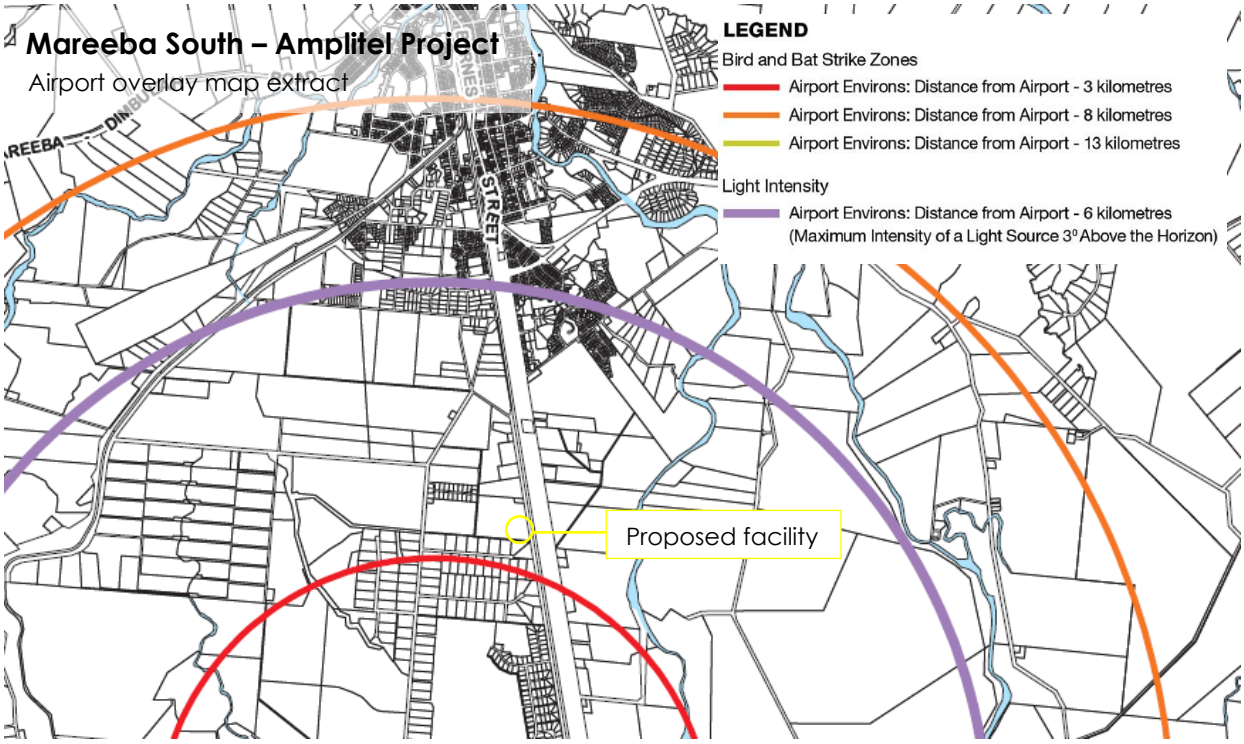


Figure 13: Airport overlay map extract (Source: Mareeba Shire Planning Scheme)

The proposal does not include any putrescible material that would attract birds or bats and as a result does not impact on matters relating to the above overlay. A full assessment of this is provided within **Appendix D.**

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

11.5.2 Airport – Obstacle Limitation Surfaces

The proposed telecommunications facility is located within the Obstacle Limitations Surfaces area under Overlay Map OM002c (Error! Reference source not found.). Specifically the subject s ite is identified within the 516m area of the Airport Environs: Conical Surface (mAHD). The subject site is located at 450m AHD, and with a total height of 41.3m AHD, extends to 491.3m AHD, 24.7m under the conical surface and the inner horizontal surface of 516m AHD as set by the overlay mapping.

Mareeba Shire Council was contacted in August 2021 to confirm specific requirements with respect to Mareeba Aerodrome. Council provided that based on the relative heights and initial assessment by Ventia, that there were no issues envisaged but that confirmation on some matters was being sought from AirServices Australia.

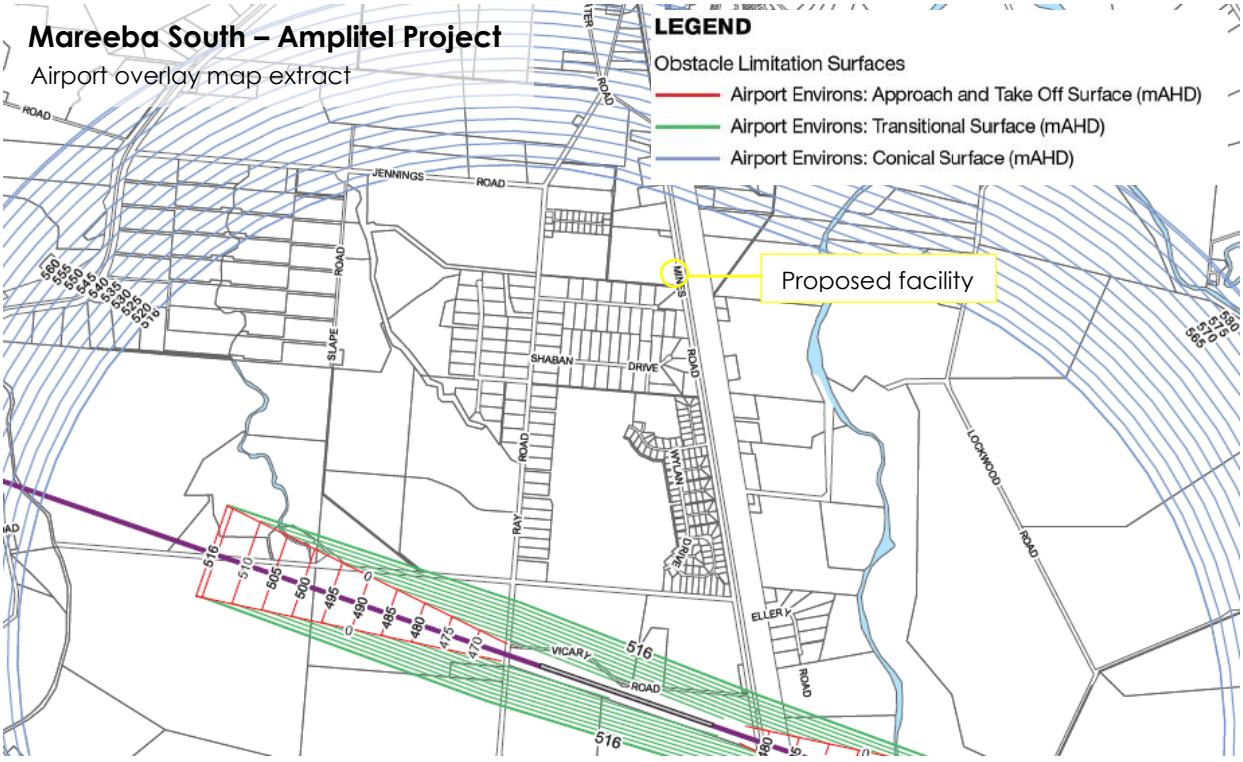


Figure 14: Airport overlay map extract (Source: Mareeba Shire Planning Scheme)

In early 2022, while waiting for formal confirmation of AirServices Australia assessment, Ventia contacted CASA directly as a result of pre-lodgement advice from Council. CASA confirmed:

- that given the height of the proposal, so long as it did not pierce the OLS or PANS-OPS there would not be a need for CASA requirements under the Civil Aviation Safety Regulation 1998 to be adhered to; and
- that CASA regulations did regulate requirements for structures around crop-dusting, skywriting or other activities not associated with airport or aerodromes and that such operators would simply need to avoid the tower as with any similar obstruction such as a water tank or windmill

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Formal confirmation that the proposal would not impact on the safe operations of the Mareeba Aerodrome was received via email from Mareeba Shire Council on 3 March 2022

Ventia has examined the surrounding area and determined that given the location of agricultural land there is unlikely to be crop dusting in the immediate vicinity of the site and so the risk is appropriately low.

11.5.3 Bushfire Hazard Overlay

The proposed telecommunications facility is located on land identified as being affected by a Bushfire Hazard – Potential Impact Buffer (100 metres) (**Figure 15**).

The buffer area relates to a medium potential bushfire intensity area within the reserve around surrounding the Kennedy Highway. The proposed use is considered compatible with this risk given its construction materials and inability to provide a place of habitation or shelter in the event of a bushfire.

Accordingly, compliance with the Bushfire Hazard Overlay is demonstrated in **Appendix D**.

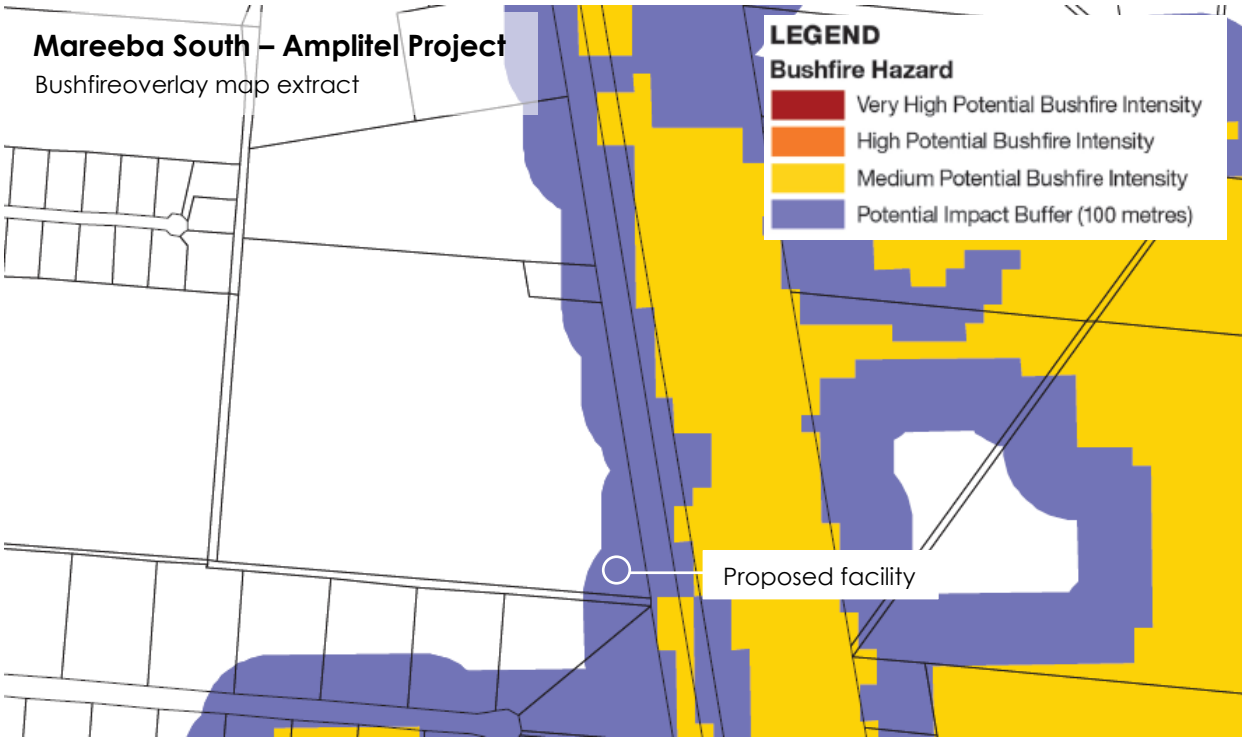


Figure 15: Bushfire hazard map OM003m Source: Mareeba Shire Council Planning Scheme)

11.5.4 Energy and infrastructure code

The proposed Telecommunications Facility is required to comply with the Energy and Infrastructure Code of the local planning instrument.

As provided within **section 6.0** of this report, significant due diligence was undertaken to ensure the location of the proposed facility would meet the current and future needs of the area while managing impacts to the community and the environment. **Section 12.0**

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

includes additional consideration for public health and safety, visual amenity and environmental matters.

Unlike many other kinds of infrastructure, there is a direct correlation between the height of a Telecommunications Facility and the quality and extent of coverage it can provide. Furthermore, Telecommunications Facilities are required, where possible, to be in the direct centre of the proposed coverage area. Facilities are also encouraged to be of a suitable height and design to enable co-location by other Carriers, thereby preventing the unnecessary proliferation of towers. The balance of these technical considerations with amenity and environmental impacts is often a fine one, and one that has been balanced to the greatest extent possible for this proposal Under the energy and infrastructure code, preference is made for the reuse of existing facilities or building, or the location of any new Telecommunications Facilities in commercial or industrial areas. Unfortunately, as demonstrated at length within **section 6.0** of this report, there are no co-location possibilities and no surrounding commercial or industrial areas. The proposed facility represents the lowest potential amenity impact while still providing high level coverage to the area and allowing for co-location by other Carriers. This visual mitigation is provided by:

- Placing the facility on a large lot away from higher density residential areas (800km north-west and 1km south)
- Placing the facility adjacent to a highway, restricting potential future impacts
- Placing the facility on a low-traffic local road
- Using a monopole design for the facility rather than a bulkier lattice structure
- Using a concrete monopole to reduce glare and reflectivity (should this change to a steel pole colour treatment to a neutral grey is available)
- Including a solid colour treated security wall around the compound to reduce visual impact of ground-based elements.

Consideration has also been made to shadowing effects of the tower, with key shadow impacts visualised for both the summer solstice (longest day of the year and with shadowing to the north) (**Figure 16** and **Figure 17**and winter solstice (shortest day of the year and with shadowing to the south) **Figure 18 Figure 19**. These shadow assessments have shown no impact on surrounding residences, with only some shadowing of open space areas on properties to the north during winter months.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

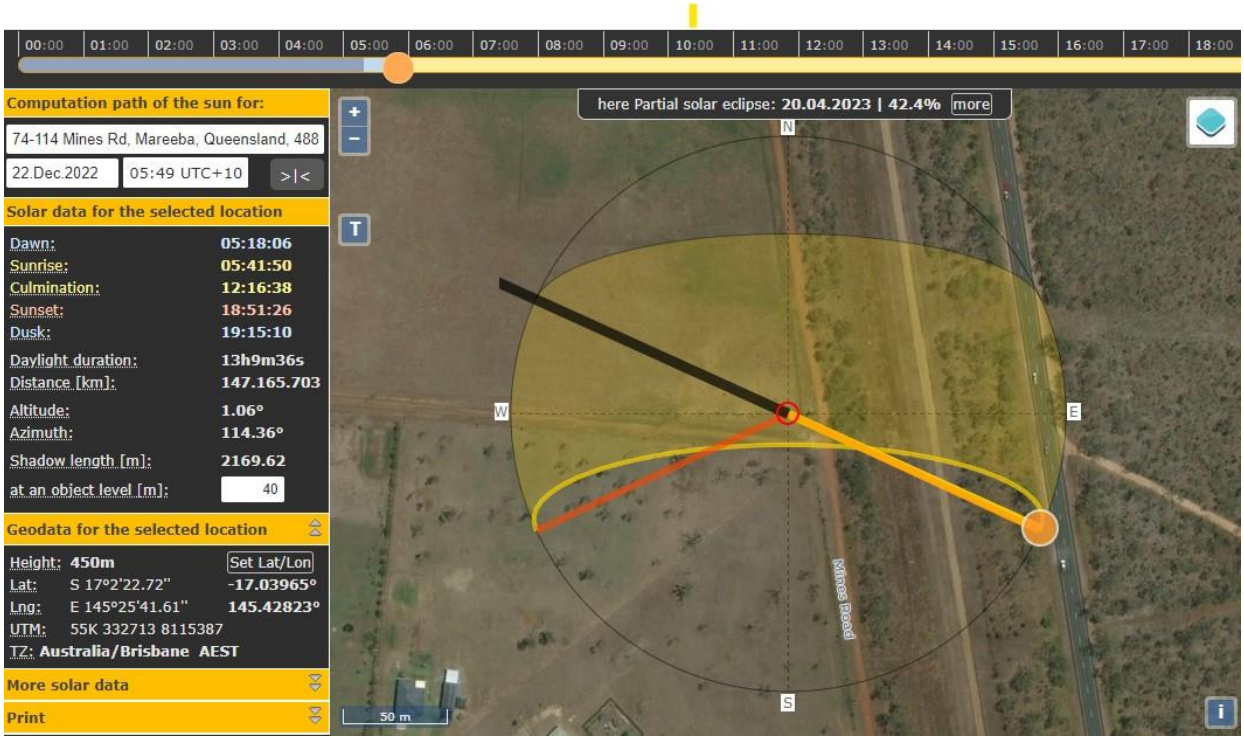


Figure 16: Shadow impacts during first light of longest day of the year (Source Ventia 2022)

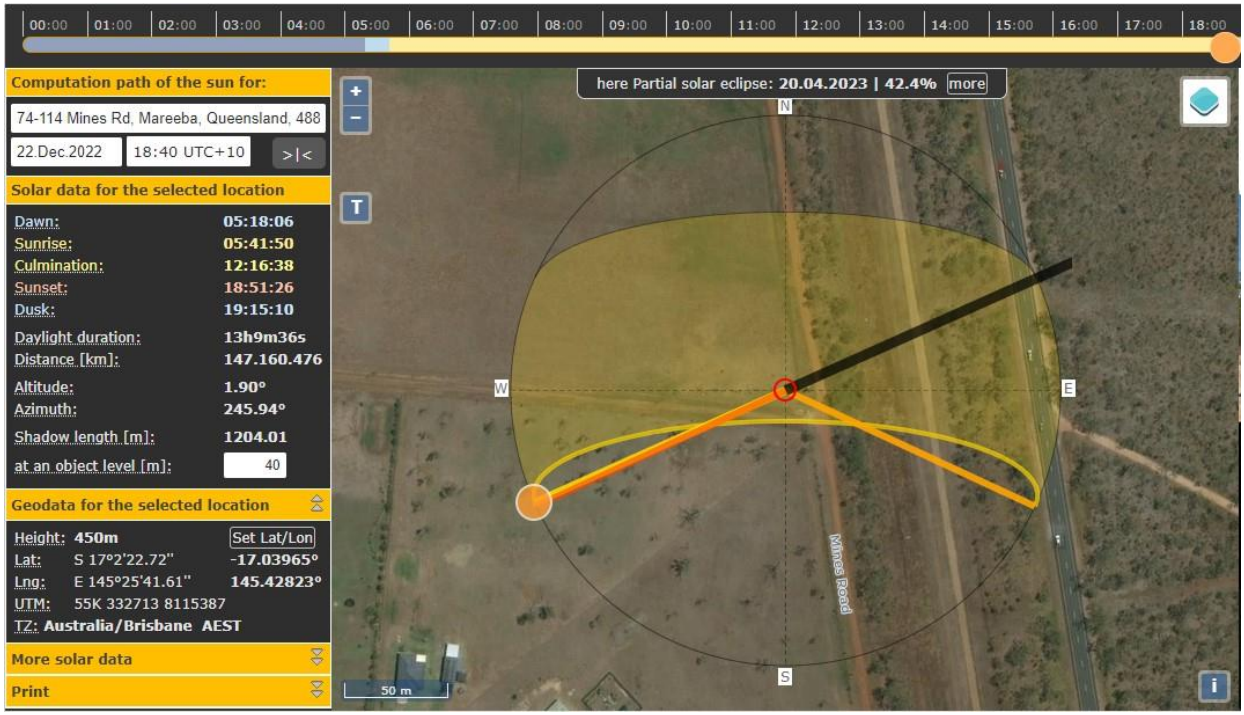


Figure 17: Shadow impacts during last light of longest day of the year (Source Ventia 2022)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

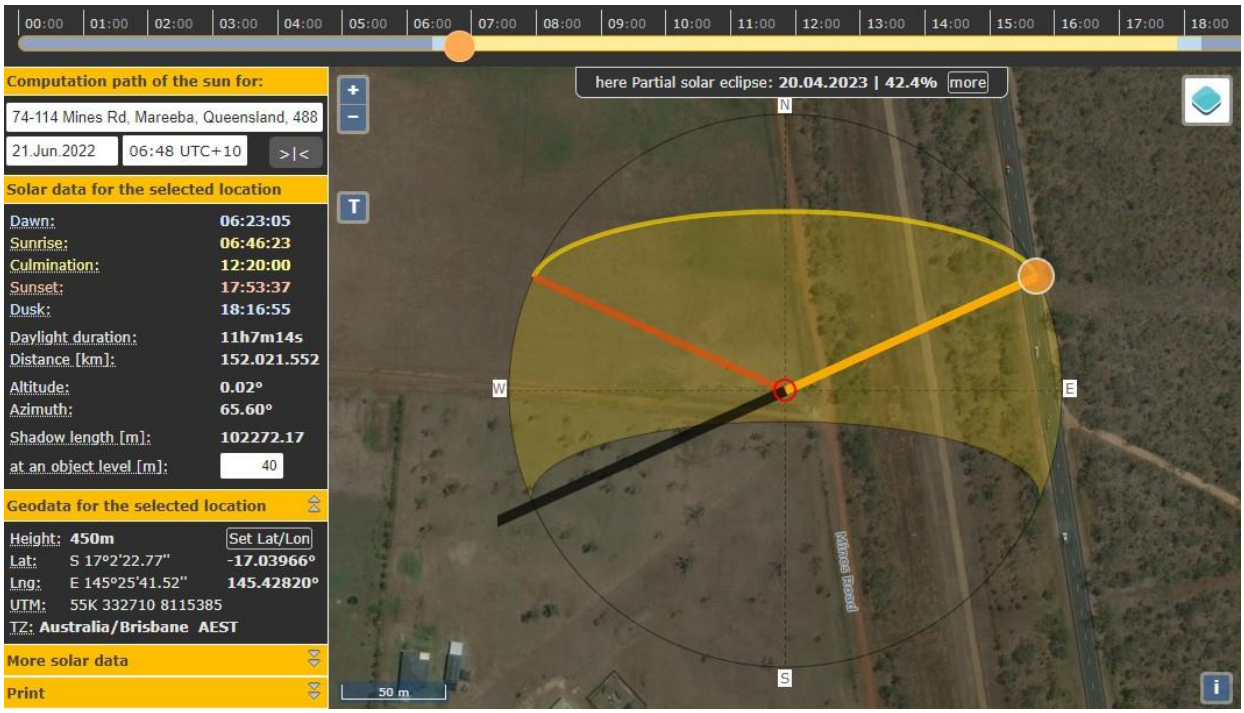


Figure 18: Shadow impacts during first light of shortest day of the year (Source Ventia 2022)

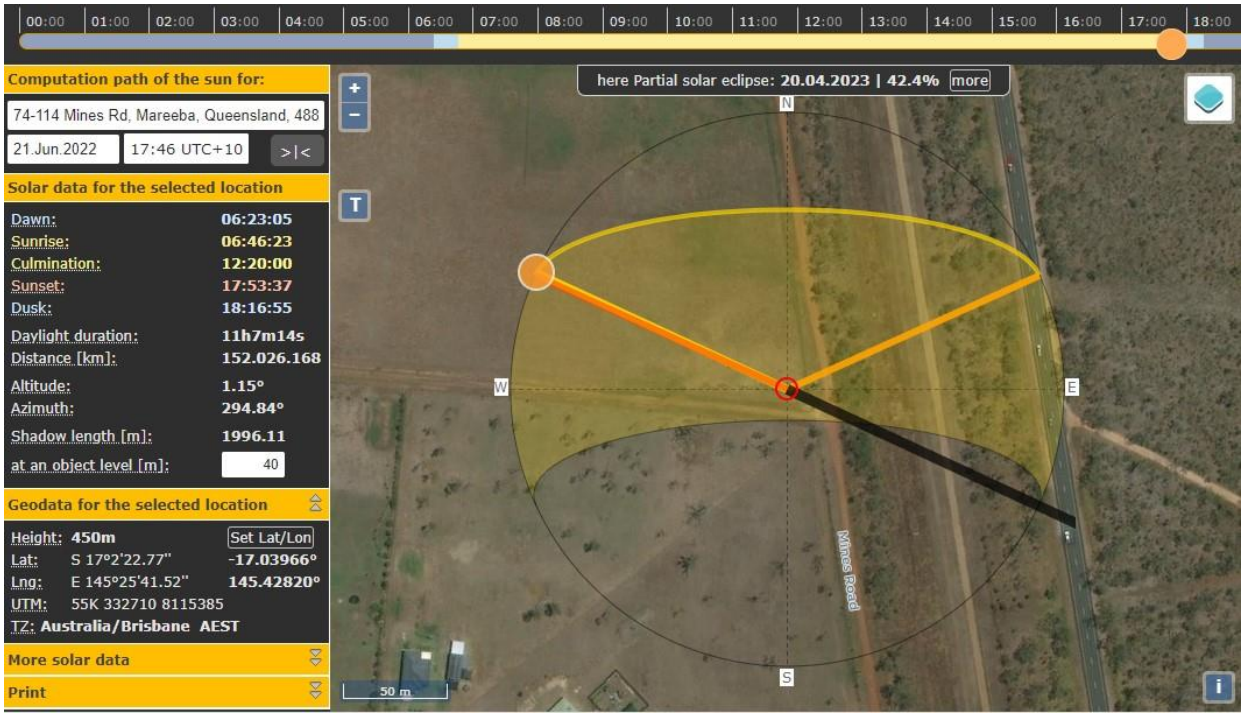


Figure 19: Shadow impacts during last light of longest day of the year (Source Ventia 2022)

11.5.5 Landscaping code

The proposed facility is subject to the landscaping code of the local planning scheme. As agreed by Council in its provided pre-lodgement advice, no additional landscaping is proposed to be provided for the facility. This is due to the remote nature of the facility,

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

issues with maintaining landscaping over time and the height of the facility and the low-impact landscaping would have on its visual obstruction. As an agreed alternative a solid colorbond ® style fence will be constructed as part of the compound fence. This fence can be colour-treated to any colour specified by Council, with G54 mist green from AS2700 recommended. Accordingly, no formal response to the code has been provided.

11.5.6 Parking and access code

The proposed facility is subject to the parking and access code of the local planning scheme. The proposed facility will not be a significant generator of traffic and post-construction will operate unmanned, with maintenance conducted two (2) to four (4) times a year via a single utility vehicle. The proposed compound does include sufficient space within it for maintenance vehicles and larger vehicles. Excepting this it is considered the proposed facility does not require dedicated parking spaces. Accordingly, no formal response to the code has been provided.

11.5.7 Works, services and infrastructure code

The proposed facility is subject to the works, services and infrastructure code of the local planning scheme. With regards to the relevant aspects of the code:

- The proposed facility does not required connection to the water or wastewater network, noting the area is rural residential
- The proposed facility introduces a small amount of additional impervious surface over the subject site and so is not considered to change the hydrology of the area such that formal stormwater detention or management is required.
- The propose facility will be connected to power via an extension from the existing power at the on-site dwelling
- The proposed facility will require minimal excavation or filling, only that required to ensure a level bed and for the tower footings, with material to be removed from the site in the event the landowner does not wish for it to be stockpiled for later beneficial use

The proposed facility will not be a significant generator of traffic and post-construction will operate unmanned, with maintenance conducted two (2) to four (4) times a year via a single utility vehicle. The proposed compound does include sufficient space within it for maintenance vehicles and larger vehicles. Excepting this it is considered the proposed facility does not require dedicated parking spaces. Accordingly, no formal response to the code has been provided.

12.0ENVIRONMENTAL ASSESSMENT

Further to the planning scheme assessment undertaken above, the proposal has addressed environmental considerations which are specific to mobile phone base station deployment, including:

- Visual considerations;

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

- Public safety;
- Heritage; and
- Flora and fauna.

12.1 Visual considerations

To ensure there are no 'dead spots' or 'drop outs' within the coverage perimeter and in order to achieve its desired coverage in the area, Telstra needs to sufficiently elevate its antennas above physical obstructions, such as built form and vegetation.

While the proposed antennas will adequately meet the required Telstra coverage objectives, due care was taken in the design and positioning of the facility so as to minimise impact on the surrounding areas. As a result, Amplitel has chosen to install a 40m tall monopole with antennas. The height of the facility is required to provide continued and high-quality mobile and wireless services to the surrounding area. The minimal visual impacts on the area can be attributed to the following factors:

- the proposed facility is located on the corner of a the two (2) hectare precinct of the rural residential area, allowing for it only minimally impact on the overall mass of residences within the two (2) hectare precinct while still providing excellent coverage to the area;
- the proposed facility is located 715m from the densest residences in the area, those being the easternmost dwelling of the Mareeba Lifestyle development, an appropriate separation to minimise visual impact whilst not detrimentally affecting coverage;
- the facility is 350m and 400m from nearest residences to the east and north respectively, providing an appropriate separation;
- the facility will be partially obstructed from views to the west and east by existing mature vegetation along road and property boundaries; and
- the proposed facility will be surrounded by a 2.4m high solid fence (colorbond ® style, proposed to be 'pale eucalypt' in colour) to obstruct views of the equipment shelter and blend into the surrounding landscape.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 20: Views of obstructing mature vegetation south of the proposed facility Source: Ventia, 2021)

Figure 21: Views of obstructing mature vegetation west of the proposed facility Source: Ventia, 2021)

Ventia has produced montages of the proposal in the surrounding area (**Figure 22**). The locations for the montages are shown in **Figure 15** and are considered to represent the viewpoints from key residential locations. Note that Montage A is taken at the same distance from the facility as the nearby residential development and so can be used to represent the visual impact (not including screening from those residences).

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 15: Aerial view showing montage locations of the proposal in the surrounding area (Source: Google Earth 2021)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 16: Photomontage of proposed facility as taken from montage location A (Note that facility has been made semi-transparent due to obstruction by vegetation) (Source: Ventia 2022)

Figure 17: Photomontage of proposed facility as taken from montage location C (Source: Ventia 2022)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 18: Photomontage of proposed facility as taken from montage location D (Source: Ventia 2022)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

The photomontages demonstrate the monopole design of the facility assists in reducing the visual bulk of a tall structure in the area. It is acknowledged that the proposed facility will impact on some houses more than others, however a balance must always be made between tall structures that provide high-quality service to the community and their location. As described earlier, Ventia has undertaken substantial due diligence to ensure that the impacts are minimised to the greatest extent possible, including by placing the facility at a location that is near the motorway and away from the more dense residential areas to the south and north-west.

The proposed facility is a concrete monopole and so is considered to be of low reflectivity. Refer to **Figure 19** showing as constructed example of low reflectivity of concrete monopole. The colour of the proposed facility will also have an impact on the level of visual impact. Colour treating poles and towers green is common where the structure is located against a vegetation backdrop of hills or tall trees, refer to example **Figure 19**. Conversely an untreated concrete monopole colour will not highlight the tower against any variety of skyscapes, from overcast weather to clear skies. Any colour treatment conditioned by Council will be considered by Amplitel to ensure the facility appropriately responds to the receiving environment.

Figure 19: (Left) As constructed example of low reflectivity of concrete monopole against sky backdrop. (Right) As constructed example of colour-treated concrete pole against vegetated and sky backdrop (Source: Ventia 2022)

12.2 Public safety

Public safety will not be jeopardised as the facility will include a 2.4m fence, is not located in an area that lends itself to casual entry (such as adjacent to and in view of a a road) and warning signs will be placed at appropriate locations.

The Australian Radiation Protection and Nuclear Safety Agency (**ARPANSA**) has set limits for electromagnetic radiation (**EME**) exposure from mobile phone base stations. These limits and the methodology to measure them are included within a published standard, which all licences carriers must comply with. The ARPANSA limits are consistent with the guidelines of the World

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Health Organisation and provide protection for the very young, the elderly and pregnant women whether they are visiting the surrounding area or located within it 24/7. Importantly, the ARPANSA-created compliance report demonstrates the maximum signal strength of a proposed facility, assuming that it is handling the maximum number of users 24-hours a day.

In this way, the ARPANSA requires network carriers to demonstrate the greatest possible impact that a new telecommunications facility could have on the environment to give the community greater peace of mind. In reality, base stations are designed to operate at the lowest possible power level to accommodate only the number of customers using the facility at any one time. This design function is called "adaptive power control" and ensures that the base station operates at minimum, not maximum, power levels at all times.

The EME report in **Appendix B** provides further site specific information, including that operating at maximum power the facility is only capable of 1.75% (1/57) of the public exposure limit using a standard radial measure at 1.5m above the facility ground height.

To assist Council and the public with understanding the EME Report, the ARPANSA Guide to the Environmental EME Report is included as **Appendix E**.

Telstra relies on the expert advice of national and international health authorities such as ARPANSA and the WHO for overall assessments of health and safety impacts.

The WHO advises that all expert reviews on the health effects of exposure to radiofrequency fields have concluded that no adverse health effects have been established from exposure to radiofrequency fields at levels below the international safety guidelines that have been adopted in Australia.

Telstra has strict procedures in place to ensure its mobile phones and base stations comply with these guidelines. Compliance with all applicable EME standards is part of Telstra's responsible approach to EME and mobile phone technology

12.3 Built heritage

In order to determine the likelihood of the proposal impacting on any built (non-cultural) heritage matters, searches were conducted of relevant registers.

From the searches, it has been concluded that no known items of heritage significance have been found within the subject land holding.

12.4 Environmental

12.4.1 High Risk Flora

The proposed site is not identified as being within the High-Risk area of the Protected Plants Flora Survey Trigger Map as seen in **Figure 20.** As such, there is no requirement for assessment against the provisions of the *Nature Conservation Act 1992*.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Figure 20: Protected Plants Flora Map (Source: QLDGlobe, 2022)

12.4.2 Regulated Vegetation

The site is not identified as being within a Category X Regulated Vegetation area, identified in **Figure 21** below and no vegetation clearing is proposed as part of the development application.

Figure 21: Regulated Vegetation Map (source: Queensland Government 2021)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

13.0 CONCLUSION

The proposed telecommunications facility at 114 Mines Road, Mareeba QLD 4880 formally described as Lot 22 on SP323208 will form an integral component in the enhancement of mobile telecommunications network for Telstra Corporation Limited and will provide an essential service to the existing and expanding surrounding rural and residential areas.

The proposed facility is considered appropriate on the site given:

- The site is technically feasible and can achieve Telstra's coverage and capacity objectives by installing the new monopole facility;
- The site will allow for co-location by other Carriers
- The site will enable fill the coverage gap around the Mareeba area;
- The site is within the Rural Recreation Zone, which can be a suitable location for the proposed facility;
- The proposal achieves appropriate separation from surrounding residential dwellings;
- The facility can be established in the proposed location, only requiring the removal of one ornamental/introduced tree of low height;
- Views of the proposed facility will be limited to the north, east and west with some vegetation obstruction to residences south of the proposed facility;
- Views of the equipment shelter from nearby public paths can be restricted through the use of a tall solid colour-treated fence around the compound
- Council has expressed support for the Amplitel proposal;
- The site is not located within an environmentally or culturally significant area;
- The proposed facility will not prejudice the existing or anticipated future use of the site; and
- The costs associated with delivering the site and constructing the facility are considered by Amplitel and Telstra to be reasonable.

Based on the above, the proposed **Impact Assessable** material change of use application, to install a Telecommunications Facility at 114 Mines Road, Mareeba QLD 4880 formally described as Lot 22 on SP323208 is considered appropriate for the site and warrants favourable consideration by Council subject to reasonable and relevant conditions.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Appendix A Proposal Plans

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Appendix B Environmental EME Report

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Appendix C Cultural heritage search

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Appendix D Planning scheme assessment

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Appendix E Guide to EME Report

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Plot date: 5 April 2022 - 10:35 AM

TN

EXISTING PROPERTY BOUNDARY

PROPOSED EWP AND CRANE STAGING AREA. 1

EXISTING EQUIPMENT

PROPOSED TELSTRA SITE. REFER TO SHEET S1-1 FOR LAYOUT DETAILS 1

EXISTING O/H POWER LINE.

EXISTING TREES

PROPOSED 3.0m WIDE ACCESS TRACK FROM MINES RD 1

EXISTING 1.8m WIDE ACCESS GATE TO BE WIDEN DOUBLED FOR CONSTRUCTION VEHICLES 1

EXISTING GATES

PROPOSED TELSTRA FIBRE ROUTE (INDICATIVE ONLY). 1

2RP736579

SP210185

5SP210185

MINES RD

10.9m

10.0m

9.5m

PROPOSED U/G SUBMAINS ROUTE FROM EXISTING METER PANEL BOARD LOCATED AT EXISTING HOUSE (INDICATIVE ONLY). 1

EXISTING O/H POWER LINE

KENNEDY HWY

RFNSA SITE NO. 4880015

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LOCALITY PLAN
NOT TO SCALE

SERVICES LEGEND

—T—T—T—	OPTICAL FIBRE BELOW GROUND
—E—E—	ABOVE GROUND ELECTRICAL SUPPLY
— — E — — E —	BELOW GROUND ELECTRICAL SUPPLY
— — W — — W —	WATER SUPPLY BELOW GROUND

NOTE:

1. ACCESS TRACK WORKS WILL BE REQUIRED AT TIME OF CONSTRUCTION WORKS, LOCATIONS AND LENGTH ARE DEPENDENT ON SITE CONDITIONS AT THE TIME OF CONSTRUCTION, TYPICAL ACCESS TRACK WORKS INCLUDE THE STRIPPING OF THE TOP LEVEL OF VEGETATION AND INSTALLATION OF APPROX. 150mm OF CLASS 4 ROAD MATERIAL LOCAL QUARRY RUBBLE OR APPROVED EQUIVALENT.

UNAPPROVED DRAWING

SITE ACCESS
SCALE 1:1000

10m 0 10m 20m 30m 40m 50m SCALE 1:1000

1 PRELIMINARY

TO BE READ IN CONJUNCTION WITH SHEETS S1-1, S1-2 S3 & S3-1.

PROPERTY DESCRIPTION

PART OF LOT 22 ON SP 323208
PARISH: N/A
COUNTY: N/A

SITE STRUCTURE CO-ORDINATES (GDA94) GPS READING ACCURACY: ±10m CENTRE OF POLE	
LATITUDE	-17.03963° (GDA94)
LONGITUDE	145.42821° (GDA94)

COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT)
SIGNATURE DATE

visionstream

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4017936.01	RA	AH	PRELI - 30095327WO015 VPL - LTE700/1800/2100/NR3.6/5G.85	MR	RO	27.02.22	1

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AMPLITEL Part of the Telstra Group

TOWER AMS SITE QLD006338
MAREEBA SOUTH
SITE ACCESS AND LOCALITY PLAN
114 MINES RD, MAREEBA, QLD 4880

DWG NO. Q116998 SHT NO. S1

Cad file: Q116998_PD.dwg A3

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Plot date: 5 April 2022 - 3:11 PM

TN

PROPOSED EWP AND CRANE STAGING AREA.

PROPOSED SIGNS TO BE UV STABLE STICKERS AND FIXED TO REAR OF ALL TELSTRA PANEL ANTENNAS (9 OFF) # 2

PROPOSED AMPLITEL 40.0m HIGH CONCRETE MONOPOLE.

PROPOSED SIGN TO BE SECURED AT 1.5m AGL TO MONOPOLE USING STAINLESS STEEL STRAPS # 6

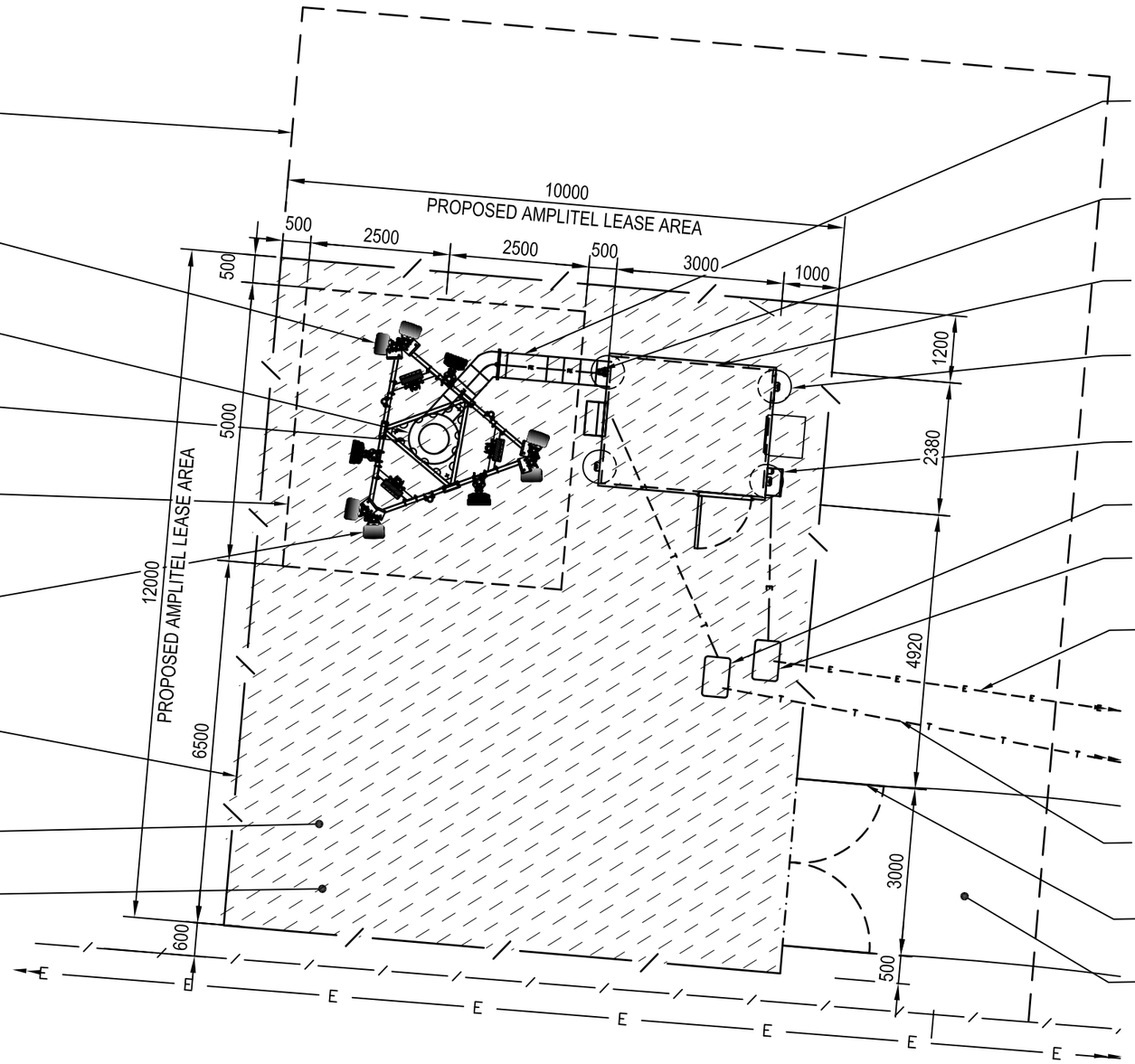
PROPOSED AMPLITEL MONOPOLE PAD FOOTING (5.0m x 5.0m) (INDICATIVE ONLY).

PROPOSED TELSTRA PANEL ANTENNAS & RRUS. REFER S1-2 FOR DETAILS

PROPOSED 2.4m HIGH AMPLITEL SOLID FENCE WITH 3.0m WIDE DOUBLE ACCESS GATE

PROPOSED AMPLITEL LEASE AREA (12.0m x 10.0m).

PROPOSED STANDARD GRADE BLACK WOVEN POLYPROPYLENEWEED MAT, COVERED WITH 75mm DEEP 20mm AGGREGATE & RETAINED USING CCA TREATED TIMBER.



PROPOSED TELSTRA NEMA 20B 450 WIDE HORIZONTAL CABLE TRAY TO ACCOMMODATE PROPOSED TELSTRA FEEDER CABLES.

PROPOSED TELSTRA LTE700 GPS ANTENNA (1 OFF) TO BE INSTALLED ON PROPOSED STANDARD MOUNT.

PROPOSED TELSTRA MK5.1 SHELTER (3.0m x 2.38m) TO ACCOMMODATE PROPOSED EQUIPMENT.

PROPOSED TELSTRA SHELTER PIER FOOTINGS (INDICATIVE ONLY).

PROPOSED TELSTRA PDB

PROPOSED TELSTRA FIBRE PIT P5 (INDICATIVE ONLY).

PROPOSED TELSTRA POWER PIT P5 (INDICATIVE ONLY).

PROPOSED U/G SUBMAINS ROUTE FROM EXISTING METER PANEL BOARD LOCATED AT EXISTING HOUSE (INDICATIVE ONLY).

PROPOSED TELSTRA FIBRE ROUTE (INDICATIVE ONLY).

#13 PROPOSED SIGN SECURED TO AMPLITEL COMPOUND GATE USING STAINLESS STEEL STRAPS

PROPOSED 3.0m WIDE COMPACTED GRAVEL ACCESS ROAD FROM MINES RD.

COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT)
SIGNATURE DATE

SITE LAYOUT
SCALE 1:100

1m 0 1m 2m 3m 4m 5m SCALE 1:100

PRELIMINARY

NOTES :
1. ALL FEEDER ACCESS POINTS ON THE STRUCTURE MUST BE BIRD PROOFED AS PER EXTERNAL PLANT POLICY 003615.
2. FOR EME SIGNS NOTED AS #X REFER TO 005486 DOCUMENTS FOR DETAILS.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
4. ▨ PROPOSED AMPLITEL LEASE AREA

UNAPPROVED DRAWING

visionstream

TO BE READ IN CONJUNCTION WITH SHEETS S1, S1-2, S3 & S3-1.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4017936.01	RA	AH	PRELI - 30095327WO015 VPL - LTE700/1800/2100/NR3.6/5G.85	MR	RO	27.02.22	1

AMPLITEL
Part of the Telstra Group

TOWER AMS SITE QLD006338
MAREEBA SOUTH
SITE LAYOUT
114 MINES RD, MAREEBA, QLD 4880

DWG NO. Q116998 SHT NO. S1-1

Cad file: Q116998_PD.dwg A3

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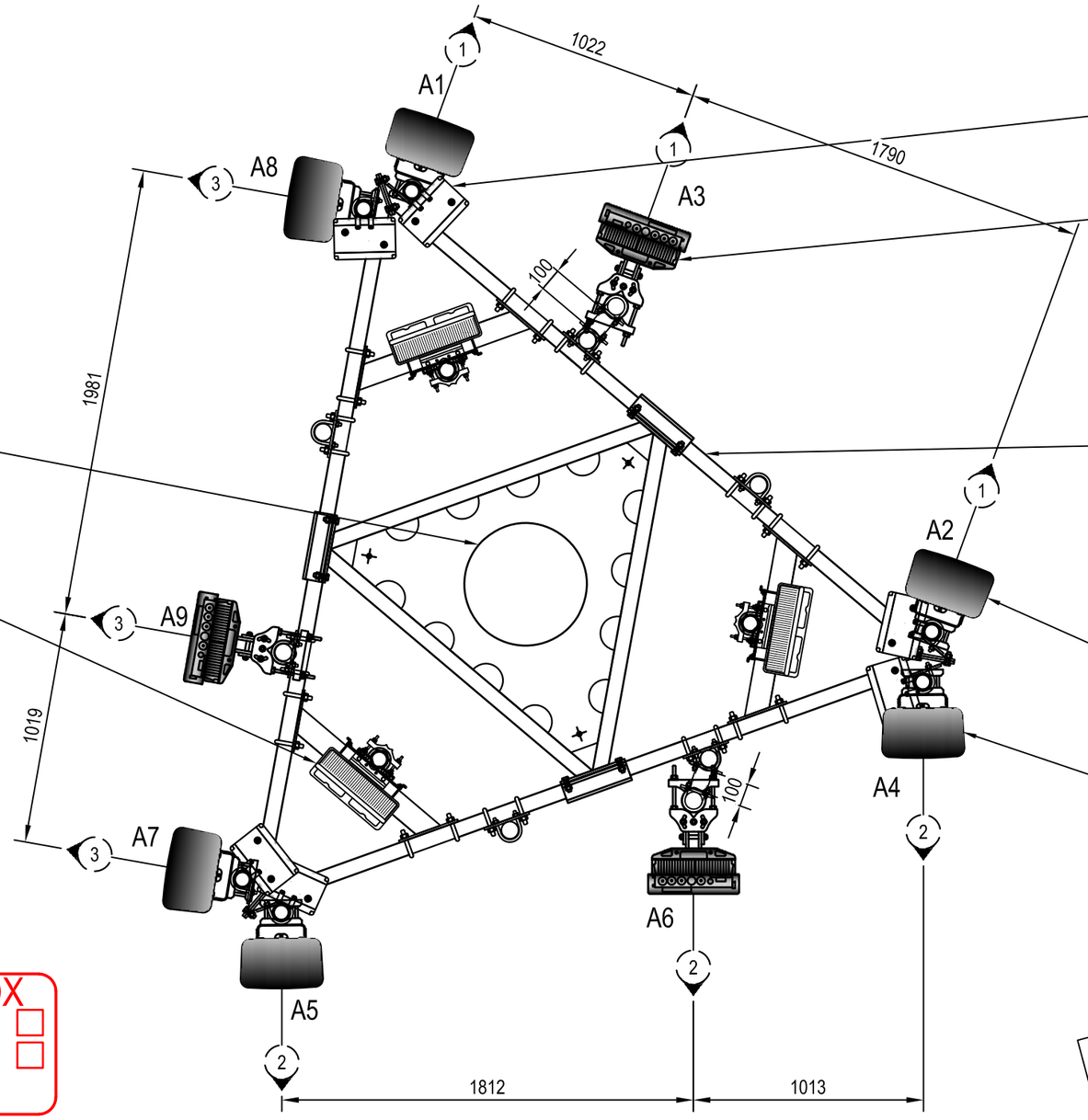
TN

HEADFRAME ORIENTATION 40° TN



PROPOSED TELSTRA LTE700 / NR850 TMA'S (6 OFF) ATTACHED TO PROPOSED MOUNTS BEHIND PANEL ANTENNAS (A1, A2, A4, A5, A7 & A8).

PROPOSED TELSTRA NR3600 PANEL ANTENNAS (3 OFF A3, A6 & A9) TO BE INSTALLED ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED AMPLITEL 40.0m HIGH CONCRETE MONOPOLE.

PROPOSED TELSTRA TRIANGULAR HEADFRAME TO ACCOMMODATE PROPOSED TELSTRA ANTENNA, TMA'S & RRU'S.

PROPOSED TELSTRA LTE1800 / LTE2100 RADIO 4480 (B3/B1) (3 OFF) AND RRU INTERFACE JUNCTION BOXES (3 OFF) TO BE INSTALLED BELOW RADIO 4480 ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED TELSTRA LTE700 / NR850 PANEL ANTENNAS (3 OFF A2, A5 & A8) TO BE INSTALLED ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED TELSTRA LTE700 / LTE1800 / LTE2100 / NR850 PANEL ANTENNAS (3 OFF A1, A4 & A7) TO BE INSTALLED ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT)
SIGNATURE DATE

UNAPPROVED DRAWING

ANTENNA LAYOUT AT EL 40.67m & 40.0m AND RADIO LAYOUT AT EL 40.5m

SCALE 1:25

250 0 250 500 750 1000 1250 SCALE 1:25

TO BE READ IN CONJUNCTION WITH SHEETS S1, S1-1, S3 & S3-1.

PRELIMINARY

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4017936.01	RA	AH	PRELI - 30095327WO015 VPL - LTE700/1800/2100/NR3.6/5G.85	MR	RO	27.02.22	1

visionstream

Telstra

MOBILE NETWORK SITE 362123
MAREEBA SOUTH
ANTENNA LAYOUT
114 MINES RD, MAREEBA, QLD 4880

DWG NO. Q116998 SHT NO. S1-2

Cad file: Q116998_PD.dwg A3

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Plot date: 5 April 2022 - 10:35 AM

PROPOSED SIGNS TO BE UV STABLE STICKERS AND FIXED TO REAR OF ALL TELSTRA PANEL ANTENNAS (9 OFF) # 2

PROPOSED TELSTRA NR3600 PANEL ANTENNAS (3 OFF A3, A6 & A9) TO BE INSTALLED ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED TELSTRA TRIANGULAR HEADFRAME TO ACCOMMODATE PROPOSED TELSTRA ANTENNA, TMA'S & RRU'S.

PROPOSED TELSTRA LTE700 / LTE1800 / LTE2100 / NR850 PANEL ANTENNAS (3 OFF A1, A4 & A7) TO BE INSTALLED ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED TELSTRA LTE700 / NR850 PANEL ANTENNAS (3 OFF A2, A5 & A8) TO BE INSTALLED ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED TELSTRA LTE1800 / LTE2100 RADIO 4480 (B3/B1) (3 OFF) AND RRU INTERFACE JUNCTION BOXES (3 OFF) TO BE INSTALLED BELOW RADIO 4480 ON PROPOSED MOUNTS ON PROPOSED HEADFRAME.

PROPOSED TELSTRA LTE700 / NR850 TMA'S (6 OFF) ATTACHED TO PROPOSED MOUNTS BEHIND PANEL ANTENNAS (A1, A2, A4, A5, A7 & A8).

PROPOSED AMPLITEL 40.0m HIGH CONCRETE MONOPOLE.

PROPOSED TELSTRA LCF78-50JA FEEDERS (12 OFF) AND 7/8" HYBRID CABLES (3 OFF) TO RUN INTERNALLY TO MONOPOLE.

PROPOSED TELSTRA NEMA 20B 450 WIDE HORIZONTAL CABLE TRAY TO ACCOMMODATE PROPOSED TELSTRA FEEDER CABLES.

PROPOSED TELSTRA LTE700 GPS ANTENNA (1 OFF) TO BE INSTALLED ON PROPOSED STANDARD MOUNT.

PROPOSED TELSTRA MK5.1 SHELTER (3.0m x 2.38m) TO ACCOMMODATE PROPOSED EQUIPMENT.

PROPOSED 2.4m HIGH AMPLITEL SOLID FENCE WITH 3.0m WIDE DOUBLE ACCESS GATE

PROPOSED TELSTRA PDB (BEHIND)

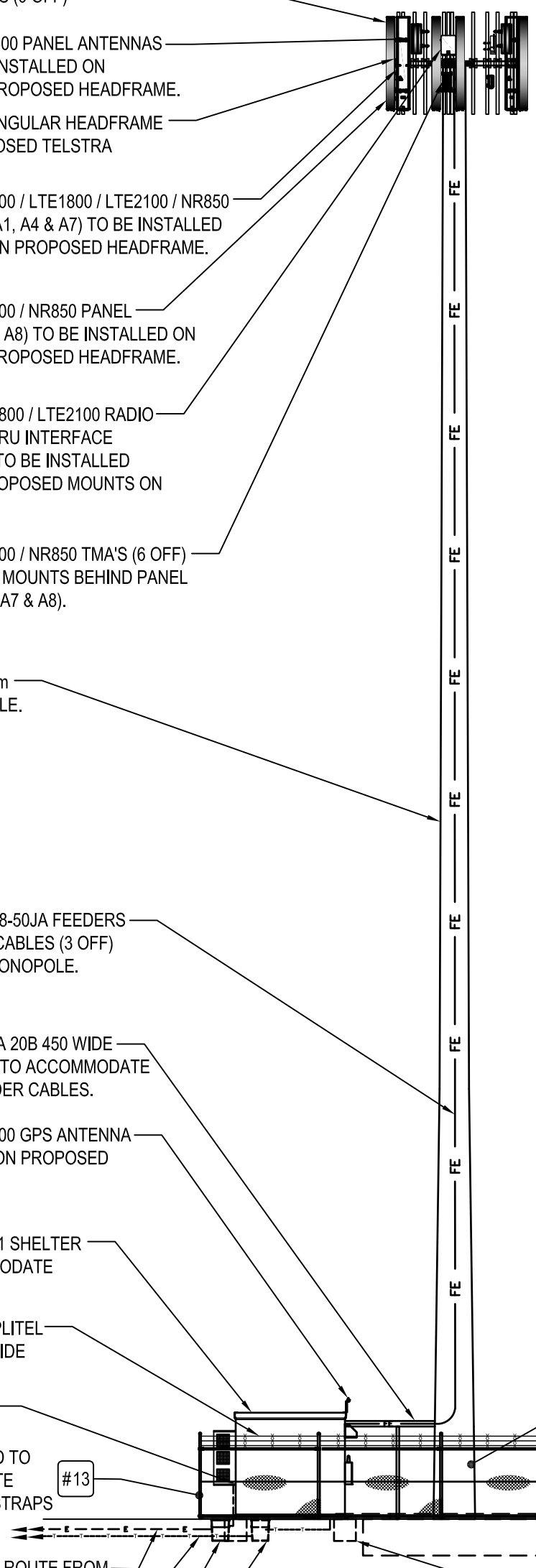
PROPOSED SIGN SECURED TO AMPLITEL COMPOUND GATE USING STAINLESS STEEL STRAPS #13

PROPOSED U/G SUBMAINS ROUTE FROM EXISTING METER PANEL BOARD LOCATED AT EXISTING HOUSE (INDICATIVE ONLY).

PROPOSED TELSTRA FIBRE ROUTE (INDICATIVE ONLY).

PROPOSED TELSTRA POWER PIT P5 (INDICATIVE ONLY).

PROPOSED TELSTRA FIBRE PIT P5 (INDICATIVE ONLY).



▽ E.L. 41.4m (±100mm) RL 491.4m A.H.D.
OVERALL HEIGHT

▽ E.L. 40.67m (±100mm) RL 490.67m A.H.D.
C/L PROPOSED TELSTRA NR3600 PANEL ANTENNAS (3 OFF A3, A6 & A9)

▽ E.L. 40.5m (±100mm) RL 490.5m A.H.D.
C/L PROPOSED TELSTRA LTE1800/LTE2100 RADIO 4480 (B3/B1) (3 OFF)

▽ E.L. 40.0m (±100mm) RL 490.0m A.H.D.
TOP OF PROPOSED MONOPOLE
C/L PROPOSED TELSTRA TRIANGULAR HEADFRAME
C/L PROPOSED TELSTRA LTE700/NR850/LTE1800/LTE2100 PANEL ANTENNAS (3 OFF A1, A4 & A7)
C/L PROPOSED TELSTRA LTE700/NR850 PANEL ANTENNAS (3 OFF A2, A5 & A8)

▽ E.L. 39.5m (±100mm) RL 489.5m A.H.D.
C/L PROPOSED W & B JUNCTION BOXES (3 OFF)
C/L PROPOSED TELSTRA LTE700/NR850 TMA'S (6 OFF)

UNAPPROVED DRAWING

COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT)
SIGNATURE DATE

NOTES :

1. ALL FEEDER ACCESS POINTS ON THE STRUCTURE MUST BE BIRD PROOFED AS PER EXTERNAL PLANT POLICY 003615.
2. FOR EME SIGNS NOTED AS #X REFER TO 005486 DOCUMENTS FOR DETAILS.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

6 PROPOSED SIGN TO BE SECURED AT 1.5m AGL TO MONOPOLE USING STAINLESS STEEL STRAPS

▽ E.L. 00.0m (±100mm) RL 450.0m A.H.D.
GROUND LEVEL

PROPOSED AMPLITEL MONOPOLE PAD FOOTING (5.0m x 5.0m) (INDICATIVE ONLY).

PROPOSED TELSTRA SHELTER PIER FOOTINGS (INDICATIVE ONLY).

NORTH ELEVATION

SCALE 1: 150

1.5m 0 1.5m 3m 4.5m 6m 7.5m SCALE 1:150

PRELIMINARY

TO BE READ IN CONJUNCTION WITH SHEETS S1, S1-1, S1-2, & S3-1.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4017936.01	RA	AH	PRELI - 30095327WO015 VPL - LTE700/1800/2100/NR3.6/5G.85	MR	RO	27.02.22	1

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AMPLITEL Part of the Telstra Group

TOWER AMS SITE QLD006338
MAREEBA SOUTH
NORTH ELEVATION
114 MINES RD, MAREEBA, QLD 4880

DWG NO. Q116998 SHT NO. S3

visionstream

Cad file: Q116998_PD.dwg A3V

Telstra Networks Wireless Program Delivery Template - 017866P02 issue 12.11 /04/ 2016
Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022
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Plot date: 5 April 2022 - 10:36 AM

TELSTRA ANTENNA CONFIGURATION TABLE

ANTENNA No	ANTENNA TYPE & SIZE H x W x D	ANTENNA ACTION REQUIRED	ANTENNA HEIGHT C/L A.G.L.	ANTENNA BEARING (x°T)	SECTOR NO. & TECHNOLOGY
A1	ARGUS RVVPX310.11B-T2H PANEL 2533 x 350 x 208mm	INSTALL	40.0m	20°	S1: LTE700 / S1: NR850 S1: LTE700 / S1: NR850
					S1: LTE1800 / S1: LTE2100 S1: LTE1800 / S1: LTE2100
					S1: LTE1800 / S1: LTE2100 S1: LTE1800 / S1: LTE2100
A2	ARGUS RVVPX310.11B-T2H PANEL 2533 x 350 x 208mm	INSTALL	40.0m	20°	S1: LTE700 / S1: NR850 S1: LTE700 / S1: NR850
					SPARE SPARE
					SPARE SPARE
A3	ERICSSON AIR6488 PANEL 810 x 400 x 200mm	INSTALL	40.67m	20°	S1: NR3600 S1: NR3600
A4	ARGUS RVVPX310.11B-T2H PANEL 2533 x 350 x 208mm	INSTALL	40.0m	180°	S2: LTE700 / S2: NR850 S2: LTE700 / S2: NR850
					S2: LTE1800 / S2: LTE2100 S2: LTE1800 / S2: LTE2100
					S2: LTE1800 / S2: LTE2100 S2: LTE1800 / S2: LTE2100
A5	ARGUS RVVPX310.11B-T2H PANEL 2533 x 350 x 208mm	INSTALL	40.0m	180°	S2: LTE700 / S2: NR850 S2: LTE700 / S2: NR850
					SPARE SPARE
					SPARE SPARE
A6	ERICSSON AIR6488 PANEL 810 x 400 x 200mm	INSTALL	40.67m	180°	S2: NR3600 S2: NR3600
A7	ARGUS RVVPX310.11B-T2H PANEL 2533 x 350 x 208mm	INSTALL	40.0m	280°	S3: LTE700 / S3: NR850 S3: LTE700 / S3: NR850
					S3: LTE1800 / S3: LTE2100 S3: LTE1800 / S3: LTE2100
					S3: LTE1800 / S3: LTE2100 S3: LTE1800 / S3: LTE2100
A8	ARGUS RVVPX310.11B-T2H PANEL 2533 x 350 x 208mm	INSTALL	40.0m	280°	S3: LTE700 / S3: NR850 S3: LTE700 / S3: NR850
					SPARE SPARE
					SPARE SPARE
A9	ERICSSON AIR6488 PANEL 810 x 400 x 200mm	INSTALL	40.67m	280°	S3: NR3600 S3: NR3600
A200	GPS ANTENNA KRE 101 2082/1 Ø68 x 96	INSTALL	BASE OF GPS 3.2m	0°	-

UNAPPROVED DRAWING

COMPLIANCE BOX
COMPLETED AS PER DESIGN ☐
ALTERATIONS IN RED ☐
NAME (PRINT)
SIGNATURE DATE

PRELIMINARY

TO BE READ IN CONJUNCTION WITH SHEETS S1, S1-1, S1-2 & S3.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
4017936.01	RA	AH	PRELI - 30095327WO015 VPL - LTE700/1800/2100/NR3.6/5G.85	MR	RO	27.02.22	1

visionstream

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MOBILE NETWORK SITE 362123
MAREEBA SOUTH
ANTENNA CONFIGURATION TABLE
114 MINES RD, MAREEBA, QLD 4880

DWG NO. Q116998 | SHT NO. S3-1

Cad file: Q116998_PD.dwg | A3V

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Environmental EME Report

Location	114 MINES RD, MAREEBA QLD 4880		
Date	16/03/2022	**RFNSA No.**	4880015

How does this report work?

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at 114 MINES RD, MAREEBA QLD 4880. These levels have been calculated by Visionstream using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).
A document describing how to interpret this report is available at ARPANSA's website:
A Guide to the Environmental Report.

A snapshot of calculated EME levels at this site

There are currently no existing radio systems for this site.

The maximum EME level calculated for the **proposed** changes at this site is

1.75%

out of 100% of the public exposure limit, 79 m from the location.

EME levels with the proposed changes

Distance from the site	Percentage of the public exposure limit
0-50 m	1.02%
50-100 m	1.75%
100-200 m	1.52%
200-300 m	0.76%
300-400 m	0.53%
400-500 m	0.31%

For additional information please refer to the EME ARPANSA Report annexure for this site which can be found at *http://www.rfnsa.com.au/4880015*.

Radio systems at the site

This base station currently has equipment for transmitting the services listed under the existing configuration.
The proposal would modify the base station to include all the services listed under the proposed configuration.

	Existing		Proposed	
Carrier	**Systems**	**Configuration**	**Systems**	**Configuration**
Telstra			4G, 5G	LTE700 (proposed), LTE1800 (proposed), NR850 (proposed), LTE2100 (proposed), NR3500 (proposed)

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An in-depth look at calculated EME levels at this site

This table provides calculations of RF EME at different distances from the base station for emissions from existing equipment alone and for emissions from existing equipment and proposed equipment combined. All EME levels are relative to 1.5 m above ground and all distances from the site are in 360º circular bands.

	Existing configuration			Proposed configuration		
Distance from the site	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
0-50m				6.16	100.81	1.02%
50-100m				8.09	173.78	1.75%
100-200m				7.54	150.85	1.52%
200-300m				4.85	62.44	0.76%
300-400m				3.92	40.71	0.53%
400-500m				3.00	23.84	0.31%

Calculated EME levels at other areas of interest

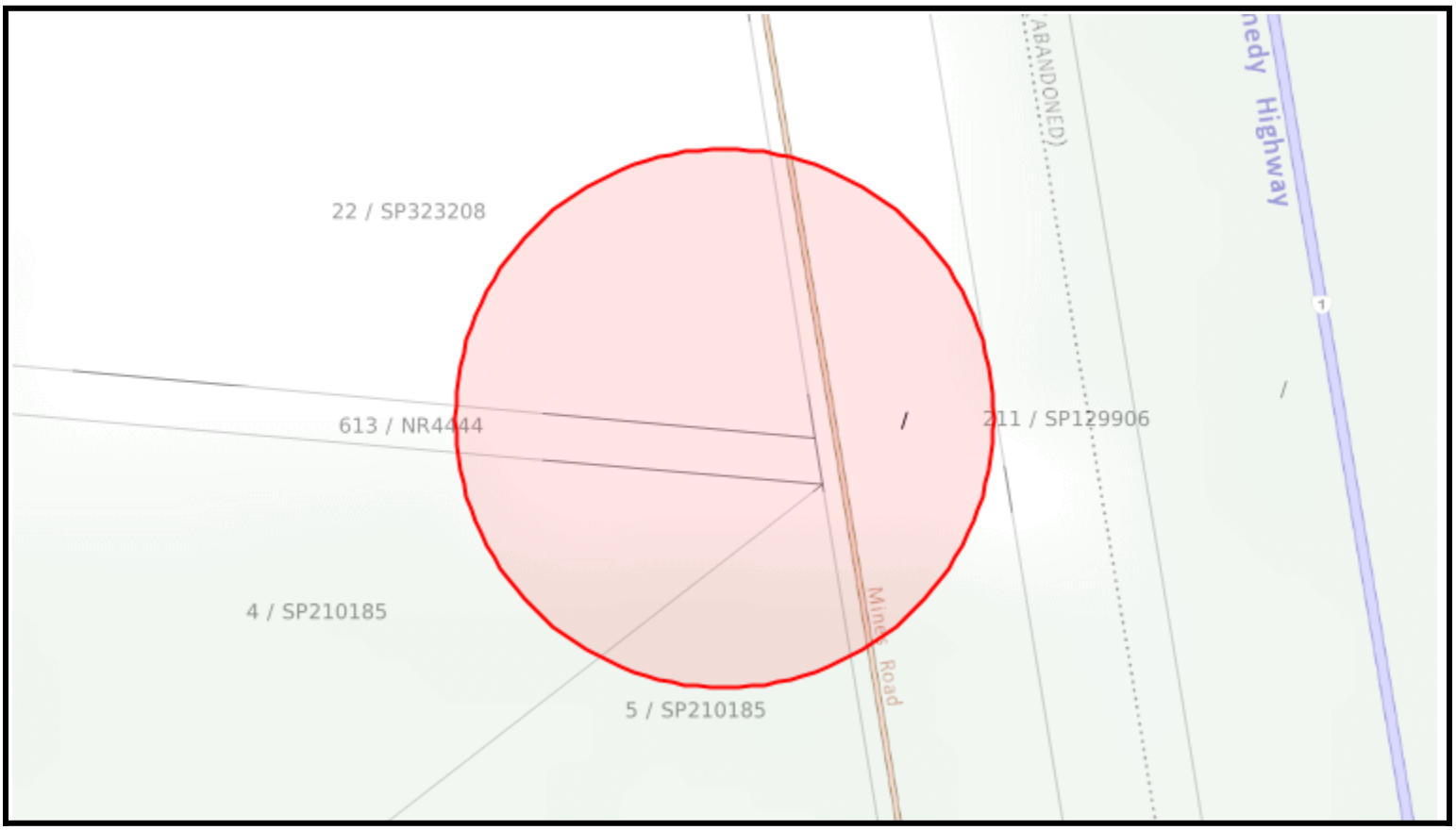
This table contains calculations of the maximum EME levels at selected areas of interest, identified through consultation requirements of the Communications Alliance Ltd Deployment Code C564:2020 or other means. Calculations are performed over the indicated height range and include all existing and any proposed radio systems for this site.

Maximum cumulative EME level for the proposed configuration

Location	Height range	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
No locations identified				

Latitude/Longitude Search

Reference Number:	107528
Latitude:	-17.039666713006877
Longitude:	145.42817471455797
Buffer Distance:	60 metres



There are no Aboriginal or Torres Strait Islander cultural heritage site points recorded in your specific search area.

There are no Aboriginal or Torres Strait Islander cultural heritage site polygons recorded in your specific search area.

There is no cultural heritage party recorded in your specific search area.

There is no cultural heritage body recorded in your specific search area.

Feb 24, 2022, 1:38 PM

GDA2020

Latitude/Longitude Search

There are no cultural heritage management plans recorded in your specific search area.

There are no Designated Landscape Areas (DLA) recorded in your specific search area.

There are no Registered Cultural Heritage Study Areas recorded in your specific search area.

Regional Coordinator:

Name	Position	Phone	Mobile	Email
Leigh Preston	Cultural Heritage Coordinator North Region	07 4796 7862	0427 142 782	Leigh.Preston@dsdsatsip.qld.gov.au

Disclaimer: The Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships is the custodian of spatial data provided by various third parties for inclusion in the Aboriginal and Torres Strait Islander cultural heritage online portal. This includes spatial data provided by the National Native Title Tribunal and Aboriginal and Torres Strait Islander parties. Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships is not responsible for the accuracy of information provided by third parties or any errors in this search report arising from such information.

Map Datum: Geographic Latitude & Longitude (GDA2020)

Latitude/Longitude Search

I refer to your submission in which you requested advice regarding Aboriginal or Torres Strait Islander cultural heritage recorded at your nominated location.

The Cultural Heritage Database and Register have been searched in accordance with the location description provided, and the results are set out in the above report.

Aboriginal or Torres Strait Islander cultural heritage which may exist within the search area is protected under the terms of the *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003*, even if the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships has no records relating to it.

Under the legislation a person carrying out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal or Torres Strait Islander cultural heritage. This applies whether or not such places are recorded in an official register and whether or not they are located on private land.

Please refer to our website https://www.dsdsatsip.qld.gov.au/people-communities/aboriginal-torres-strait-islander-cultural-heritage for a copy of the gazetted Cultural Heritage Duty of Care Guidelines, which set out reasonable and practicable measure for meeting the cultural heritage duty of care.

In order to meet your duty of care, any land-use activity within the vicinity of recorded cultural heritage should not proceed without the agreement of the Aboriginal or Torres Strait Islander Party for the area, or by developing a Cultural Heritage Management Plan under Part 7 of the legislation.

If your proposed activity is deemed a Category 5 activity pursuant to the Duty of Care Guidelines, there is generally a high risk that it may harm cultural heritage. In these circumstances, the activity should not proceed without cultural heritage assessment.

Where a Category 5 activity is proposed that may impact on features set out in Paragraph 6 of the Guidelines, it is necessary to notify the Aboriginal or Torres Strait Islander Party and seek:

a. Advice as to whether the area is culturally significant;
b. If it is, agreement on how best the activity may be managed to avoid or minimise harm to any cultural heritage values.

The features set out in Paragraph 6 include:

- Rock outcrops

Latitude/Longitude Search

- Caves
- Foreshores and coastal dunes
- Sand Hills
- Areas of biogeographical significance, such as natural wetlands
- Permanent and semi-permanent waterholes, natural springs
- Native vegetation
- Some hill and mound formations

The extent to which the person has complied with Cultural Heritage Duty of Care Guidelines and the extent the person consulted Aboriginal or Torres Strait Islander Parties about carrying out the activity – and the results of the consultation – are factors a court may consider when determining if a land user has complied with the cultural heritage duty of care.

Should you have any further queries, please do not hesitate to contact the Search Approval Officer on 1300 378 401.

Kind regards

The Director
Cultural Heritage | Community Participation | Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships

Appendix D Planning Scheme Code Assessment

Rural residential zone code

6.2.10.2 Purpose

(1) The purpose of the Rural residential zone code is to provide for residential development on large lots where local government infrastructure and services may not be provided on the basis that the intensity of development is generally dispersed.
(2) Mareeba Shire Council's purpose of the Rural residential zone code is to provide for residential development on a range of larger lots which take account of the history of rural residential development throughout the region. Limited agricultural and animal husbandry activities which contribute to a semi-rural setting may be appropriate on lots with areas in the upper range of lot sizes.
(3) The Rural residential zone has been broken into three precincts to cater for the distinct lot sizes and levels of servicing that historically occurred in this zone:
    (a) The 2 hectare precinct is characterised by significant clusters of larger rural residential lifestyle lots that have limited infrastructure and proximity to services. Lots within this precinct will not be reconfigured below 2 hectares in size;
    (b) The 1 hectare precinct is characterised by significant clusters of rural residential lifestyle lots that have limited access to infrastructure and proximity to services. Lots within this precinct will not be reconfigured below 1 hectare in size; and
    (c) The 4,000m2 precinct is characterised by clusters of smaller rural residential lots in proximity to activity centres, where reticulated water supply and an urban standard of infrastructure (apart from sewerage) can be provided. Lots within this precinct will not be reconfigured below 4,000m².
(4) The purpose of the code will be achieved through the following overall outcomes:

Overall Outcome	Applicant Response
4a The development of large rural residential lots with attendant provision of onsite infrastructure is facilitated.	The proposed facility will provide a critical service to current and emerging uses within the surrounding area, including rural residential dwellings, small-sized residential lots and agricultural development.
4b Development within the zone preserves the environmental and topographical features of the land by integrating an appropriate scale of rural residential activities;	The proposed facility will not have an adverse impact on any of the environmental values of the land and there are no topographical features (valleys, slopes, mountains etc.) that have view-corridors affected by the proposed facility. The height of the facility is necessary to provide an acceptable level of coverage and allow for future co-location by other Carriers. The facility has been sited to balance amenity impacts on the surrounding area with other considerations. Montages provided have shown that by using a monopole design, the proposed facility has a low built bulk and so while it introduces a built element into the skyline, it is thin and does not dominate any particular view. Shadow assessments for the structure have also shown that during the longest and shortest day of the year, (and so showing the range of impacts during the year) the proposal has only a small impact on

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Overall Outcome	Applicant Response
	residences in the area and that these impacts are relatively brief.
4c Development avoids areas of ecological significance;	The proposed development is sited such that there are no impacts on areas of environmental significance.
4d Low-impact activities such as small-scale eco-tourism and outdoor recreation uses are permitted within the zone where the impacts of such uses are acceptable;	The proposed development is for a community purpose and so is not analogous to small eco-tourism or outdoor recreation uses. The proposed facility is however considered low-impact in respect to its use of a small land area and its lack of emissions such as noise, odour, lighting or dust.
4e Natural features such as creeks, gullies, waterways, wetlands and vegetation and bushland are retained, enhanced and buffered from the impacts of development, with unavoidable impacts minimised through location, design, operation and management requirements;	The proposed development is sited such that it is not near a creek, gully, waterway or wetland and will not impact on such. The only vegetation in the construction area is native grasses and potentially some low shrubbery.
4f Other uses may be appropriate where meeting the day to day needs of the rural residential catchment or having a direct relationship to the land in which the particular use is proposed. Any such uses should not have any adverse effects on the residential amenity of the area through factors such as noise generation, traffic generation or other factors associated with the use;	The proposed use is a piece of community infrastructure and as such provides a critical service to both the existing and emerging community. This service is not only important for the everyday social interactions that have become more strained and important during the current pandemic, but also for tele-health (including disability services), home-schooling, home-based business and existing agricultural businesses. The proposed facility is required to be located in direct proximity to the area it is intended to service and has an acceptable amenity impact on the area and will generate nearly no noise and no additional traffic as a result of its operation. The proposed facility will also not prejudice the existing or future use of the land.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Overall Outcome	Applicant Response
4g Reconfiguring a lot will maintain the predominant lot size of the precinct or intended for the precinct; and	The proposed development does not include reconfiguring a lot.
4h Reconfiguring a lot involving the creation of new lots is not undertaken external to a precinct in the Rural residential zone in consideration of the inherent environmental, and/or physical infrastructure and/or social infrastructure constraints of Rural residential zoned land outside of identified precincts.	The proposed development does not include reconfiguring a lot.

6.2.10.3 Criteria for assessment

Table 6.2.10.3—Rural residential zone code - For accepted development subject to requirements and assessable development

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
For accepted development subject to requirements and assessable development		
Height		
PO1 Building height takes into consideration and respects the following: a) the height of existing buildings on adjoining premises; b) the development potential, with respect to height, on adjoining premises;	**AO1.1** Development has a maximum building height of: a) 8.5 metres; and b) (b) 2 storeys above ground level. **AO1.2** Building and structures are set back 10m from all boundaries.	**Performance solution**: The extent of service provided by the facility and its ability to allow for co-location by another Carrier (preventing multiple towers in the area) is in direct correlation to its height. Limiting the tower to a height of two storeys or 8.5m would result in a tower that provides very low levels

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
c) the height of buildings in the vicinity of the site; d) access to sunlight and daylight for the site and adjoining sites; e) privacy and overlooking; and f) site area and street frontage length.	**AO1.3** Building height does not exceed the maximum height identified on Overlay map – Building heights.	of coverage and no ability for co-location. The proposed facility has been sited so that it is visible from a small number of residences, the majority of which are located in the rural residential area to the south. Due to its height and its remote location, landscaping elements are not able to obstruct the facility, though it will take advantage of mature vegetation in the surrounding area. Montages and shadowing calculations have been provided that show respectively, low and brief levels of impact. The proposal will not impact on the privacy of any surrounding parcels, does not prejudice the existing or potential uses of the subject site or surroundings, and by dint of its specific need for height, does not create an precedent or similar with relation to the height of future structures in the area.
Outbuildings and residential scale		
PO2 Domestic outbuildings: a) do not dominate the lot on which they are located; and b) are consistent with the scale and character of development in the Rural residential zone.	**AO2.1** On lots less than 2 hectares, domestic outbuildings do not exceed: (a) 150m2 in gross floor area; and (b) 5.5 metres above natural ground level **AO2.2** On lots greater than 2 hectares, domestic outbuildings do not exceed: (a) 200m2 in gross floor area; and (b) 8.5 metres above natural ground level.	**Not applicable** – The proposed facility does not include any domestic outbuildings. The development does includes a small equipment shelter 7.5m^2 in size and lower than 5m above natural ground level.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
Siting		
PO3 Development is sited in a manner that considers and respects: a) the siting and use of adjoining premises; b) access to sunlight and daylight for the site and adjoining sites; c) privacy and overlooking; d) opportunities for casual surveillance of adjoining public spaces; e) air circulation and access to natural breezes; f) appearance of building bulk; and g) relationship with road corridors.	**AO3** Buildings and structures include a minimum setback of: a) 40 metres from a frontage to a Statecontrolled Road; b) 6 metres from a frontage to any other road; c) 10 metres from a boundary to an adjoining lot in the 2 hectare precinct, 1 hectare precinct or the Rural zone or Conservation zone; d) (d) 5 metres from a boundary to an adjoining lot in the 4,000m2 precinct; and (e) 3 metres from a side or rear boundary otherwise	**Complies –** The proposed Telecommunications Facility is setback: a) Over 40 metres from a frontage to a State-controlled Road; b) over 6 metres from a frontage to any other road; c) over 10 metres from the southern boundary to the 2 hectare precinct; d) over 5 metres from the boundary to the 4,000m2 precinct;
Accommodation density		
PO4 The density of Accommodation activities: a. contributes to housing choice and affordability; b. respects the nature and density of surrounding land use; c. does not cause amenity impacts beyond the reasonable expectation of accommodation density for the zone; and d. is commensurate to the scale and frontage of the site	**AO4** Development provides a maximum density for Accommodation activities of 1 dwelling or accommodation unit per lot.	**Complies –** The proposed Telecommunications Facility does not increase the density of accommodation activities on the lot
For assessable development		
Site cover		
PO6 Buildings and structure occupy the site in a manner that: a) makes efficient use of land;	**AO5** No acceptable outcome is provided.	**Performance solution** The proposed facility occupies the smallest land area possible and the smallest height possible whilst ensuring coverage to the area is acceptable to Telstra

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
b) is consistent with the bulk and scale of surrounding buildings; and c) appropriately balances built and natural features.		and co-location by another Carrier is possible. The slim monopole design of the tower will reduce the building bulk while the equipment shelter and other ground-based components will be obstructed from view within a compound surrounded by a solid fence. Montages and shadowing calculations have shown impacts on surrounding residences are for the former, restricted mainly to rural residential properties to the south and for the latter, very brief in nature.
Building design		
PO6 Building facades are appropriately designed to: a) include visual interest and architectural variation; b) maintain and enhance the character of the surrounds; c) provide opportunities for casual surveillance; d) include a human scale; and e) encourage occupation of outdoor space.	**AO6** No acceptable outcome is provided.	**Performance solution:** There is little ability to disguise the façade of the monopole itself without compromising its ability to function effectively or increasing its bulk. As provided within the report, colour-treatment of the monopole is available as a potential condition of approval. However, colour-treatment of the tower without a vegetation backdrop or similar may result in a tower that stands out more against a variety of sky backdrops, unlike the more neutral natural grey colour of the tower material. The equipment shelter will be of a pale eucalypt and the proposed solid fence around the compound can be colour-treated from a variety of different colours within the AS2700 standard. The remainder of this PO relates

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
		more to non-infrastructure structures.
PO7 Development complements and integrates with the established built character of the Rural residential zone, having regard to: a. roof form and pitch; b. eaves and awnings; c. building materials, colours and textures; and d. window and door size and location	**AO7** No acceptable outcome is provided.	**Performance solution:** The performance solution identifies numerous elements such as pitch, eaves and windows that are not present on the proposed Telecommunications Facility. The proposed facility does include building materials, mainly steel and can be colour-treated to a variety of difference colours within the AS2700 standard. However, colour-treatment of the tower without a vegetation backdrop or similar may result in a tower that stands out more against a variety of sky backdrops, unlike the more neutral natural grey colour of the tower material. The equipment shelter will be of a pale eucalypt and the proposed solid fence around the compound can be colour-treated from a variety of different colours within the AS2700 standard
Non-residential development		

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
PO8 Non-residential development: a) is consistent with the scale of existing development; b) does not detract from the amenity of nearby residential uses; c) does not impact on the orderly provision of non-residential development in other locations in the shire; and d) directly supports the day to day needs of the immediate residential community; or e) has a direct relationship to the land on which the use is proposed.	**AO8** No acceptable outcome is provided.	**Performance solution:** The proposed Telecommunications Facility is considered community infrastructure and so is non-residential development. The proposed facility is not consistent with the scale of existing development in terms of height, but is consistent with the scale of existing development in terms of the density and growth of the area and its critical need for additional telecommunication services. The proposed facility has been sited to minimise amenity impacts, which are near entirely restricted to rural residential properties to the south. The proposed facility will not impact on non-residential development in other locations in the shire and will directly support social cohesion of dwellings in the area, provide for tele-health, home-schooling, work from home, agricultural and home-based businesses in the surrounding area. The proposed facility has a direct relationship to the land on which the use is proposed as a Telecommunications Facility must be placed with regards to the coverage it will provide. Radio-frequency assessment has shown the proposed facility provides the best coverage of available candidates.
Amenity		
PO9	**AO10**	**Performance solution**

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
Development must not detract from the amenity of the local area, having regard to: a. noise; b. hours of operation; c. traffic; d. advertising devices; e. visual amenity; f. privacy; g. lighting; h. odour; and i. emissions.	No acceptable outcome is provided.	The proposed development, once constructed, will create minimal traffic (two (2) to four (4) maintenance visits a year), no odour, lighting or advertising devices. The proposed facility will incorporate a small residential-style air-conditioning unit that will generate minimal noise and EME emissions are well within the standards set by the Australian Government. With regards to amenity, montages and shadowing diagrams have been supplied. The proposed facility has been sited to minimise amenity impacts, which are near entirely restricted to rural residential properties to the south, with clever siting meaning that residences to the north, east and west are only minimally affected. The proposed development takes advantage of some mature vegetation to the south to obstruct parts of the tower. Ground-based elements of the facility will be obstructed by solid fencing (colourbond ® style) around the compound, for which a range of colour-treatments are available (AS2700). Similarly, a range of colour options are available for the tower itself, however given the lack of vegetated or solid colour backdrop, a colour treatment to pale eucalypt/mist green or similar can often create a monopole that stands out more against a variable sky

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Rural residential zone code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
		backdrop. Ventia considers that the facility has minimised amenity impacts to the greatest degree possible and remaining amenity impacts are acceptable given the need for the height of the tower and its ability to provide co-location capabilities to other Carrier and prevent a proliferation of towers in the area.

Airport environs overlay code

8.2.2.2 Purpose

1) The purpose of the Airport environs overlay code is to protect the current and ongoing operations of established airports, aerodromes and aviation infrastructure in Mareeba Shire.
2) The purpose of the code will be achieved through the following overall outcomes:

Overall Outcome	Applicant Response
OO2a The ongoing operation of Mareeba Airport and its associated infrastructure are protected from incompatible development;	**Response** In conjunction with discussions with CASA, Council and its own assessment the proposed facility is not considered to impact on the ongoing operation of the Mareeba Airport. The facility will not increase potential food or waste to attract wildlife and has a maximum height 24.7m under the nearby conical surface area of 516mAHD and the inner horizontal surface area of 516m AHD, as supplied under the airport overlay mapping by the State Government. As a result of this the proposed facility is not considered to breach the OLS and does not require lighting or similar treatments.
OO2b Aerodromes in Chillagoe and Dimbulah are maintained to support recreation, mining and rural uses;	**Response** The proposed facility is not located near the Chillagoe or Dimbulah aerodromes.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Overall Outcome	Applicant Response
OO2c Operational airspace is protected;	**Response** In conjunction with discussions with CASA, Council and its own assessment the proposed facility is not considered to impact on the ongoing operation of the Mareeba Airport. The facility has a maximum height 24.7m under the conical surface area of 516mAHD, as supplied under the airport overlay mapping by the Mareeba Shire Council. As a result of this the proposed facility is not considered to breach the OLS and does not require lighting or similar treatments.
OO2d Threats to aviation safety such as bird and bat strike and distraction or blinding of pilots are avoided or minimised;	**Response** The proposed facility does not include any food or waste that would attract bats or birds and is not considered to be reflective to blind or distract pilots.
OO2e State significant aviation facilities associated with the Mareeba Airport are protected from encroachment by sensitive land uses;	**Response** The proposed Telecommunications Facility is not considered a sensitive use with respect to state significance aviation facilities associated with the Mareeba Airport.
OO2f Development in the vicinity of airports, aerodromes and aviation infrastructure does not compromise public safety.	**Response** In conjunction with discussions with CASA, Council and its own assessment the proposed facility is not considered to impact on the ongoing operation of the Mareeba Airport. The facility will not increase potential food or waste to attract wildlife and has a maximum height 24.7m under the conical surface area of 516mAHD and the inner horizontal surface area of 516m AHD, as supplied under the airport overlay mapping by the Mareeba Shire Council As a result of this the proposed facility is not considered to breach the OLS and does not require lighting or similar treatments. The proposed facility is also not located near the Mareeba airport to hinder its existing or future use.

Table 8.2.2.3—Airport environs overlay code - For accepted development subject to requirements and assessable development

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
For accepted development subject to requirements and assessable development		

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
Protection of operational airspace		
PO1 Development does not interfere with movement of aircraft or the safe operation of an airport or aerodrome where within the: a. Airport environs: OLS area of Mareeba Airport identified on Airport environs overlay map (OM-002c); or b. Airport environs: OLS area of Cairns Airport identified on Airport environs overlay map (OM-002c.1); or c. 'Airport environs: Airport buffer - 1 kilometre' of an aerodrome identified on Airport environs overlay map (OM-002f); or b) (d) 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f).	**AO1.1** Development has a maximum building height of: Development does not exceed the height of the Obstacle Limitation Surface (OLS) where located within the Airport environs: OLS area of: c) (a) Mareeba Airport identified on Airport environs overlay map (OM-002c); or d) (b) Cairns Airport identified on Airport environs overlay map (OM-002c.1).	**Complies:** The proposed facility does not exceed the OLS of 516m AHD set for the subject site.
	AO1.2 Development has a maximum height of 10 metres where within the 'Airport environs: Airport buffer - 1 kilometre' of an aerodrome identified on Airport environs overlay map (OM-002f).	**Complies:** The proposed facility is not within the 1 kilometre buffer as shown on the Airport environs overlay map.
	AO1.3 Development has a maximum height of 15 metres where within the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f).	**Complies:** The proposed facility is not within the 3 kilometre buffer as shown on the Airport environs overlay map.
Lighting		

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
PO2 Development does not include lighting that: a. has the potential to impact on the efficient and safe operation of Mareeba Airport or an aerodrome; or b) (b) could distract or confuse pilots.	**AO2.1** Development within the 'Airport environs: Distance from airport - 6 kilometres' area for Mareeba Airport identified on Airport environs overlay map (OM-002b) or the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f) does not: (a) involve external lighting, including street lighting, that creates straight parallel lines of lighting that are more than 500 metres long; and (b) does not contain reflective cladding upwards shining lights, flashing lights or sodium lights.	**Complies** The proposed Telecommunications Facility does not include external lighting, reflective cladding, upwards shining lights, flashing lights or sodium lights.
Noise exposure		
PO3 Development not directly associated with Mareeba Airport is protected from aircraft noise levels that may cause harm or undue interference.	**AO3** Sensitive land uses are acoustically insulated to at least the minimum standards specified by AS2021 Acoustics - Aircraft Noise Intrusion - Building Siting and Construction where located within the 'Airport environs: 20-25 ANEF' area identified on Airport environs overlay map (OM-002d).	**Complies** The proposed Telecommunications Facility is not a sensitive land use.
Public safety		

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
PO4 Development does not compromise public safety or risk to property.	**AO4** Development is not located within the 'Airport environs: Mareeba Airport public safety area' identified on Airport environs overlay map (OM-002e).	**Complies** The proposed facility is not located within the 'Airport environs: Mareeba Airport public safety area' identified on Airport environs overlay map (OM-002e).
State significant aviation facilities associated with Mareeba Airport		
PO5 Development does not impair the function of state significant aviation facilities by creating: (a) physical obstructions; or (b) electrical or electro-magnetic interference; or (c) deflection of signals.	**AO5.1** Development within 'Airport environs: Zone B (600 metre buffer)' for the 'Saddle Mountain VHF' facility identified on Airport environs overlay map (OM-002a.1) does not exceed a height of 640 metres AHD.	**Complies:** The proposed facility is not located on land subject to the 'Airport environs: Zone B (600 metre buffer)' for the 'Saddle Mountain VHF' facility identified on Airport environs overlay map (OM-002a.1)
	AO5.2 Development within 'Airport environs: Zone B (4,000 metre buffer)' for the 'Hahn Tableland Radar (RSR)' facility identified on Airport environs overlay map (OM-002a) does not exceed a height of 950 metres AHD, unless associated with Hann Tableland Radar facility	**Complies:** The proposed facility is not located on land subject to the Airport environs: Zone B (4,000 metre buffer)' for the 'Hahn Tableland Radar (RSR)' facility identified on Airport environs overlay map (OM-002a)

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
	AO5.3 Building work does not occur within 'Airport environs: Zone A (200 metre buffer)' of the 'Biboohra CVOR' facility identified on Airport environs overlay map (OM-002a) unless associated with the Biboohra CVOR facility.	**Complies:** The proposed facility is not located on land subject to the Airport environs: Zone A (200 metre buffer)' of the 'Biboohra CVOR' facility identified on Airport environs overlay map (OM-002a)
	AO5.4 Development within 'Airport environs: Zone B (1,500 metre buffer)' of the 'Biboohra CVOR' facility identified on Airport environs overlay map (OM-002a), but outside 'Zone A (200 metre buffer)' identified on Airport environs overlay map (OM-002a), does not include: a) the creation of a permanent or temporary physical line of sight obstruction above 13 metres in height; or b) (b) overhead power lines exceeding 5 metres in height; or c) metallic structures exceeding 7.5 metres in height; OR d) trees and open lattice towers exceeding 10 metres in height; or e) wooden structures exceeding 13 metres in height	**Complies:** The proposed facility is not located on land subject to the Airport environs: Zone B (1,500 metre buffer)' of the 'Biboohra CVOR' facility identified on Airport environs overlay map (OM-002a)
For assessable development		
Mareeba Airport		
Protection of operational airspace		
PO6	**AO6.1** Development involving sporting and recreational aviation activities such as parachuting, hot air ballooning or hang	**Complies** The proposed facility does not involve sporting and recreational aviation

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
Development within the vicinity of Mareeba Airport or an aerodrome does not interfere with the: (a) movement of aircraft; or (b) safe operation of the airport or facility	gliding, does not occur within the Airport environs: OLS area of: (a) Mareeba Airport identified on Airport environs overlay map (OM-002c); or (b) Cairns Airport identified on Airport environs overlay map (OM-002c.1).	activities such as parachuting, hot air ballooning or hang gliding.
	AO6.2 Development involving temporary or permanent aviation activities does not occur within the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f).	**Complies** The proposed facility does not involve **temporary or permanent aviation activities**
PO7 Development does not affect air turbulence, visibility or engine operation in the operational airspace of Mareeba Airport or regional aerodromes.	**AO7** Development does not result in the emission of a gaseous plume, at a velocity exceeding 4.3 metres per second, or smoke, dust, ash or steam within: (a) the Airport environs: OLS area of Mareeba Airport identified on Airport environs overlay map (OM-002c); or (b) the Airport environs: OLS area of Cairns Airport identified on Airport environs overlay map (OM-002c.1); or (c) the 'Airport environs: Airport buffer - 1 kilometre' of a regional aerodrome identified on Airport environs overlay map (OM-002f).	**Complies** The proposed facility does not emit any gaseous plumes.
Managing bird and bat strike hazard to aircraft		
PO8 Development in the environs of Mareeba Airport or an aerodrome does not contribute to the potentially serious hazard from wildlife (bird or bat) strike.	**AO8.1** Development within the 'Airport environs: Distance from airport - 8 kilometres' Bird and bat strike zone of Mareeba Airport identified on Airport environs overlay map (OM-002b) or the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f) provides that potential food and waste sources are covered and	**Complies** The proposed facility does not generate or have any association with potential food and waste sources.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Airport environs overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
	collected so that they are not accessible to wildlife.	
	AO8.2 Development within the 'Airport environs: Distance from airport - 3 kilometres' Bird and bat strike zone of Mareeba Airport identified on Airport environs overlay map (OM-002b) or the 'Airport environs: Airport buffer - 1 kilometre' of an aerodrome identified on Airport environs overlay map (OM-002f) does not include: (a) food processing; or (b) abattoir; or (c) intensive horticulture; or (d) intensive animal husbandry; or (e) garden centre; or (f) aquaculture.	**Complies** The proposed use if a Telecommunications Facility and not: a) food processing; or (b) abattoir; or (c) intensive horticulture; or (d) intensive animal husbandry; or (e) garden centre; or (f) aquaculture.
	AO8.3 Putrescible waste disposal sites do not occur within the 'Airport environs: Distance from airport - 13 kilometres' Bird and bat strike zone of: (a) Mareeba Airport identified on Airport environs overlay map (OM-002b); or (b) Cairns Airport identified on Airport environs overlay map (OM-002b.1)	**Complies** The proposed facility does not generate or have any association with potential food and waste sources.

Bushfire hazard overlay code

8.2.3.2 Purpose

(1) The purpose of the Bushfire hazard overlay code is to minimise the threat of bushfire to people and property.

(2) The purpose of the code will be achieved through the following overall outcomes: (; (b) The number of people and properties subject to bushfire hazards are minimised through appropriate building design and location; (c) Development does not result in a material increase in the extent, duration or severity of bushfire hazard; and (d) Appropriate infrastructure is available to emergency services in the event of a bushfire.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Overall Outcome	Applicant Response
OO2a Development in a Bushfire hazard area is compatible with the nature of the hazard	**Response** The proposed facility is made of steel, concrete and other metals and is not habitable or shelterable. Given its construction materials and its location within a potential hazard area only, the proposed Telecommunications Facility is considered to be compatible the nature of the likely bushfire hazard of radiant heat and wind-blown embers associated with the buffer area.
OO2b The number of people and properties subject to bushfire hazards are minimised through appropriate building design and location;	**Response** The proposed facility operates unmanned and should a fire hazard eventuate during on of the maintenance inspections, the site design allows for a quick and efficient evacuation to the surrounding road network.
OO2c Development does not result in a material increase in the extent, duration or severity of bushfire hazard	**Response** The proposed facility is made of non-combustible material such as steel, concrete and other metals. The tower is not located within 50m of any other structures.
OO2d Appropriate infrastructure is available to emergency services in the event of a bushfire	**Response** The proposed facility is compatible with the hazard associated with the potential buffer area classification. As a result of this the facility does not require specific protection from emergency services.

Table 8.2.3.3—Bushfire hazard overlay code - For accepted development subject to requirements and assessable development

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
For accepted development subject to requirements and assessable development		
Water supply for fire-fighting purposes		
PO1 Development where within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o) maintains the safety of people and	**Where within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o)** **AO1.1** Where in a reticulated water service area, the on-site water supply has	**Performance solution** The proposed facility is located on the outer periphery of the potential impact buffer (100 metres). The proposed facility is made of steel, concrete and other

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
property by providing an adequate, accessible and reliable water supply for fire-fighting purposes which is safely located and has sufficient flow and pressure characteristics. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.	flow and pressure characteristics of 10 litres a second at 200 kPa.	metals that are not combustible and highly resistant to the radiant heat and wind-blown embers generally characterized by the potential buffer area. The proposed tower can also withstand direct flame attack, though this is not associated with the potential buffer area and the natural fuel state in the immediate vicinity is low, with only low native grasses. The proposed facility operates unmanned is not habitable or shelterable. In the event of a bushfire hazard during the infrequent maintenance visits for the site there is a clear and short evacuation route to the surrounding road network. Accordingly, the proposed facility is not considered to require a water supply for fire-fighting purposes.
	AO1.2 Where access to the reticulated water network is not available, a minimum on site water storage of 5,000 litres is provided that must comprise: (a) a separate tank; or (b) a reserve section in the bottom part of the main water supply tank; or (c) a dam; or (d) a swimming pool. Note—Where a water tank is provided for fire-fighting purposes it is fitted with standard rural fire brigade fittings and the tank is provided with a hardstand area for heavy vehicles.	

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
For assessable development		
Land use		
PO2 Development within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o) is appropriate to the bushfire hazard risk having regard to the: (a) the bushfire risk compatibility of development; (b) the vulnerability of and safety risk to persons associated with the use; and (c) consequences of bushfire in regard to impacts on essential infrastructure, buildings and structures. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.	AO2 All buildings, structures, infrastructure and facilities associated with the following uses are located outside any area of the site located within a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o): (a) child care centre; or (b) community care centre; or (c) correctional facility; or (d) educational establishment; or (e) emergency services; or (f) hospital; or (g) residential care facility; or (h) retirement facility; or (i) rooming accommodation; or (j) shopping centre; or (k) tourist park; or (l) tourist attraction.	Complies The proposed use is a Telecommunications Facility and not: (a) child care centre; or (b) community care centre; or (c) correctional facility; or (d) educational establishment; or (e) emergency services; or (f) hospital; or (g) residential care facility; or (h) retirement facility; or (i) rooming accommodation; or (j) shopping centre; or (k) tourist park; or (l) tourist attraction.
Lot design		
PO3 Reconfiguring a lot within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o) minimises the potential adverse impacts of bushfire on the safety of people, property and the environment through lot design that:	**Where within a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o)** **AO3.1** No new lots are created. **OR** AO3.2 All lots include a building envelope that achieves a radiant heat flux level of	**Not Applicable** The proposed development does not include reconfiguring a lot.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
(a) is responsive to the nature and extent of bushfire risk; and (b) allows efficient emergency access to buildings for fire-fighting appliances. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.	29kW/m2 at the permitter of the building envelope. Note—Where a radiant heat flux of 29kW/m2 is achieved and this relies on cleared or maintained land external to the land the subject of the development application it must be demonstrated that land external to the site will be maintained to a standard that does not exceed the level of bushfire hazard identified in a Bushfire hazard management plan.	
Firebreaks and access		
PO4 In a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003ao), vehicular access is designed to mitigate against bushfire hazard by: (a) ensuring adequate access for firefighting and other emergency vehicles; (b) ensuring adequate access for the evacuation of residents and emergency personnel in an emergency situation, including alternative safe access routes should access in one direction be blocked in the event of a fire; and (c) providing for the separation of	**AO4.1** In a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003ao), roads are designed and constructed: (a) with a maximum gradient of 12.5%; (b) (b) to not use cul-de-sacs; and (c) a constructed road width and weather standard complying with Planning Scheme Policy 4 - FNQROC Regional Development Manual.	**Not Applicable** The proposed development does not include a road. Vehicular access is via a new crossover and short access track. The access track is comprised of compacted crushed rock and will facility evacuation for any personnel undertaking a maintenance visit to the site.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
developed areas and adjacent bushland. Note—Where it is not practicable to provide firebreaks in accordance with A04.2 Fire Maintenance Trails are provided in accordance with the following: i. located as close as possible to the boundaries of the lot and the adjoining hazardous vegetation; ii. the minimum cleared width not less than 6 metres; iii. the formed width is not less than 2.5 metres; iv. the formed gradient is not greater than 15%; v. vehicular access is provided at both ends; vi. passing bays and turning areas are provided for fire-fighting appliances located on public land. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome	AO4.2 In a 'Bushfire hazard area' and 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003ao), firebreaks are provided: (a) consisting of a perimeter road that separates lots from areas of bushfire hazard; (b) a minimum cleared width of 20 metre; (c) a maximum gradient of 12.5%; and (d) a constructed road width and weather standard complying with Planning Scheme Policy 4 - FNQROC Regional Development Manual.	
Hazardous materials		
PO5 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire of hazardous materials manufactured or stored in bulk. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.	**AO5** The processing or storage of dangerous goods or hazardous materials is not undertaken in a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o)	**Complies** The proposed development does not processing or storage of dangerous goods or hazardous materials
Landscaping		
PO6 Landscaping within a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o) does not result in a material increase in	**AO6** No acceptable outcome is provided.	**Not applicable** The proposed facility, due to its remote locate and concerns with ongoing maintenance and replacements, has elected to use a solid fence around the

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
the extent, duration or severity of bushfire hazard having regard to: (a) fire ecology; (b) slope of site; and (c) height and mix of plant species. Note—Frost hollows and the associated grass kill facilitates a rapid curing of fuel and exacerbates bushfire hazard. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.		compound and does not include landscaping.
Infrastructure		
PO7 Infrastructure services located in a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o) are protected from damage or destruction in the event of a bushfire. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.	**AO7** The following infrastructure services are located below ground: (a) water supply; (b) sewer; (c) electricity; (d) gas; and (e) telecommunications	**Performance solution** It is considered this PO relates to copper and fibre networks for Telecommunications and not a Telecommunications Facility itself. Fibre to the site will be entirely underground while a finalised power design is still being supplied by the power authority. The design by the power authority will match their specifications for the area, including a private pole and/or complete undergrounding from existing poles.
Private driveway		
PO8 All premises located in a 'Bushfire hazard area' and a 'Potential impact buffer (100 metres)' identified on the Bushfire hazard overlay maps (OM-003a-o) are provided with vehicular access that enables safe evacuation for	**AO8** Private driveways: (a) do not exceed a length of 60 metres from the street frontage; (b) do not exceed a gradient of 12.5%; (c) have a minimum width of 3.5 metres;	**Not applicable** It is not considered that the proposed Telecommunications Facility is a 'premises' as it is not habitable or shelterable. Notwithstanding, the proposed facility will use a compacted gravel or rock

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Bushfire hazard overlay code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
occupants and easy access by fire-fighting appliances. Note— A Bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the Performance outcome.	(d) have a minimum vertical clearance of 4.8 metres; (e) accommodate turning areas for firefighting appliances in accordance with the Queensland Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines; and (f) serve no more than three dwellings or buildings.	base and will not be over 60m in length, exceed a gradient of 12.5%, and including the open areas inside the subject site, will accommodate a turning area for fire-fighting equipment (though this is not considered required given the nature of the facility). Accordingly, the proposed facility will allow for easy evacuation by any person conducting a maintenance visit for the proposed facility.

Energy and infrastructure activities code

9.3.4.2 Purpose

(1) The purpose of the Energy and infrastructure activities code is to ensure the appropriate location, planning, design, installation and operation of Energy and infrastructure activities to meet community standards and minimise any adverse impacts on nearby land uses and the natural environment. Renewable energy facility development will aim to achieve social, environmental and economic benefits to the community at both the local and regional level.

(2) The purpose of the code will be achieved through the following overall outcomes:

Overall Outcome	Applicant Response
OO2a Energy and infrastructure activities meet the needs of the local and regional community through safe, accessible and convenient points of service	**Response** The proposed facility will provide high-quality wireless phone and data coverage and capacity to a currently underserved area. The proposed facility balances these requirements with impacts on the environment, community and the feasibility of different candidates.
OO2b Energy and infrastructure activities are designed to promote improved sustainability and efficient use of resources	**Response** The proposed facility is not an energy activity and will instead provide The proposed facility will provide high-quality wireless phone and data coverage and capacity to a currently underserved area.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Overall Outcome	Applicant Response
OO2c Energy and infrastructure activities are co-located where appropriate	**Response** Co-location on the existing NBN tower at 94 Vicary Road would not provide adequate coverage to the target area given its proximity to the main and emerging residential areas south of Mareeba. The proposed facility has been specifically designed to allow and be attractive for co-location by other Carriers and providers, removing the need for multiple towers in the area.
OO2d Energy and infrastructure activities are consistent with industry standards and objectives;	**Response** The proposed Telecommunications Facility is in compliance with industry standards regarding compound size and height to allow for co-location. The EME report provided shows that EME levels for the proposed facility are well within the relevant standard set by the Australian Radiation Protection and Nuclear Safety Agency.
OO2e Energy and infrastructure activities minimise any negative impacts to public health, safety and the environment;	**Response** The proposed facility emits only low-RF EME and this is at safe levels for all persons including the elderly, children and pregnant women. For further information see the EME report which has been calculated in accordance with the standards set by the Australian Radiation Protection and Nuclear Safety Agency and shows EME levels far within the public exposure limits. Additional information relating to this subject can be viewed at https://www.arpansa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/mobile-phone-base-stations
OO2f Energy and infrastructure activities are located, designed and operated to address and minimise potential impacts on environmental, economic and social values;	**Response** The proposed facility has been carefully sited such that there are no impacts to environmental matters such as biodiversity.
OO2g Any variation to existing amenity, visual, light, noise, electromagnetic interference and aircraft safety conditions or circumstances as a result of the Renewable energy facility is maintained within acceptable limits.	**Response** The proposed facility is not a renewable energy facility

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Overall Outcome	Applicant Response
OO2h Renewable energy facilities are located within an area which provides economically viable resources;	**Response** The proposed facility is not a renewable energy facility
OO2i Renewable energy facilities are operated in accordance with site-specific management plans that adequately control and monitor variable impacts such as turbine noise, shadow flicker, bird strike, maintenance and environmental management over the operational life of the facility;	**Response** The proposed facility is not a renewable energy facility
OO2j Renewable energy facilities takes comprehensive account of national and/or state government recognised scientific knowledge and standards and are commensurate with significance, magnitude and extent of both direct and nondirect impacts; and	**Response** The proposed facility is not a renewable energy facility
OO2k Comprehensive site rehabilitation is carried out at the end of the operational life of the Energy and infrastructure activity to restore the site to its pre-development state.	**Response** In the event of any decommissioning of the site it will be restored to its previous state.

Table 9.3.4.3—Energy and infrastructure activities code - For accepted development subject to requirements and assessable development

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
For accepted development subject to requirements and assessable development		
Design		

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
PO1 Cable connection between infrastructure within and external to the facility are designed to ensure visual clutter is minimised. and has sufficient flow and pressure characteristics.	**AO1.1** Cable connections between infrastructure and are located underground	**Complies** The proposed facility will use underground extensions (subject to final designs from utility/power provider) for both fiber and power. A second power pole ay be required at the front of the proposed facility, again subject to final designs from the utility/power provider.
PO2 The Energy and infrastructure activity is appropriately designed to ensure public safety is maintained.	**AO2.1** Security fencing with a minimum height of 1.8 metres is provided around perimeter of the proposed energy and infrastructure facility	**Complies** The proposed facility will be surrounded by a locked security fence with a solid wall barrier to reduce visual amenity of ground-based component.
	AO2.2 Warning or information signs are erected to the perimeter security fence.	**Complies** The proposed facility will include a warning sign on the exterior of the compound.
If for Telecommunications Facility		
PO3 Telecommunication facilities are integrated with the built and natural environment to ensure they are not visually dominant or obtrusive.	**AO3.1** Telecommunication facilities are located: (a) underground; or (b) aboveground where: (i) with other telecommunications facilities; (ii) in or on an existing building or structure; and (iii) in areas where the predominant land uses are telecommunication facilities, industrial or commercial uses	**Performance solution** As provided within the Planning Report there are no other opportunities for co-location or the reuse of an existing building. Further, there are no industrial or commercial premises in the area. Ventia has mitigated amenity impacts by locating close to the motorway and away from the greatest densities of residential areas while still providing high-quality coverage to existing and emerging development in the area,

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
	AO3.2 Telecommunication facilities: (a) include external finishes, materials and colours which blend into the visual landscape and prevent recognition of the building or structure as a Telecommunications facility; or (b) integrated within an existing building or structure by: (i) concealment as an integral part of the building or structure; and (ii) not increasing the bulk of the building or structure which it is a part of; or (iii) being co-located within existing communication facilities.	**Complies:** The proposed facility includes design elements to mitigate visual impact. This includes the use of a monopole over a bulkier lattice tower, the use of a non-reflecting finish (should construction material change to galvanised steel then colour-treatment to a natural grey may be beneficial), and the use of a solid colour-treated fence around the compound.
For assessable development		
Location, site suitability and design		
PO4 Energy and infrastructure activities are appropriately located and designed: (a) to ensure the privacy and amenity of existing land uses in the surrounding area is not adversely impacted; (b) to ensure public health and safety is not adversely impacted; (c) having regard to the existing built and natural character of the immediate vicinity;	**AO4** No acceptable outcome is provided	**Performance solution** The proposed Telecommunications Faclity will not impact on the privacy of surrounding land uses and minimised amenity impacts to the greatest extent possible. As per the provided EME report, levels are under 1/50 of the safe public exposure limits set by the Australian Radiation Protection and Nuclear Safety Agency. Other than this and some low-level noise from a small residential-style airconditioning unit there are

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
(d) to allow direct connection to existing high voltage electricity infrastructure; (e) where sufficient resources are available to make the activity viable; and (f) considering the visibility of the activity in the surrounding area. infrastructure, buildings and structures.		no other emissions from the facility. As provided within the Planning Report there are no other opportunities for co-location or the reuse of an existing building. Further, there are no industrial or commercial premises in the area. Ventia has mitigated amenity impacts by locating close to the motorway and away from the greatest densities of residential areas while still providing high-quality coverage to existing and emerging development in the area. The proposed facility includes design elements to mitigate visual impact. This includes the use of a monopole over a bulkier lattice tower, the use of a non-reflecting finish (should construction material change to galvanised steel then colour-treatment to a natural grey may be beneficial), and the use of a solid colour-treated fence around the compound.
Noise impacts		
PO5 Energy and infrastructure activities are designed to ensure that existing urban and rural uses are not subject to unacceptable noise emissions, having regard to: (a) potential nuisance; and (b) risk to human health or wellbeing.	**PO4** No acceptable outcome is provided	**Performance solution** The proposed facility will emit noise only through a small residential-style air-conditiong unit used to keep equipment within the equipment shelter at operable temperatures. Given the size of the unit and the distance from sensitive receptors, there is unlikely to by any audible noise at nearby sensitive receptors.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
Shadow impacts		
PO6 Buildings or structures associated with the Energy and infrastructure activity do not cast shadows that would cause the amenity of surrounding premises, or the useability of public open space, to be unacceptably reduced.	**AO6** No acceptable outcome is provided.	**Performance solution** Shadow assessments have been provided that demonstrate no impacts on surrounding residences and impacts on other property open space areas only during the shorter winter days of the year.
Radio frequency emissions		
PO7 Radiofrequency emission levels from equipment and infrastructure associated with an Energy and infrastructure activity have no adverse impact on: (a) human health and safety; and (b) existing television or radio reception or transmission.	**AO7** No acceptable outcome is provided.	**Performance solution** An EME report in the format set by the Australia Radiation Protection and Nuclear Safety Agency (**ARPANSA**) has been provided showing that the maximum theoretical levels of EME emitted by the facility are well under the limits set by ARPANSA. Additional information relating to this EME guide has also been provided as a separate attachment to the Planning Report.
Construction management		
PO8 Construction of Energy and infrastructure activities is carried out in accordance with an approved Construction Management Plan which contains management controls to ensure: (a) any adverse impact on the amenity or privacy of an existing use in the immediate surrounds of the site is minimised;	**AO8** No acceptable outcome is provided.	P**erformance solution** The proposed Telecommunications Facility occupies a small piece of the 21 hectare subject site. As a result there is a large amount of space available within the property for the setdown of materials and plant. This is further detailed within the proposed plans that include crane and EWP setup areas. As per the planning report the total construction of the site should take 6-8 weeks. During

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
(b) disruption to public facilities, such as roads and open space, is minimised; and (c) construction occurs in a timely manner		this time there should be minimal impacts to the surrounding road network given the low number of construction vehicles and the low trips per day nature of the adjacent road.
Operational and maintenance management		
PO9 The operation and maintenance of Energy and infrastructure activities is carried out in accordance with an approved Operations and Maintenance Plan which contains management controls to ensure: (a) any impact on the surrounding area is not increased in intensity or severity during the operation of the facility; (b) the ongoing monitoring of operations with respect to emissions levels; and (c) ongoing maintenance is undertaken to provide for efficient operation.	**AO9** No acceptable outcome is provided.	**Performance solution** It is unclear what Operations and Maintenance Plan could apply to the proposed telecommunications facility. Once constructed the facility is designed to operate without further on-site input and emissions are restricted to low levels of EME and extremely low levels of noise from a single residential-style air-conditioning unit. Maintenance is carried out generally 2-4 times a year, comprising a site inspection using a utility vehicle.
Decommissioning and rehabilitation		
PO10 Comprehensive site decommissioning and rehabilitation is carried out when the Energy and infrastructure activity is discontinued to restore the site to its pre-development state, allowing future land uses that are consistent with the character and use of the immediate surrounds. The site is rehabilitated through the: (a) removal of all infrastructure and facilities associated with the Energy and infrastructure activity;	**AO10** No acceptable outcome is provided.	**Performance solution** Should the facility be decommissioned in the future the site will be rehabilitated to its existing state. Amplitel is happy to accept this as a condition of any approval so that Council can be satisfied it will be undertaken.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
(b) landscaping and planting of the site in a manner which is consistent with the landscape character within the immediate vicinity; and (c) restoration of any built or natural onsite features that existed prior to the site's use for the Energy and infrastructure activity.		
If for Renewable energy facility		
PO11 The Renewable energy facility has environmental, economic and social benefits at both a local and regional scale throughout its operational life	**AO11** No acceptable outcome is provided.	**Not applicable** The proposed use is not a renewable energy facility.
PO12 Shadow flicker from a Renewable energy facility that has the potential to impact on urban and rural uses does not result in unacceptable levels of impacts on existing amenity, relating to unfettered access to sunlight absent shadow flicker.	**AO12** Modelled blade shadow flicker impacts do not exceed 30 hours per annum and 30 minutes/day at existing urban or rural developments.	**Not applicable** The proposed use is not a renewable energy facility.
PO13 Audible and inaudible noise emissions resulting from a Renewable energy facility do not result in unacceptable impact(s): (a) on the ability to enjoy the expected level of acoustic amenity anticipated for the zone and/or precinct; (b) to human or animal health.	**AO13** No acceptable outcome is provided.	**Not applicable** The proposed use is not a renewable energy facility.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Energy and infrastructure activities code		
Column 1 Performance Outcomes	Column 2 Acceptable outcomes	Column 3 Applicants Response
PO14 The siting of a renewable energy facility and associated infrastructure takes account of and is sensitive to existing urban and rural development, environment, heritage, landscape and scenic values.	**AO14** No acceptable outcome is provided.	**Not applicable** The proposed use is not a renewable energy facility.
PO15 The material, finish and colour of a Renewable energy facility (including associated infrastructure) minimises visual impacts on the landscape setting.	**AO15** No acceptable outcome is provided.	**Not applicable** The proposed use is not a renewable energy facility.
PO16 Site access: (a) for construction of the facility does not adversely alter the existing natural drainage pattern; (b) services are co-located within accesses where possible and desirable; (c) is controlled and managed by a Construction Management Plan during construction; and (d) is controlled and managed by a Maintenance Management Plan during operation	**AO16** No acceptable outcome is provided.	**Not applicable** The proposed use is not a renewable energy facility.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Australian Government
Australian Radiation Protection and Nuclear Safety Agency

arpansa

A Guide to the Environmental EME Report

What is an Environmental EME Report?

The Environmental EME Report provides calculations of the maximum levels of radiofrequency (RF) electromagnetic energy (EME) around an existing and/or proposed wireless base station that may include mobile telephony, broadband and data services. The report is generally produced by a network operator (such as a mobile phone company) or consultants working on their behalf.

All deployment of public mobile telecommunications service infrastructure in Australia, which includes wireless base stations, small cells and antennas, must be carried out according to the Industry Code C564:2020 Mobile Phone Base Station Deployment (the Code)[1]. The Code requires the supply of certain information as part of the consultative process with the local community and local government authority. The environmental EME report is part of this process and is produced according to a methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)[2]. It provides objective estimates of the maximum levels of EME from a wireless base station or small cell for both existing and proposed upgrades to telecommunications systems at the site. There are two types of environmental EME report, each representing either a wireless base station or a small cell.

Why is there an EME Report?

Wireless base stations and small cells work by sending out RF EME in the form of waves carrying information. When the RF EME reaches objects, including people and animals, some of the energy carried by the waves is deposited in the object[3]. This can lead to heating of the object and, if levels are too high, can cause harmful effects. The ARPANSA RF Standard[4] provides limits of exposure which must be complied with by all radio installations, including wireless base stations and small cells. The limits for EME exposure given in the ARPANSA Standard are intended to provide protection for people of all ages and medical conditions when exposed 24 hours per day, 7 days per week. The EME Report shows the maximum

[1] The Communications Alliance Ltd Industry Code C564:2011 'Mobile Phone Base Station Deployment' is available from the Communications Alliance Ltd website, http://commsalliance.com.au.

[2] The ARPANSA methodology produces overconservative calculations for multiple-input and multiple-output (MIMO) systems

[3] Information on RF EME and its effects is available from ARPANSA http://www.arpansa.gov.au/RadiationProtection/basics/rf.cfm

[4] The ARPANSA RF Standard is available from http://www.arpansa.gov.au/Publications/Codes/rps3.cfm

619 Lower Plenty Road, Yallambie VIC 3085
+61 3 9433 2211

38–40 Urunga Parade, Miranda NSW 2228
PO Box 655, Miranda NSW 1490
+61 2 9541 8333

info@arpansa.gov.au
arpansa.gov.au

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

calculated levels for a specific installation and compares them against the exposure limits in the ARPANSA Standard.

What information is on the report?

The report gives the address of the installation, together with a list of the companies using the site and the types of mobile network currently installed and being proposed. It also includes details of calculated levels of RF EME. If the site already has antennas in place, the report includes separate information on the existing and the combined existing and proposed installations. The report estimates RF EME from all of the identified wireless transmitters at this site; it does not estimate RF EME from all surrounding sites. The calculated levels do not include RF EME from other types of radio transmitters (that are not subject to the industry Code) which may be installed on the same structure, e.g. AM and FM radio, TV etc.

EME Levels

The tables of calculated EME levels on the report provide maximum levels of EME found at various distances from the base of the tower or supporting structure for wireless base stations. Within each range of distances, the highest value is given regardless of direction. For small cells mounted on light and power poles or other structures, the report shows the maximum EME level and the distance where this occurs. This provides more relevant exposure information to account for the lower overall power and the much shorter range of the transmitted radio signals from small cells.

For wireless base stations the values of EME are presented in 3 different units:

- volts per metre (V/m) – the electric field component of the RF wave
- milliwatts per square metre (mW/m²) – the power density (or rate of flow of RF energy per unit area)[5]
- percentage (%) of the ARPANSA Standard

In reports for small cells the EME levels are only presented as a percentage of the ARPANSA Standard.

When expressed as a percentage, a value of 100% corresponds to the general public exposure limit. For example, a typical highest value of 1% means that the total EME level from all wireless network transmitters on the site, all operating at their maximum power, will be no more than one hundredth (1/100) of the limit set by the ARPANSA Standard for members of the public.

The table below shows the actual EME limits in the ARPANSA RF Standard used for the frequency bands representing different types of mobile network. At frequencies below 2000 megahertz (MHz) the limits vary across the band and the limit values shown in the table have been determined at the Assessment Frequency indicated. The table shows the three equivalent exposure limit figures in V/m, mW/m^2 and % ARPANSA Standard.

[5] Power density is often expressed in units other than mW/m², other common units are watts per square metre (W/m²) and microwatts per square centimetre (μW/cm²). Where conversion is required: 1 watt per square metre (W/m²) = 100 microwatts per square centimetre (μW/cm²) = 1000 milliwatts per square metre (mW/m²).

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Radio Systems	Frequency Band	Assessment Frequency	ARPANSA Standard public exposure limits at the Assessment Frequency		
			Electric Field V/m	Power Density mW/m²	% of ARPANSA exposure limits
LTE700	758 – 803 MHz	750 MHz	37.5 V/m	3750 mW/m²	100%
WCDMA850	870 – 890 MHz	900 MHz	41.1 V/m	4500 mW/m²	100%
GSM900, LTE900, WCDMA900	935 – 960 MHz	900 MHz	41.1 V/m	4500 mW/m²	100%
GSM1800, LTE1800	1805 – 1880 MHz	1800 MHz	58.1 V/m	9000 mW/m²	100%
LTE2100, WCDMA2100	2110 – 2170 MHz	2100 MHz	61.4 V/m	10000 mW/m²	100%
LTE2300	2302 – 2400 MHz	2300 MHz	61.4 V/m	10000 mW/m²	100%
LTE2600	2620 – 2690 MHz	2600 MHz	61.4 V/m	10000 mW/m²	100%
LTE3500	3425 – 3575 MHz	3500 MHz	61.4 V/m	10000 mW/m²	100%

Effect of Landscape (topography)

The tables of calculated EME levels provide values at 1.5 m above a flat landscape. Commonly, wireless base stations and small cells are located on a high point and the assumption of flat ground provides a worst-case estimate for these situations. Sometimes, however, the ground may slope upwards away from the installation and this can cause concern that levels may be higher than calculated. In these cases the 'Calculated EME levels at other areas of interest' table should include the levels of EME at a selection of heights where maximum levels are expected.

Generally, locations very close to the base of the antenna will experience very low levels of EME compared to the surrounding areas. This may not be true if a location is both close, say within 100 m, and elevated above the height of the base of the antenna structure. This may occur because a building is located nearby or the ground rises sharply. In either of these circumstances, EME levels may actually be higher than found at the height of flat ground or a community member may have reasonable concerns that this is so. If such locations exist, carefully calculated estimates in a representative sample of such situations should be provided in the 'Calculated EME levels at other areas of interest' table. It is important to note that in many cases the location may not be in the direction of significant radiated EME and the EME levels may be very low.

Other Areas of Interest

The Code requires the mobile network companies to take account of Community Sensitive Locations. The Code defines Community Sensitive Location to include land uses such as residential areas, childcare centres, schools, aged care centres, hospitals and regional icons which may be considered as sensitive uses in some communities. It is acknowledged that each location should be evaluated on a site by site basis to determine community sensitive locations.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

The table 'Calculated EME levels at other areas of interest' on the report provides additional estimates of EME levels at a small number of such locations. These locations may be identified as being of particular concern to the community during the consultation process required by the Code. Typically, levels may be given for the closest point of a children's facility, or for a small number of other locations. It is expected that for an average report, there may be 3 to 5 additional areas of interest calculations. These should be chosen to be representative of both community concern and locations where higher levels of EME may actually be expected on technical grounds. Community Sensitive Locations would be expected to include a small number of floors of a multistorey building if it is close to the antennas and in the direction of significant radiated EME. For some sites there may be no indication for other areas of interest, such as where there is flat ground, no elevated buildings and no locations identified as being of particular community concern. In these cases, after checking:

- the Code's community consultation plan
- topography or buildings near the antennas
- other locations, such as those identified as being of significant previous community concern

no other areas of interest will have been identified. In this case, the EME Report should include the statement 'No locations identified' in the 'Calculated EME levels at other areas of interest' table.

Can I expect to have an EME calculation done for my house?

Whilst the Environmental EME report is a basic report, members of the public are free to request (in writing) a Carrier to provide additional information under section 3.3 of the Code

The Carrier will choose how best to service that request, but it will not be considered as part of the ARPANSA EME report.

Why do the EME levels vary with distance?

The calculations of the maximum EME levels are based on well understood principles of physics that deal with how electromagnetic waves travel and spread out. The total amount of energy emitted from the antenna is limited by the power of the amplifier used to drive the antenna. As the energy leaves the antenna, it spreads out to cover bigger and bigger areas and so gets less intense the further away it gets, this is illustrated in Figure 1 which shows a basic 2-dimensional view of what happens to the EME around a real base station.

The antenna is usually designed to direct most of the energy out towards the horizon, or a few degrees below, so that most of the energy goes where it is needed to communicate with the mobile phone handsets or other user equipment. As one moves away from a base station at ground level, the levels first increase before reaching a maximum and then get less as you move still further away. Typically, the maximum EME level at ground level will occur between 75 m and 200 m from the base of the antenna.

The mobile network companies sometimes need to adjust the angle of the antennas to obtain the best coverage and this can alter slightly the distance at which the maximum occurs and exactly what EME level is found there. Often, the ARPANSA EME Report will take likely alterations into account and include the

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

highest levels that might occur if the antenna is moved in the future. Some antennas use self-tilt and pan to dynamically change direction; in these situations the orientation that produces the highest maximum EME level is used for the calculation.

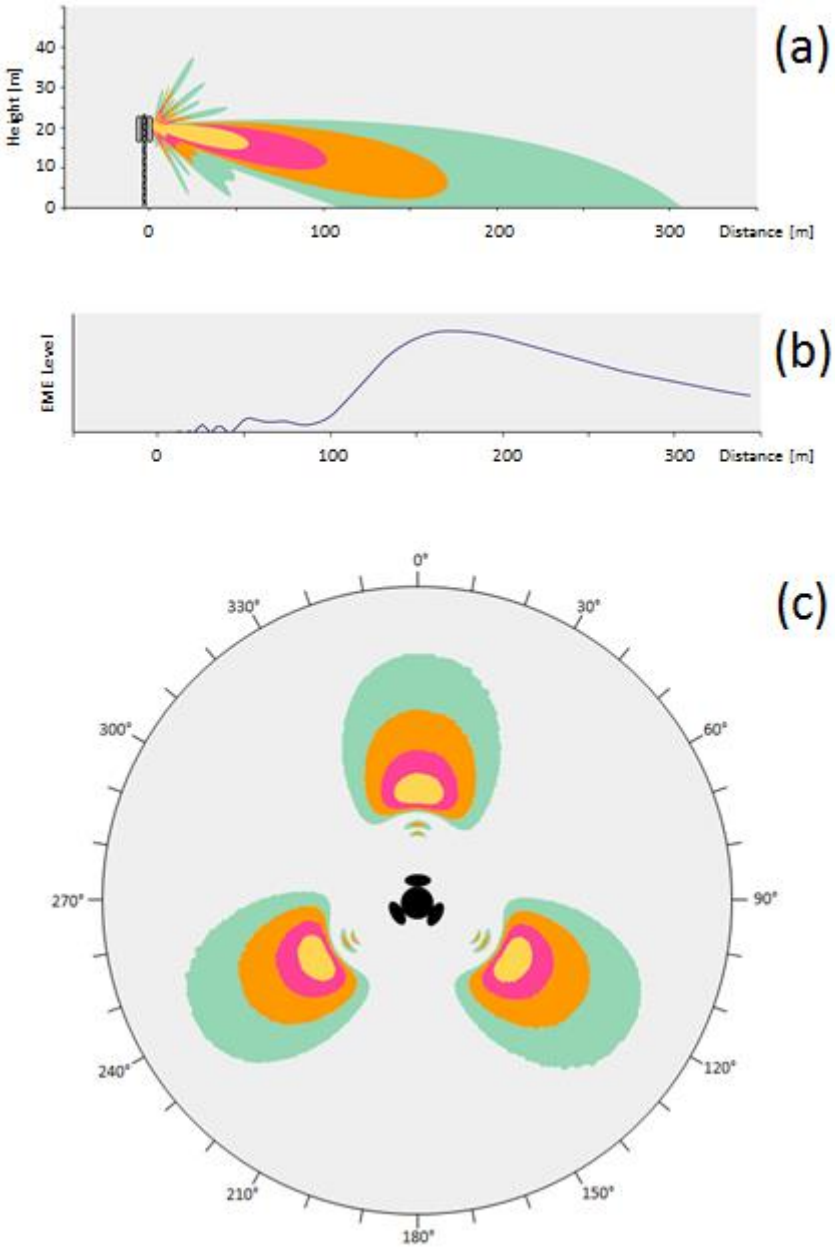


Figure 1. How the EME levels vary as you move away from a base station tower.
(a) Side view of a single antenna pattern. (b) EME level at 1.5 m above ground.
(c) Aerial view of three sector antenna pattern

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

The EME transmitted from small cells is more localised and, depending on its configuration, may not follow the same emission profile as a larger base station. Typically, the EME levels are very low and they decrease rapidly with distance away from the source much like the larger base stations.

How Accurate are the Calculated Values?

The values of EME provided in the report are intended to be maximum levels that can almost never be exceeded when the base station is operating. The values assume, for example, that all the planned transmitters are installed and are all operating at maximum power. Some of the transmitters at a base station are only used when there are a certain number of telephone calls or data transmissions actually in progress; otherwise they are turned off. Even when a call is in progress, the power transmitted is adjusted to be only as high as necessary to communicate with the handset. If the handset is close, or in a good signal area, the base station transmitter will reduce its power automatically.

The calculations do not take into account trees, vegetation or buildings which may alter the EME levels, generally decreasing them. Some of the EME is reflected from buildings and the ground and often this signal is used by a handset when the direct signal is blocked by a building. When the reflected signal and direct signal combine the overall level can be lower or higher than the direct signal alone depending on the exact location.

Measurements around base stations have shown actual values of EME are usually less than calculation by factors of 10 to 1000 or even more. Values of EME indoors will typically be even lower as walls, windows and roofs absorb or reflect the energy.

A similar situation applies to the emissions from small cells. The EME emissions from small cells follow the same physical process and are similarly affected by surrounding objects.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Example Snapshot of Calculated EME Levels

The maximum EME level calculated for the **existing** systems at this site is

0.46%

out of 100% of the public exposure limit, 161.98 m from the location.

The maximum EME level calculated for the **proposed** changes at this site is

1.0%

out of 100% of the public exposure limit, 161.10 m from the location.

EME levels with the proposed changes

Distance from the site	Percentage of the public exposure limit
0–50 m	0.09%
50–100 m	0.16%
100–200 m	1.0%
200–300 m	0.88%
300–400 m	0.43%
400–500 m	0.24%

The example snapshot above applies to the calculated EME levels around a typical base station and provides the following information:

- The highest calculated level of RF EME coming from the existing equipment at this base station is found at a distance of approximately 161.98 m and is 0.46% or less than 1/200 of the ARPANSA Standard exposure limit.
- Subsequent to the proposed alterations to the equipment at this site, the highest calculated level of RF EME rises to 1.04%, which is found at a distance of 161.10 m from the base of the tower.

The information detailing EME levels at radial distances from the installation is not included in EME reports for small cells due to the more localised emission of the antennas. In this case, information about the highest calculated EME level at the corresponding distance associated with the small cell is included. This is reported for both existing and proposed systems at the site in the same way as wireless base stations.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Example Table of an In-depth Look at Calculated EME Levels

	Existing configuration			Proposed configuration		
Distance from the site	Electric field (V/m)	Power density (mW/m²)	Percentage of the public exposure limit	Electric field (V/m)	Power density (mW/m²)	Percentage of the public exposure limit
0–50 m	0.57	0.87	0.01%	1.7	7.2	0.09%
50–100 m	0.96	2.5	0.04%	1.9	9.2	0.16%
100–200 m	3.4	31	0.46%	5.0	66	1.0%
200–300 m	3.2	27	0.40%	4.6	56	0.88%
300–400 m	2.3	13	0.20%	3.2	28	0.43%
400–500 m	1.7	7.7	0.11%	2.4	16	0.24%

The example table above provides the following information:

- At any location on level ground within 50 m of the base of the tower, the highest calculated level of RF EME coming from the existing equipment at this base station is 0.01% or approximately 1/10000 of the ARPANSA Standard exposure limit. In physical units this is a power density of 0.87 milliwatts per metre squared (mW/m²), equivalent to an electric field strength of 0.57 volts per metre (V/m).
- Subsequent to the proposed alterations to the equipment at this site, at any location on level ground within 50 m of the base of the tower, the highest calculated level of RF EME rises to a power density of 7.18 mW/m² or an electric field strength of 1.65 V/m which is equivalent to 0.09% of the ARPANSA Standard exposure limit (or less than 1/1000 of the limit).
- The values reported here are only expected to occur when the transmitters are all operating at full power and where there is clear line-of-sight to all antennas. Levels indoors will be lower.
- At any distance within 500 m of the tower the table can be used to determine the maximum level. For example at a location 330 m from the tower, that is between 300 m and 400 m, the calculated level will be less than 0.2% of the ARPANSA Standard exposure limit for the existing equipment and 0.43% of the ARPANSA Standard exposure limit for the existing and proposed equipment. In many directions, and at most times, the actual level will be much lower than this calculated level.
- For a new wireless base station where there are no antennas already installed, the above table will only contain data under the 'Proposed Configuration' columns. Similarly, for a wireless base station that is not being upgraded, the table will only contain data under the 'Existing Configuration' columns.

This table is not included in EME reports for small cells due to the more localised emission from these installations.

It should be noted that all values quoted in the above two tables are calculated at 1.5 m above ground level in a flat landscape. As stated in the section “Effects of Landscape (topography)”, If the ground height changes enough to cause significant under estimation of the worst case environmental levels, further calculations shall be reported in the “Other Areas Of Interest” section.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Example Table of Calculated EME levels at Other Areas of Interest

Location	Height range	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
ABC Primary School	0–6 m	2.6	18	0.29%
123 Sports Centre	0–6 m	2.4	15	0.23%
XYZ Community Centre	0–6 m	2.6	18	0.29%

The 'Calculated EME levels at other areas of interest' table provides calculated levels of RF EME at locations considered to be of special community interest or at elevated locations where there may be concern about higher levels of EME. The calculations are performed over the indicated height range and include all existing and any proposed radio systems for this site This table is included in reports for both wireless base stations and small cells. In reports for small cells the EME levels are only presented as a percentage of the ARPANSA Standard.

Further Information

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is a Federal Government agency incorporated under the Health portfolio. ARPANSA is charged with responsibility for protecting the health and safety of people, and the environment, from the harmful effects of radiation (ionising and non-ionising).

Information about RF EME can be accessed at the ARPANSA website, http://www.arpansa.gov.au, including:

- The procedure used for the calculations in this report is documented in the ARPANSA Technical Report; “Radio Frequency EME Exposure Levels - Prediction Methodologies” [2]
- The ARPANSA RF Standard[4]

The Australian Communications and Media Authority (ACMA) is responsible for the regulation of broadcasting, radiocommunications, telecommunications and online content. Information on EME is available at https://www.acma.gov.au/our-rules-eme.

The Communications Alliance Ltd Industry Code C564:2020 Mobile Phone Base Station Deployment is available from the Communications Alliance Ltd website, http://commsalliance.com.au.

Contact details for the Carriers (mobile network companies) operating in Australia and the most recent version of each site’s Environmental EME Report are available online at the Radio Frequency National Site Archive, http://www.rfnsa.com.au.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

1. The Communications Alliance Ltd Industry Code C564:2020 Mobile Phone Base Station Deployment is available from the Communications Alliance Ltd website, https://www.commsalliance.com.au/Documents/all/codes/c564

2. The ARPANSA methodology produces overconservative calculations for multiple-input and multiple-output (MIMO) systems. (Radio frequency EME exposure levels - prediction methodologies technical report.)

3. Information on RF and its effects is available from ARPANSA https://www.arpansa.gov.au/understanding-radiation/what-is-radiation/non...

4. The ARPANSA RF Standard is available from https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpss-1

5. Power density is often expressed in units other than mW/m^2, other common units are watts per square meter (W/m^2) and microwatts per square centimetre ($\mu W/cm^2$). Where conversion is required: 1 watt per square metre (W/m^2) = 100 microwatts per square centimetre ($\mu W/cm^2$) = 1000 milliwats per square metre (mW/m^2).

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**51240594**	**Search Date:**	27/10/2021 08:53
Date Title Created:	16/12/2020	**Request No:**	39051132
Previous Title:	50199451		

ESTATE AND LAND

Estate in Fee Simple

LOT 22 SURVEY PLAN 323208
Local Government: MAREEBA

REGISTERED OWNER

Dealing No: 720447234 07/12/2020

MYLES KENNETH GOSTELOW
DEBRA ANN GOSTELOW JOINT TENANTS

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2. MORTGAGE No 718134180 05/07/2017 at 10:04
NATIONAL AUSTRALIA BANK LIMITED A.B.N. 12 004 044 937

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

DA Form 1 – Development application details

Approved form (version 1.3 effective 28 September 2020) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) **and** parts 4 to 6 of *DA Form 2 – Building work details.*

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008.* For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: *All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).*

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (*individual or company full name*)	Amplitel Pty Ltd c/- Ventia Pty Ltd
Contact name *(only applicable for companies)*	Daniel Park
Postal address *(P.O. Box or street address)*	Level 1, 10 Browning Street
Suburb	WEST END
State	QLD
Postcode	4101
Country	Australia
Contact number	
Email address *(non-mandatory)*	Daniel.park@ventia.com
Mobile number *(non-mandatory)*	0437318759
Fax number *(non-mandatory)*	
Applicant's reference number(s) *(if applicable)*	4017936.01 – Mareeba South

2) Owner's consent
2.1) Is written consent of the owner required for this development application?
☒ Yes – the written consent of the owner(s) is attached to this development application ☐ No – proceed to 3)

Queensland Government

PART 2 – LOCATION DETAILS

3) Location of the premises *(complete 3.1) or 3.2), and 3.3) as applicable)*

***Note**: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.*

3.1) Street address and lot on plan

☐ Street address **AND** lot on plan (a*ll lots must be listed*), ***or***

☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises *(appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).*

a)	Unit No.	Street No.	Street Name and Type	Suburb
		114	Mines Road	Mareeba
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4880	22	SP 323208	MAREEBA
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)

3.2) Coordinates of premises *(appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)*

***Note**: Place each set of coordinates in a separate row.*

☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) *(if applicable)*
		☐ WGS84 ☐ GDA94 ☐ Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) *(if applicable)*
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application

☒ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

☐ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

☐ In a tidal area

Name of local government for the tidal area *(if applicable)*:

Name of port authority for tidal area *(if applicable)*:

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994*	
EMR site identification:	
☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994*	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see DA Forms Guide.

☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application

☐ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

☒ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☐ Code assessment ☒ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

Telecommunications Facility

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*

☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application

☐ Not required

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☐ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☐ Yes – complete division 2
Operational work	☐ Yes – complete division 3
Building work	☐ Yes – complete *DA Form 2 – Building work details*

Division 1 – Material change of use

***Note**: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.*

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition *(include each definition in a new row)*	Number of dwelling units *(if applicable)*	Gross floor area (m^2) *(if applicable)*
Telecommunications Facility	Telecommunications Facility	0	7.5

8.2) Does the proposed use involve the use of existing buildings on the premises?
☐ Yes
☒ No

Division 2 – Reconfiguring a lot

***Note**: This division is only required to be completed if any part of the development application involves reconfiguring a lot.*

9.1) What is the total number of existing lots making up the premises?

9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)*	
☐ Subdivision *(complete 10))*	☐ Dividing land into parts by agreement *(complete 11))*
☐ Boundary realignment *(complete 12))*	☐ Creating or changing an easement giving access to a lot from a constructed road *(complete 13))*

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?	
☐ Yes – provide additional details below ☐ No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m^2)	Lot on plan description	Area (m^2)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? *(attach schedule if there are more than two easements)*				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? *(e.g. pedestrian access)*	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

***Note**: This division is only required to be completed if any part of the development application involves operational work.*

14.1) What is the nature of the operational work?		
☒ Road work	☐ Stormwater	☐ Water infrastructure
☐ Drainage work	☒ Earthworks	☐ Sewage infrastructure
☐ Landscaping	☐ Signage	☐ Clearing vegetation
☐ Other – please specify:		
14.2) Is the operational work necessary to facilitate the creation of new lots? *(e.g. subdivision)*		
☐ Yes – specify number of new lots:		
☒ No		
14.3) What is the monetary value of the proposed operational work? *(include GST, materials and labour)*		
$		

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application
MAREEBA SHIRE COUNCIL
16) Has the local government agreed to apply a superseded planning scheme for this development application?
☐ Yes – a copy of the decision notice is attached to this development application
☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☒ No

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?
***Note**: A development application will require referral if prescribed by the* Planning Regulation 2017.

☒ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the *Planning Act 2016*:**

☐ Clearing native vegetation
☐ Contaminated land *(unexploded ordnance)*
☐ Environmentally relevant activities (ERA) *(only if the ERA has not been devolved to a local government)*
☐ Fisheries – aquaculture
☐ Fisheries – declared fish habitat area
☐ Fisheries – marine plants
☐ Fisheries – waterway barrier works
☐ Hazardous chemical facilities
☐ Heritage places – Queensland heritage place *(on or near a Queensland heritage place)*
☐ Infrastructure-related referrals – designated premises
☐ Infrastructure-related referrals – state transport infrastructure
☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
☐ Infrastructure-related referrals – near a state-controlled road intersection
☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
☐ Koala habitat in SEQ region – key resource areas
☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
☐ Ports – Brisbane core port land – hazardous chemical facility
☐ Ports – Brisbane core port land – taking or interfering with water
☐ Ports – Brisbane core port land – referable dams
☐ Ports – Brisbane core port land – fisheries
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*
☐ SEQ development area
☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
☐ Tidal works or works in a coastal management district
☐ Reconfiguring a lot in a coastal management district or for a canal
☐ Erosion prone area in a coastal management district
☐ Urban design
☐ Water-related development – taking or interfering with water
☐ Water-related development – removing quarry material *(from a watercourse or lake)*
☐ Water-related development – referable dams
☐ Water-related development –levees *(category 3 levees only)*
☐ Wetland protection area

Matters requiring referral to the **local government:**

☐ Airport land
☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government)*

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**
☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:
- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**
☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**
☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**
☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**
☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**
☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application
☐ No

Referral requirement	Referral agency	Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application *(if applicable).*

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules

☒ I agree to receive an information request if determined necessary for this development application
☐ I do not agree to accept an information request for this development application

***Note**: By not agreeing to accept an information request I, the applicant, acknowledge:*

- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.*

Further advice about information requests is contained in the DA Forms Guide.

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? *(e.g. a preliminary approval)*

☐ Yes – provide details below or include details in a schedule to this development application
☒ No

List of approval/development application references	Reference number	Date	Assessment manager
☐ Approval ☐ Development application			
☐ Approval ☐ Development application			

21) Has the portable long service leave levy been paid? *(only applicable to development applications involving building work or operational work)*

☐ Yes – a copy of the receipted QLeave form is attached to this development application
☒ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid
☐ Not applicable *(e.g. building and construction work is less than $150,000 excluding GST)*

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

☐ Yes – show cause or enforcement notice is attached
☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

☐ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below
☒ No

***Note**: Application for an environmental authority can be found by searching "ESR/2015/1791" as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.*

Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			

☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

☐ Yes – *Form 69: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application
☒ No

***Note**: See www.business.qld.gov.au for further information about hazardous chemical notifications.*

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

***Note**: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.*

2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☒ No

***Note**: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.*

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

***Note**: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.*

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

***Note**: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.*

DA templates are available from https://planning.dsdmip.qld.gov.au/. If the development application involves:

- *Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1*
- *Taking or interfering with water in a watercourse, lake or spring: complete DA Form1 Template 2*
- *Taking overland flow water: complete DA Form 1 Template 3.*

Waterway barrier works

23.7) Does this application involve **waterway barrier works?**

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from https://planning.dsdmip.qld.gov.au/. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants?**

☐ Yes – an associated *resource* allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☒ No

***Note**: See guidance materials at www.daf.qld.gov.au for further information.*

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

***Note**: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.*

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

***Note**: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.*

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application
☒ No

***Note**: See guidance materials at www.dnrme.qld.gov.au for further information.*

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work *(only required if application involves prescribed tidal work)*
- ☐ A certificate of title

☒ No

***Note**: See guidance materials at www.des.qld.gov.au for further information.*

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

☐ Yes – details of the heritage place are provided in the table below
☒ No

***Note**: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.*

Name of the heritage place:		Place ID:	

Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
☒ No

Decision under section 62 of the *Transport Infrastructure Act 1994*

23.15) Does this development application involve new or changed access to a state-controlled road?

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
☒ No

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

☐ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

☒ No

***Note**: See guidance materials at www.planning.dsdmip.qld.gov.au for further information.*

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 ***Note**: See the Planning Regulation 2017 for referral requirements*	☒ Yes
If building work is associated with the proposed development, Parts 4 to 6 of *DA Form 2 – Building work details* have been completed and attached to this development application	☐ Yes ☒ Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application ***Note**: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.*	☐ Yes
Relevant plans of the development are attached to this development application ***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*	☒ Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (*see 21*)	☒ Yes ☐ Not applicable

25) Applicant declaration

☒ By making this development application, I declare that all information in this development application is true and correct

☐ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*

***Note**: It is unlawful to intentionally provide false or misleading information.*

Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002.*

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: | Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment *Note: For completion by assessment manager if applicable*			
Description of the work			
QLeave project number			
Amount paid ($)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Document Set ID: 4083466
Version: 1, Version Date: 19/04/2022