



# PLANNING REPORT

*Proposed Mobile Telecommunications Facility  
Lot 9001, Berkeley Crescent, Kununurra, WA, 6743*

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## Document Controls

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Amplitel Pty Ltd	[REDACTED]

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## Executive Summary

<b>Proposal</b>	<p>Key elements of the proposal are as follows:</p> <ul style="list-style-type: none"> <li>• Establishment of a 100m<sup>2</sup> lease area;</li> <li>• Installation of one (1) 40 metre monopole;</li> <li>• Mounting of a headframe at the top of the pole;</li> <li>• Installation of six (6) Telstra panel antennas mounted on the headframe with a maximum overall height of 41.3m;</li> <li>• Installation of 1 x Telstra parabolic antenna mounted on the pole at 37.0m;</li> <li>• Installation of one (1) Telstra standard equipment shelter;</li> <li>• Installation of ancillary equipment including transceivers, remote radio units, cable trays, feeders, cabling, electrical equipment, signage, and other associated equipment.</li> <li>• Access to the facility via Berkeley Crescent and an internal access track.</li> </ul>
<b>Site Description / Location</b>	<p>Address: Lot 9001, Berkeley Crescent, Kununurra  RPD: LOT 9001 ON DEPOSITED PLAN 67199  Total Area of Site: 56.42 Ha</p>
<b>Planning Scheme</b>	<p><b>Planning Scheme:</b> Shire of Wyndham East Kimberley - Planning Scheme No. 9  <b>Zoning:</b> Rural Residential  <b>Existing Use:</b> Rural  <b>Proposed Use:</b> Telecommunications Facility</p>
<b>Application Details</b>	<p>Development Permit sought for the installation of a 40m monopole and associated equipment. The facility will deliver improved coverage and network capacity to the local area.</p>

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# 1. Introduction

## 1.1 Overview of the Report

BMM Group Pty Ltd acts as Project Manager to Amplitel Pty Ltd, a subsidiary of Telstra that deploys mobile telecommunications infrastructure. This planning report has been prepared by BMM Group, on behalf of Amplitel to support installation of the proposed telecommunications facility at Lot 9001, Berkeley Crescent, Kununurra.

The report and appendices address the merits of the proposed development with regards to the provisions of the WA Planning and Development Act 2005 and the provisions of the *Shire of Wyndham East Kimberley Scheme No. 9*. It is considered that the development is appropriate and justified; therefore, Council's approval of the application is sought, subject to reasonable and relevant conditions.

The telecommunications facility continue to operate within all current and relevant standards regulated by the Australian Communications and Media Authority (ACMA).

## 1.2 Objectives of the Proposal

The Telstra group is committed to improving mobile services in remote and rural areas of Australia. As a result, Telstra has committed capital, (as part of a co-investment with Federal and State Government) to the Regional Connectivity Program (RCP). The RCP is designed to improve telecommunications infrastructure and digital connectivity across regional, rural and remote Australia. The subject proposal is part of Round 2 of the RCP (RCP2).

Partnerships with government and local communities are often a good way to improve coverage in remote areas, particularly where a purely commercial investment may not be practical.

Mobile connectivity has continued to grow in importance as the combination of smart phones and tablets with increased mobile broadband speeds and capacity are changing the way people live. The recent COVID 19 pandemic further accelerated the shift to online services, meaning connectivity is even more important to participating in the digital economy, healthcare and education amongst other things.

The Telstra mobile network currently reaches over 99.4% of the population and is by far the largest network in the country, covering 2.4 million square kilometres of the Australian land mass, in part due to a long-term commitment to network investment.

The site at Kununurra was chosen following a project application process, which is initiated via nomination from residents and businesses at the subject location. The proposed facility will be designed and constructed with adequate structural capacity to enable other carriers to co-site their equipment and offer services to their customers, further improving mobile services, in line with the accepted industry practice.

The subject location at Kununurra has long suffered from poor mobile services and the proposed telecommunications facility will deliver essential telecommunications infrastructure and provide an important and necessary link to Telstra's existing telecommunications network. The facility will improve overall mobile and mobile broadband performance in the area and provide a high-quality service to local residents, commuters, agricultural businesses, and which provides a critical first response in the event of natural or man-made disasters.

Telstra are proud to invest in regional Western Australia along with the Federal and State Governments and look forward to rolling out new base stations as part of the RCP and expanding coverage for Australians in remote and rural areas.

## 1.3 Objectives of the Report

This report provides an assessment relevant to a Development Application for a Development Permit for the installation of a telecommunications facility. The purpose of this planning report is to assess and describe:

- The need for the proposal (Section 2)
- The site selection process and potential candidates (Section 2)
- Site description and locality (Section 3)
- The proposed mobile telecommunications facility (Section 4)
- How the proposed development meets the planning objectives of the various applicable Commonwealth, State and Local laws (Section 5,6,7)
- The environmental planning implications associated with the proposed facility (Section 8)

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## 2. Telecommunications Objective and Site Selection

### 2.1 Regional Connectivity Program (RCP)

The RCP is a direct response to requests for improved coverage in regional, rural and remote areas.

The Regional Connectivity Program (the RCP) is a grants program funding the delivery of 'place-based' telecommunications infrastructure projects to improve digital connectivity across regional, rural and remote Australia.

Round 2 of the RCP is providing \$137.2 million (GST inclusive) from 2022 to 2024 to improve telecommunications infrastructure in regional and remote Australia. This funding will leverage a total investment of \$226 million for the delivery of projects across Australia.

This includes Australian Government funding of \$69.6 million (GST inclusive) for projects through the Connecting Northern Australia initiative (CNA initiative) and funding of \$67.6 million (GST inclusive) for projects in regions across other parts of Australia.

Round 2 of the RCP focuses on areas:

- of high economic and/or social value
- outside the NBN Fixed-line footprint, and
- where better connectivity and increased data have a clear benefit to a local region.

Potential sites are selected based on nominations by individuals, communities, and governments via project proposals. Where project proposals have enough support, they progress into project applications as part of the RCP.

### 2.2 Mobile Base Station Information

A Mobile Base Station is essentially a radio transmitter / transceiver and an antenna, which transmits and receives radio frequency (RF) or electromagnetic energy (EME) signals from mobile phones. The base stations are linked to the rest of the mobile and fixed phone network and pass the signal/call on into those networks.

A base station typically consists of an Equipment Cabin (which houses all the electronics required to send and receive mobile phone calls), a series of Panel Antennas (which transmit and receive signals to and from the handset) and a Radio Transmission (RT) Dish or optical fibre cable which links the base station to the rest of the network. It is essential that when a call is made, coverage is available within the area. A base station establishes the call connection, holding the call as long as the phone user remains on the call and in the range of that base station.

The location of the base station is determined by a number of factors, including topography and other physical constraints such as trees and buildings, the immediate network 'capacity' or number of calls expected to be made in the area, and the radio frequency at which the base station will operate. Antennas need to be located clear of obstructions like trees and significant changes in grade, in order to provide a clear line of uninterrupted sight and ensure good signal quality.

*(MCF Fact Sheet - How the mobile phone network operates).*

### 2.3 Need for the facility

The proposed facility is required to provide much needed coverage to the local area. Current coverage is either non-existent or inadequate to service the needs of the community. Telstra is seeking to provide improved mobile and broadband coverage to the local area which will provide access for local residents, businesses and road users to a superior mobile network.

The nearest Telstra telecommunications facilities are located at 216014 Victoria Highway, Lake Argyle, approximately 7.16 kilometres south west, and Weber Road, located approximately 6.52 kilometres east of the proposed facility location. The existing facilities are not able to provide adequate coverage to the targeted coverage area at Kununurra.

If a suitably located and correctly configured radio facility is not installed, the area will continue to suffer from no or inadequate mobile network coverage. The underperformance will be characterised by coverage black holes and call dropouts in the area, ultimately impacting on businesses, residents and travellers to the area.

## 2.4 Site Selection

There are many competing factors to be considered in determining possible suitable locations to establish a telecommunications facility. These include the availability of land, willingness of the landowner, visual impact, cost, access for maintenance purposes, constructability, town planning and radio frequency requirements such as coverage objectives, line of sight and height of surrounding buildings, trees, hills and other structures. An in-depth site selection process was undertaken in the area prior to confirming the preferred candidate location.

Carriers are required to apply a precautionary approach when designing their radio communications networks. A number of candidates were therefore identified through this selection process and evaluated against the criteria within **Table 1**. *N.B. the criteria may not represent an exhaustive list of issues that need to be addressed when designing mobile network infrastructure.*

**Table 1:** Site Selection Criteria

Key Factors	Key Criteria
<b>Planning</b>	Compliance with the Planning and Development Act 2016 and the Planning and Design Code
	Acceptability to the local Council and community
	Suitable location with regard to sensitive land uses and environmental factors
	Minimal potential visual impacts
	Compliance with the EME standards mandated by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)
	Minimal environmental impact on the subject site and surrounding area
	Potential co-siting with another existing telecommunications facility
<b>Property</b>	Willingness by the landowner to enter into a lease agreement and provide access during construction and operation
<b>Engineering</b>	Feasibility of construction, availability of infrastructure such as power, and access to the facility for construction and maintenance
<b>Radio Frequency and Coverage</b>	Ability to be linked to the existing telecommunications networks and meet the radio frequency coverage objectives for the area

These considerations are applied to the site selection process with differing weight. Firstly, the applicant cannot locate a facility on a site without the landowners willing consent. There is also no point in locating a facility where radio frequency requirements are not met. Generally, greater coverage is achieved with an elevated base station combined with a taller base station structure. Additional base stations may be required if height is restricted. The best location to build base stations to maximise network performance efficiency is closest to where those services are required and where multiple carriers can co-locate on the one facility.

Mobile telecommunication facilities provide coverage to an area with generally three sectors of antennas that cover approximately 120 degrees each. By locating within the search area, the telecommunications facility is able to provide coverage and capacity to customers on all three sectors.

The nature of any base station is such that reliable communication is limited mainly to “line of sight” of the mobile. Whilst some buildings and foliage can be penetrated to a limited extent, radio signals cannot penetrate more substantial objects, such as hills. Accordingly, in order to achieve Telstra’s network performance and quality requirements for the area, the base station must be located in an elevated location and have antennas above the treeline.

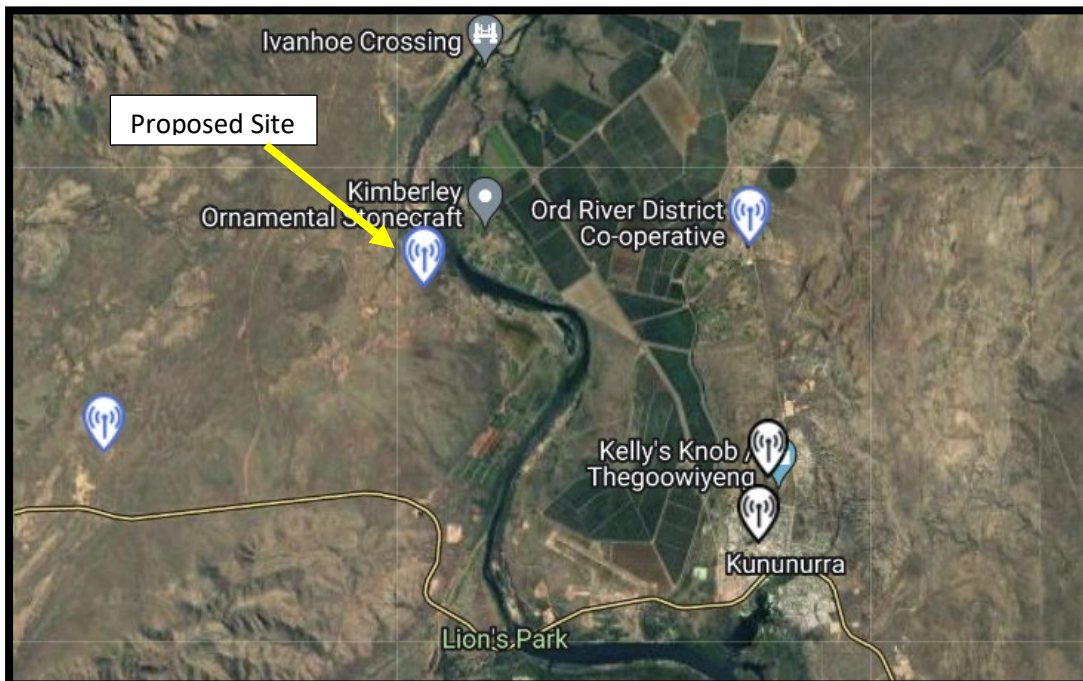
To establish criteria for site selection, an assessment of the immediate area was undertaken to determine the best long-term plan for the design and configuration of the network. The proposed standalone facility provides for the most effective and sustainable long-term plan for Telstra’s network and is deemed to satisfy the requirements of Council’s Planning Scheme and Codes, contributes to the local area and broader success as a sustainable and connected community, and has been appropriately sited and designed to ensure that the amenity of the locality will not be compromised.

**2.5 Co-location Opportunities**

State, Federal and Local government legislation encourages the use of existing telecommunication facilities for the colocation of antennas. As such, Telstra’s standard site selection process flags potential colocation options during its initial stage of candidate selection. In this case, there are no other suitable existing structures near the proposed facility location on which the proposed Telstra facility could co-locate. **Figure 1** shows the location of existing facilities in the broader area.

As shown, there are no other existing or proposed mobile telecommunications facilities within close proximity of the required coverage target area. Existing facilities in the general area will not provide coverage to the targeted area. Based on this assessment, the construction of a new telecommunications facility is the most practicable option to deliver coverage to the targeted area.

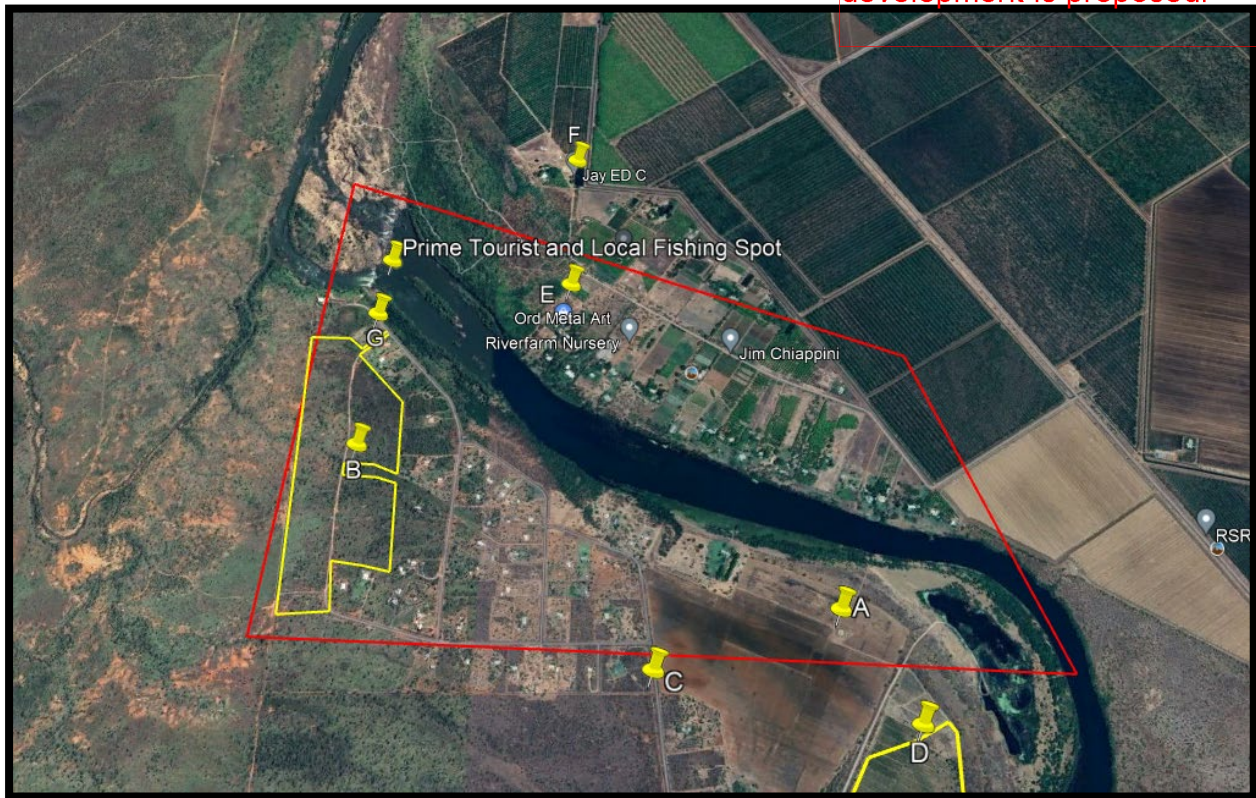
**Figure 1 – Nearby telecommunications facilities (Source: Radio Frequency National Site Archive)**



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**Figure 2: Location of potential greenfield sites**



**Table 2: Candidate Site Details**

Candidate	Address	Facility Type	Description
A	Lot 20, Weero Road, Kununurra	40m monopole	<p>The site was not suitable from a radio engineering perspective and it was too far south in the search area to provide coverage to the northern area of the targeted coverage area.</p> <p>The landowner was interested in the proposal; however the candidate was not pursued given the locational constraints from a network and coverage perspective.</p>
B	Lot 9001, Berkeley Crescent, Kununurra	40m monopole	<p>The site is suitable from an engineering and radio frequency perspective. The location will deliver a suitable coverage solution.</p> <p>The proposed location can be established without compromising the existing and future use of the land within the Rural Residential Precinct. The facility can be setback from the road and is not in close proximity to any residences or sensitive uses.</p> <p>The landowner is willing to proceed with a proposal along the northern boundary of the lot. The LO's preference is the north-eastern corner to reduce visual impact from their house.</p> <p>Proposed site location does not contain vegetation and access and power can be provided to the site with little or no disturbance.</p>



C	Lot 106 Berkeley Crescent, Kununurra	40m monopole	<p>The proposed candidate was investigated for the installation of new monopole facility.</p> <p>The site was not suitable from a radio engineering perspective and it was too far south in the search area to provide coverage to the northern area of the targeted coverage area.</p>
D	264 Weero Road, Kununurra	40m monopole	<p>The site was not suitable from a radio engineering perspective and it was too far south in the search area to provide coverage to the northern area of the targeted coverage area.</p>
E	Lot 205 River Farm Road, Kununurra	40m monopole	<p>The subject location was considered for the erection of a 40m monopole.</p> <p>The site was not suitable from a radio frequency engineering perspective as it is too close to another facility further east and would not extend coverage to the targeted coverage area.</p>
F	Lot 591 River Farem Road, Kununurra	40m monopole	<p>The site was not suitable from a radio frequency engineering perspective as it is too close to another facility further east and would not extend adequate coverage to the targeted coverage area to the south</p>
G	Drysdale Approach, Kununurra	40m monopole	<p>The site was suitable from a radio frequency engineering perspective; however no response was received from the landowner.</p>

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## 2.6 Preferred Site

Amptel has submitted this application for a telecommunications facility in Kununurra in order to provide essential coverage and to improve mobile communications performance across the local area.

Telstra does not propose the installation of a new telecommunications facility without investigating the potential for co-location on existing infrastructure. As there is no viable existing infrastructure within the targeted area to achieve a co-location, a new structure is required. The assessment concluded that

**Candidate B** sited at Lot 9001, Berkeley Crescent is the optimal location in terms of coverage, network connectivity and satisfactory environmental outcomes.

The site is accessible, technically viable and will result in an acceptable impact on the amenity of the area, whilst also providing possible co-location opportunities for other carriers in the future.

The site selection process considered environmental and visual constraints, existing and future land use characteristics, the orderly planning of the area and the design of the facility.

With particular consideration given to **Table 1** above, the merits of the site are summarised below:

- The proposed location is suitably located to service the targeted coverage area and meets the required RF coverage metrics.
- The proposed facility will be designed and constructed to accommodate co-location of equipment by other telecommunications carriers.
- The proposal is considered to be consistent with and provides acceptable solutions in relation to relevant Planning and Design Codes. The proposal is not expected to have an adverse impact on the environment during construction and operation of the facility.
- The immediate surrounding area is characterised by rural and rural residential land uses and will have minimal impact on the visual amenity of the general area. There are no sensitive uses in close proximity and the location maintains a minimum setback of 700m from the nearest residence.
- There is no clearing of any mature vegetation required for the establishment of the facility and access is proposed directly from Berkeley Crescent Road. As a result the proposal will have minimal environmental impact.
- The site has a readily accessible power supply and access for construction, operations and maintenance.
- The proposed facility will be unstaffed on a continuous basis (other than occasional access for maintenance) and will have no measurable impact on traffic.
- The proposed facility will greatly improve the Telstra service and coverage for residents, businesses and visitors to the local area.

An assessment of the prime candidate considered the environmental and planning aspects of the proposal. **Section 6** provides a detailed assessment of these potential environmental impacts and describes proposed mitigations. The assessment concludes that the development is unlikely to have a detrimental impact on the environment or the locality.

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### 3. Site Description and Surrounding Locality

#### 3.1 Site Location and Surrounds

The proposed facility address is Lot 9001, Berkeley Crescent, Kununurra. Access to the site is proposed via a gate directly from Berkeley Crescent Road and an existing internal access road to the proposed facility location. The proposed facility is located centrally on 56.4 Ha allotment. The location is immediately north of a drainage corridor easement within an existing cleared area.

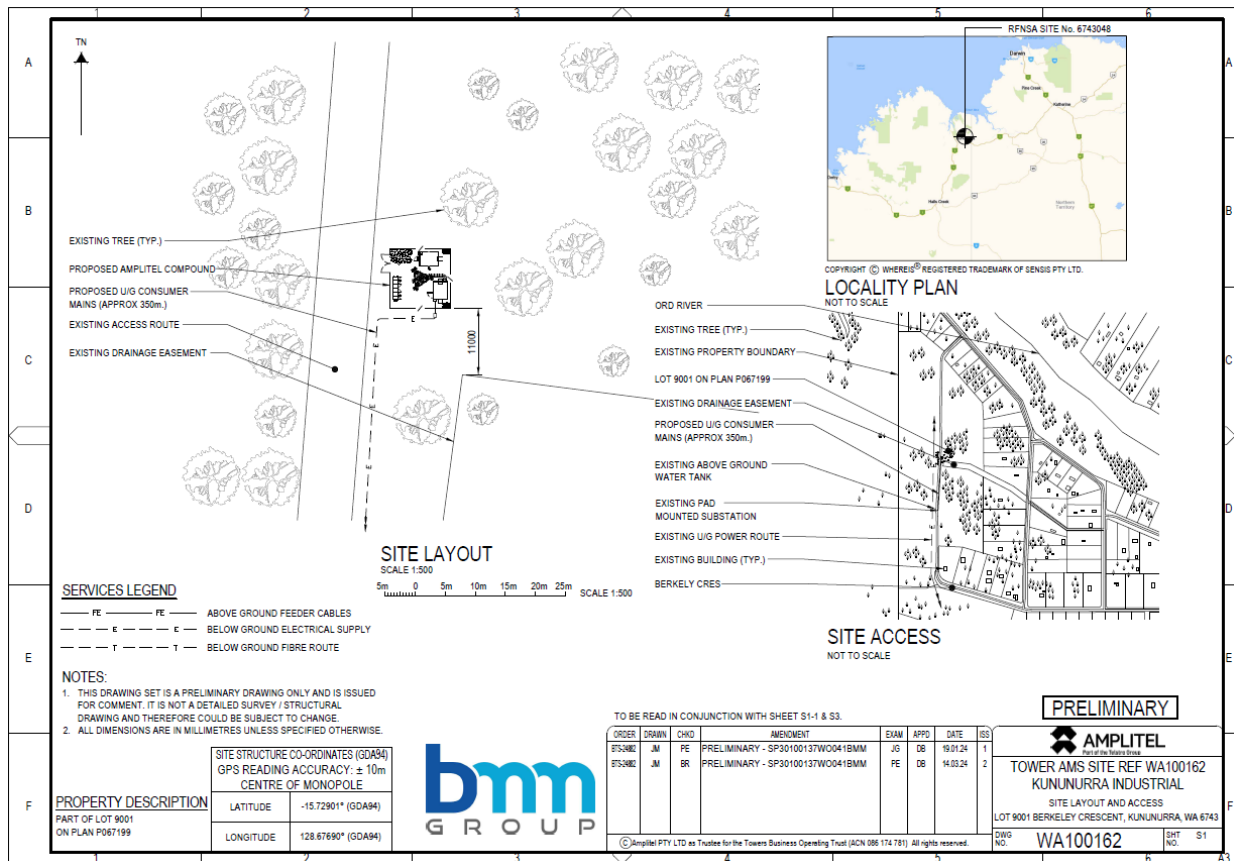


Figure 3 – Site Location (Preliminary Drawings)

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**Figure 4 – Facility location and extent of subject allotment (WAPlan)**

The Local Government Authority for the proposal is the Shire of Wyndham East Kimberley and the location is governed by the Planning Scheme No 24. The site is zoned Rural Residential. **Table 3** provides a summary of the site details.

**Table 3:** Proposed Site Details

Details	Comment
Street Address	Lot 9001, Berkeley Crescent, Kununurra
Legal Description	LOT 9001 ON DEPOSITED PLAN 67199 (Volume 2757 Folio 962)
Owner	HOLEMOB Pty Ltd
Proposed Development Footprint	100m <sup>2</sup>
Zone	Rural Residential Zone
Current Use	Rural
Access	Berkeley Crescent Road

An existing power supply is available. A Locality Plan and access alignment via an existing internal access from Berkeley Crescent Road is shown as part of the Proposal Plan within **Appendix A**. The location is illustrated in Figures 5 to 9 below.

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**Figure 5 – View Looking east towards the proposed facility location (approximate) from within the subject property**



**Figure 6 – View Looking west towards the proposed facility location (approximate) from within the subject property**





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**Figure 7 - View Looking north towards the proposed facility location from adjacent to the proposed facility location**



**Figure 8 – View looking southwest towards the facility location from the corner of Berkeley Crescent Road and unnamed road (facility located behind row of vegetation)**



## 4. Proposed Development

### 4.1 Proposal Summary

Key elements of the proposed telecommunications facility are as follows:

- Establishment of a 100m<sup>2</sup> lease area;
- Installation of one (1) 40 metre monopole;
- Mounting of a headframe at the top of the pole;
- Installation of six (6) Telstra panel antennas mounted on the headframe with a maximum overall height of 41.3m;
- Installation of 1 x Telstra parabolic antenna mounted on the pole at 37.0m;
- Installation of one (1) Telstra standard equipment shelter;
- Installation of ancillary equipment including transceivers, remote radio units, cable trays, feeders, cabling, electrical equipment, signage, and other associated equipment.
- Access to the facility via Berkeley Crescent Road and an internal access track.

Refer to **Appendix A** – Proposal Plans.

### 4.2 Proposal Construction and Installation

A total construction period of approximately eight weeks (including civil works and network integration and equipment commissioning) is anticipated. Construction activities will involve five basic stages:

- Stage 1 (Week 1) – Site preparation works, including field testing, ground preparation and construction of foundations and footings;
- Stage 2 (Week 2) – Construction of the pole;
- Stage 3 (Week 3) – Configuration and installation of ancillary equipment;
- Stage 4 (Weeks 4 – 6) – Installation of antennas and radio equipment, as well as equipment testing.

### 4.3 Traffic, access and parking

Construction access for the facility and ongoing maintenance is proposed via Berkeley Crescent and the existing internal access road. An access gate is proposed directly from Berkeley Crescent Road which will link directly to the facility location. The access location is shown on the proposal drawings in **Appendix A**.

Once installed, telecommunications facilities are unstaffed and operated remotely. Only occasional access is required for maintenance up to approximately three times per year by one passenger vehicle for approximately one day. Occasional heavy vehicle access would also be required when upgrading or replacing equipment on the monopole. The proposed facility does not generate any significant traffic and will have no impact on the adjoining Berkeley Crescent Road as a result of the infrequent maintenance visits.

### 4.4 Construction and noise

There will be minimal noise and vibration emissions associated with construction of the proposed facility. Noise generated during the construction phase is anticipated to be of short duration and accord with the standards outlined in the relevant guidelines. Construction works are planned only to occur between the hours of 7.00am and 6.00pm or otherwise in accordance with Council's conditions.

### 4.5 Utility services

Power to the existing structure will be sourced from the existing power supply. No substantial changes or upgrades are required in order to reticulate power to the proposed structure and existing equipment shelters.

### 4.6 Maintenance

The facility is designed to function on a continuously unstaffed basis and will typically only require maintenance works up to three times per year for each carrier for approximately one day.



## 5. Commonwealth Regulatory Framework

The installation of certain telecommunications facilities (as defined in the *Telecommunications Act 1997*) is regulated by the Australian Communications and Media Authority (ACMA) under the *Telecommunications Act 1997*. The legislative requirements are discussed below in further detail.

The installation of certain telecommunications facilities (as defined in the *Telecommunications Act 1997*) is regulated by the Australian Communications and Media Authority (ACMA) under the *Telecommunications Act 1997*. The legislative requirements are discussed below in further detail.

### 5.1 Telecommunications Act 1997

The *Telecommunications Act 1997 (TA)* came into operation in July 1997. This legislation establishes the criteria for 'low impact' telecommunication facilities. If a proposed facility satisfies the requirements of a 'low impact' facility, the development is exempt from the planning approval process.

Part 1 of Schedule 3 of the *TA* authorises a carrier to enter on land and exercise any of the following powers:

- Inspect the land;
- Install a facility; and to
- Maintain a facility.

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

- a) the Carrier being authorised to do so by a Facility Installation Permit, or
- b) the facility being a low-impact facility (as defined by the *Telecommunications (Low-Impact Facilities) Determination 1997* (as amended)), or
- c) the facility being temporary and used for a defence organisation for defence purposes, or
- d) if other conditions are satisfied in relation to the facility concerned.

As the proposal involves the construction of a 40m monopole, it does not constitute a low-impact facility under the *Telecommunications (Low-Impact Facilities) Determination 1997* (as amended).

As the proposed facility does not meet the criteria mentioned above, the applicant is not empowered to undertake the proposed works without approval under Western Australian legislation and must obtain planning consent from Shire of Wyndham East Kimberley.

**(Telecommunications Act 1997, p466)**

### 5.2 Telecommunications Code of Practice 2018

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

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

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

The proposed site and design was selected after a search and analysis of potential candidates and the site was considered to provide an optimal environmental and network solution. The proposed design achieves minimal visual impact while meeting the technical coverage requirements for the site.

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

### 5.3 The Deployment Code

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

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

The carriers' activities are published on the internet-based Radio Frequency National Site Archive (RFNSA) as well as information relevant to each site such as EME Reports. In the site selection and design stages of this proposal, the precautionary approach outlined in the Deployment Code has been considered (see Table 1 below).

**Table 4: Application of the Industry Code C564:2020 precautionary approach to mobile phone Radiocommunications infrastructure placement and design**

Subclause	Response
<b>Clause 4.1 Site Selection</b>	
4.1. <i>Clause 4.1 applies if a Carrier proposes to select a new site for the deployment of Mobile Phone Radiocommunications Infrastructure.</i>	Clause 4.1 Applies to this proposal for the construction of a new 40m monopole.
4.1.1. <i>A Carrier must have written procedures for site selection for Mobile Phone Radiocommunications Infrastructure in relation to factors contained in clause 4.1.4 and make them available to the public on request.</i>	Written procedures have been developed and will be made available to members of the public on request
4.1.2. <i>Once the preferred option has been selected, the Carrier must make available to the public on request the summary of the sites considered and the reasons for the selection of the preferred option.</i>	The site selection summary will be made available to any member of the public should they request it
4.1.3. <i>The Carrier must comply with its procedures as per clause 4.1.1.</i>	All procedures have been complied with
4.1.4. <i>The Carrier must ensure that its written procedures for new site selection require it must have regard to:</i>	(i) The primary requirement for installing the base station at the proposed location is to maintain and improve service in the Kununurra area.
(a) <i>the reasonable service objectives of the Carrier including:</i> (i) <i>the area the planned service must cover;</i> (ii) <i>power levels needed to provide quality of service;</i> (iii) <i>the amount of usage the planned service must handle;</i>	(ii) The power levels of Telstra's facilities are set as low as possible to meet the required service objective, the facilities also automate their power requirements in response to the demand and number of connections at any one time therefore maximising power efficiency.  iii) The proposed base station ensures that long-term, consistent, high-quality voice and mobile data services are provided in the targeted service area.
(b) <i>minimisation of EME exposure to the public;</i>	(b) The proposed design and location of the facility means its antennas are excluded from direct public access. Telstra facilities power levels are set as low as possible to meet the required service objective, the facilities also automate their power requirements in response to the demand and number of connections at any one time therefore maximising power efficiency and minimising

Subclause	Response
	EME emissions. Even at full power (see <b>Section 6.10</b> ) exposure limits to the public are substantially less than the ARPANSA RPS-S1 Standard.
(c) <i>the likelihood of an area being a community sensitive location. (Examples of sites which may be considered to be sensitive include, residential areas, childcare centres, schools, aged care centres, hospitals and regional icons);</i>	(c) The facility is located in a rural area with large landholdings. The nearest residence is greater than 700 metres east of the proposed site location. No sensitive uses are located in close proximity and the site is unlikely to be community sensitive. The Existing vegetation surrounding the facility will offer substantial screening to the base of the facility.
(d) <i>the objective of avoiding community sensitive locations;</i>	(d) The avoidance of community sensitive locations was a key factor in determining the proposed location as being suitable for the facility.
(e) <i>relevant state and local government telecommunications planning policies;</i>	(e) All relevant state and local government planning policies have been considered regarding the proposal. The minimum lot sizes required under Council Planning Scheme in the rural residential area means that the proposed 40m pole will not compromise the future use of the land.
(f) <i>the outcomes of consultation processes with Councils and Interested and Affected Parties as set out in clause 6.7;</i>	(f) The outcomes of the consultation processes with the identified affected parties have been taken into consideration and addressed.
(g) <i>the heritage significance (built, cultural and natural);</i>	(g) The proposed area is not subject to a native title claim. Various Cultural Heritage places exist over or in proximity to the proposed location. Consultation and approval from the DPLH and consultation with the Knowledge Holders will be undertaken in accordance with DPLH requirements prior to the commencement of any works. See <b>Section 6.1</b>
(h) <i>the physical characteristics of the locality including elevation and terrain;</i>	(h) The Kununurra area is characterised by flat to gently undulating topography. The proposal is suitably located to deliver the targeted coverage objectives.
(i) <i>the availability of land and public utilities;</i>	(i) There were no public utilities available.
(j) <i>the availability of transmission to connect the Mobile Phone Radiocommunications Infrastructure with the rest of the network, e.g. line of sight for microwave transmission;</i>	(j) The facility will utilise microwave transmission to connect to the Telstra Network.
(k) <i>the radiofrequency interference the planned service may cause to other services;</i>	(k) The proposed location ensures that there will be no interference with any existing services.
(l) <i>the radiofrequency interference the planned service could experience at that location from other services or sources of radio emissions;</i>	(l) The proposed location ensures that there will be no interference with any existing services.
(m) <i>any obligations and opportunities to co-locate facilities; and</i>	(m) Collocation options were either not viable or too far away to meet the objectives of this proposal.

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Subclause	Response
(n) cost factors.	(n) The cost factors are within the normal scope of development, design, location and scale.
Clause 4.2 Mobile Phone Radiocommunications Infrastructure Design	
Subclause	Response
4.2. Clause 4.2 applies if a Carrier proposes to design Mobile Phone Radiocommunications Infrastructure.	Clause 4.2 applies to this proposal.
4.2.1. The Carrier must have written procedures for designing Mobile Phone Radiocommunications Infrastructure.	Written procedures have been developed by Telstra.
4.2.2. The Carrier must comply with its procedures as per clause 4.2.1 above	All procedures have been complied with
4.2.3. With the objective of minimising unnecessary or incidental RF emissions and exposure, the procedures must require that, in designing Mobile Phone Radiocommunications Infrastructure, the Carrier have regard to: (a) the reason for the installation of the infrastructure, considering – coverage, capacity and quality; (b) the positioning of antennas to minimise obstruction of radio signals; (c) the objective of restricting access to areas where RF exposure may exceed limits of the EMR standard; (d) the type and features of the infrastructure that are required to meet service needs including: (i) the need for macro, small scale infrastructure; and (ii) the need for directional or non-directional antennas. (e) the objective of minimising power whilst meeting service objectives; and (f) whether the costs of achieving this objective are reasonable.	(a) The base station is proposed to deliver coverage to the Kununurra area. The base station will provide coverage and network capacity to the area to ensure that better quality services to customers are retained for the future.
	(b) The antennas have been positioned to minimise the obstruction of radio signals as required.
	(c) The antennas will be located atop a 40m monopole with required EME signage.
	(d) (i)-(ii) The site requires a macro cell with directional antennas to meet its coverage objectives.
	(e) Telstra facilities automate power in response to the demand and number of connections.
	(f) The cost of achieving the objective is reasonable.
4.2.4. The Carrier must make site EME assessments for Mobile Phone Radiocommunication Infrastructure in accordance with the ARPANSA prediction methodology.	The proposed facility will meet the ARPANSA EME requirements and EME levels have been calculated to be substantially less than the RPS-S1 standard. An EME Report is provided in <b>Appendix B</b> . Carriers are also required to provide validation of EME levels and report these assessments on the RFNSA once a facility is operational.
4.2.5. The ACMA may request a copy of the site EME estimate, and the Carrier must provide the estimate to the ACMA within two weeks of the request being made.	Any requests will be complied with within two weeks of the request being made.

#### 5.4 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation (EPBC) Act 1999 obliges telecommunications carriers to consider 'matters of national environmental significance'. Under this legislation, an action will require approval from the Minister of Environment if the action has or is likely to have an impact on a matter of 'national environmental significance'. According to the EPBC Act 1999, there are seven matters of national significance which must be considered.

All relevant EPBC matters have been considered and it is not anticipated that the proposal will have a significant impact on any matters of national environmental significance. Accordingly, approval from the Minister of Environment is not deemed necessary in this instance.



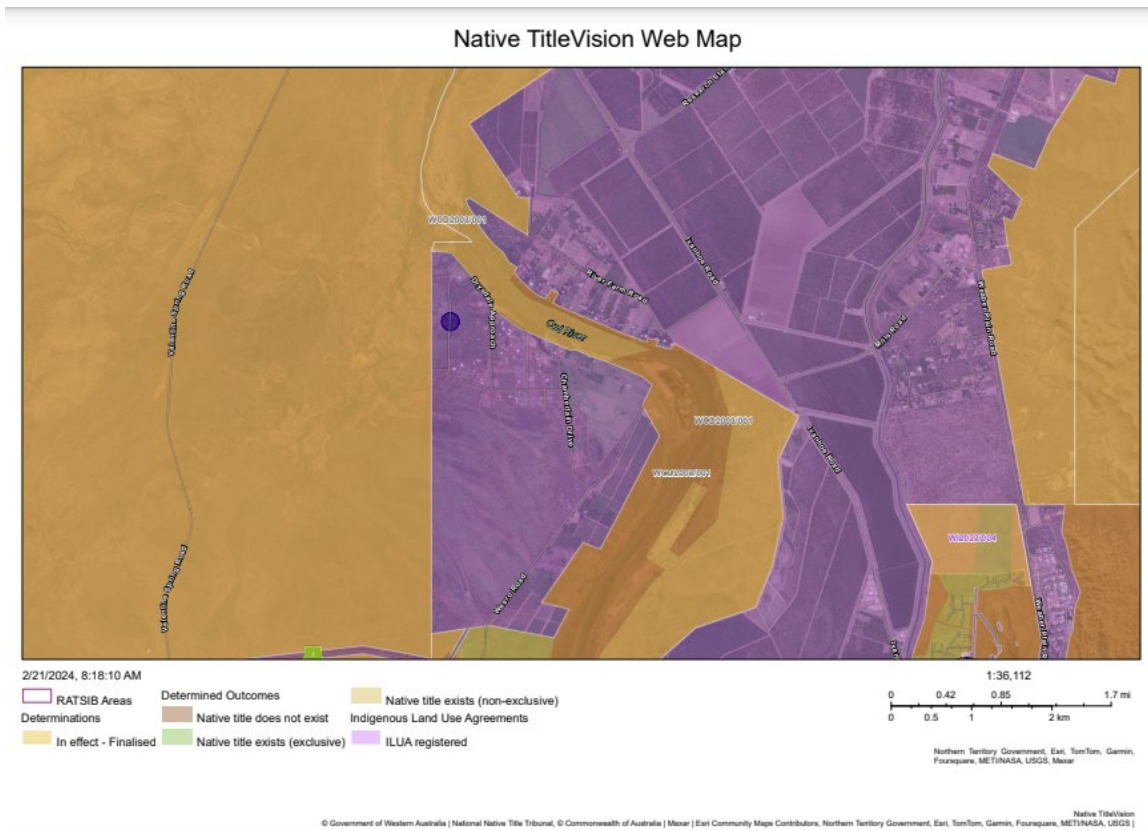
**5.5 Native Title Act**

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.

No active native title claims are active over the subject facility location.



**Figure 9 – Excerpt from WAPlan showing active native title claims. Subject site not subject to a claim.**



**Figure 10 - Excerpt of Native Title Tribunal Vision showing relevant Native Title determination in area surrounding subject site Source: Native Title Tribunal Vision, 2022**



## 6. State Regulatory Framework

The following information provides a summary of the State legislation/guidelines relevant to the proposed telecommunications facility.

### 6.1 Aboriginal Heritage Act 2021

On 1 July 2023 Western Australia proclaimed the Cultural Heritage Act 2021. The ACH management code came into effect on the 1 July 2023. The Act was subsequently repealed and an amended Aboriginal Heritage Act 1972 came into effect on 15 November 2023.

All landowners, be they freehold, leasehold, licensee, invitee or citizen, at large have one single obligation under the Act, that is not to knowingly damage an Aboriginal cultural heritage site. A Section 18 consent and any other approvals will be obtained if required through the ACH Knowledge portal. Initial advice has been sought from the DPLH.

The subject property at Lot 9001, Berkeley Crescent, Kununurra is impacted by a places on the Cultural Heritage Register. Figure 13 below shows the location of the proposed facility in relation to Heritage Place.

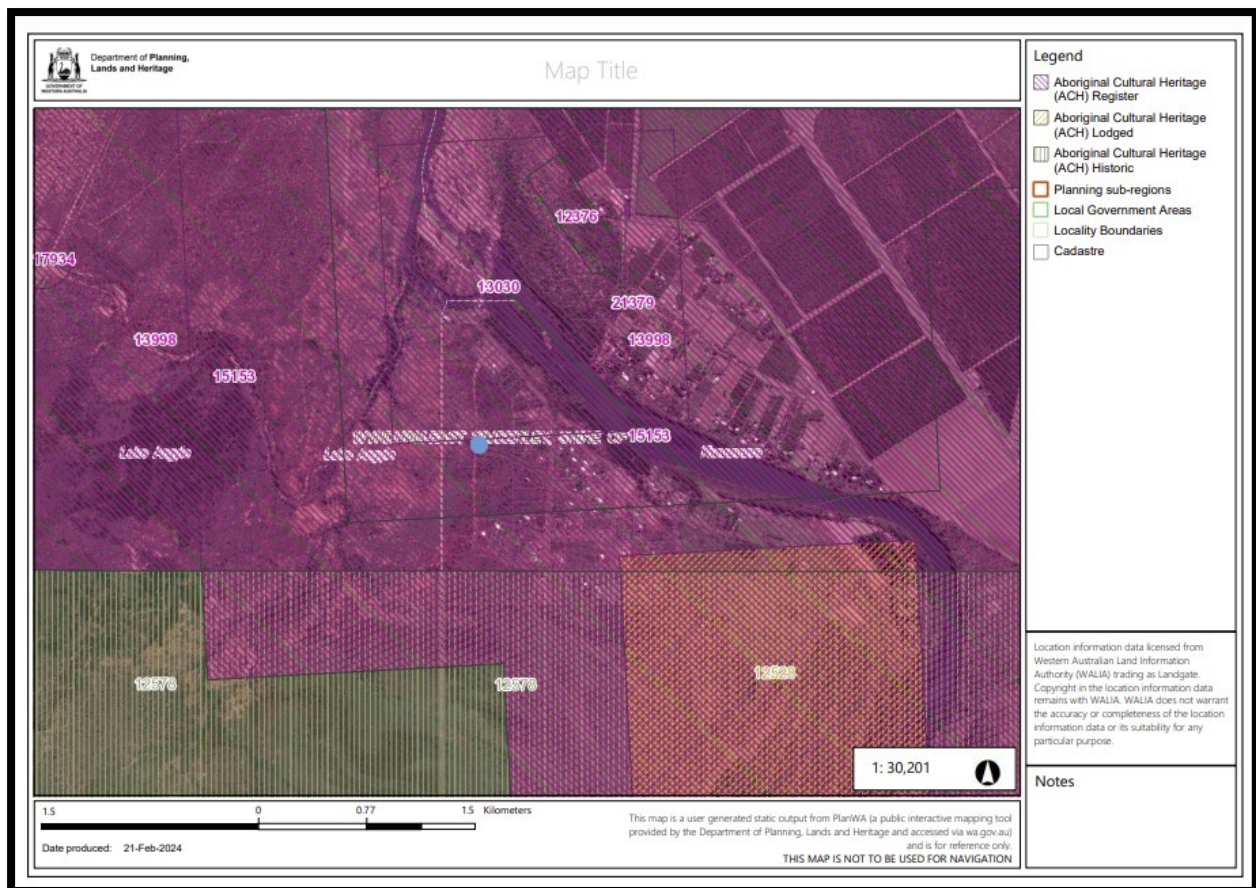


Figure 11 – Cultural Heritage Place 2008 (DPLH – Aboriginal Cultural Heritage Enquiry System)

### 6.2 Planning and Development Act 2005

The Minister of Planning and Infrastructure has ultimate authority for town planning in Western Australia. Development within Western Australia is controlled by the *Planning and Development Act 2005* through the application of environmental planning instruments. Under the *Planning and Development Act 2005*, the Western Australian Planning Commission (**WAPC**) is the responsible authority for land use planning and development matters and this report seeks to demonstrate compliance with the WAPC and other items of relevant legislation which pertain to the subject application.

### 6.3 State Planning Policy No. 5.2 – Telecommunications

State Planning Policy 5.2: Telecommunications Infrastructure Policy aims to balance the need for effective telecommunications services and effective roll-out of networks, with the community interest in protecting the visual character of local areas. The SPP applies for above and below telecommunications infrastructure, other than those exempted under the Commonwealth Telecommunications Act 1997.

Under section 5.1.1 of the State Planning Policy 5.2: Telecommunications Infrastructure Policy the West Australian Planning Commission provides a set of measures in assessing the visual impact of a proposed telecommunications facility.

The following assessment has found that the proposed telecommunications facility has been located and designed to comply with the intent and requirements of the State Planning Policy 5.2: Telecommunication Infrastructure Policy.

**Table 5: Assessment against State Planning Policy 5.2, Policy Measure 5.1.1**

Measures	Comments	Complies
<p>Be located where it will not be prominently visible from significant viewing locations such as scenic routes, lookouts and recreation sites;</p>	<p>A critical criterion for the preferred site location was based on maximising the setback of the facility from residential areas and any sensitive uses. The proposed location will not adversely impact on the amenity of nearby residential, community or other sensitive uses. Key factors in achieving this outcome are as follows:</p> <p>Whilst undertaking site selection for a new base station facility in the locality, BMM Group considered the nature of existing land uses, visual impact and aesthetics of its facility on the surrounding environment. The facility has been sited and designed to maximise visual integration in the locality and ensure that the existing and future amenity of the locality is not compromised.</p> <p>Matters such as viewing distance, number of viewers and period of view are key factors taken into consideration in the siting and design of the facility and the mitigation of visual impact. The proposed facility is well located to mitigate any potential visual impact. The immediate adjoining land is characterised by large rural and rural residential allotments. The nearest residence is located approximately 700m north. There are no sensitive uses in close proximity.</p> <p>A slimline monopole design has been utilised at this location in place of a lattice tower design in order to minimise any potentially adverse visual effects. This slimline design creates a minimal profile in the landscape, significantly reducing the bulk of the facility. The setback of the facility from the road frontage also ensures that it will not be highly visible to road users as it avoids the dominant sight lines from surrounding roads and is set behind mature vegetation.</p> <p>The monopole is proposed to be finished in a recessive colour in order to blend the facility into the sky so it is not a dominant feature.</p> <p>The design and location of the facility will achieve a high level of visual absorption of the facility into the landscape associated with the setback, colour and design of the facility. Other vertical elements in the landscape such as existing vegetation also ensure that the facility will integrate well and have a low level of visual impact.</p> <p>The proposed location of the facility is setback 1.28 kilometres from Berkeley Crescent Road and 500m from</p>	<p>✓</p>



	<p>Drysdale Approach. The setback ensures that the dominant sight lines, views and vistas from adjoining and surrounding residential areas and from surrounding roads, will not be materially impacted by the development.</p> <p>In terms of the potential visual effects of the upper section of the proposed facility, it is important to note that the antennas need to have "line of sight" to the area that they are servicing (i.e. they need to be visible to the devices in the area they service) in order to function effectively – this is an inherent feature of cellular technology. Antennas cannot be placed below a topographical line, or surrounded by trees or tall buildings, otherwise they will not be effective in providing the service to the user. It is a result of the technology that telecommunications facilities must be visible in order that they operate effectively. In this case, any views of the facility are considered to be a low level of visual impact.</p> <p>The proposed facility location and design demonstrate a successful balance between the provision of essential infrastructure and a low-level impact on amenity.</p>	
<p>Be located to avoid detracting from a significant view of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land;</p>	<p>Amplitel has selected a site and location that seeks to minimise perceived negative impacts on the visual amenity of the area. The facility is not located in close proximity to any known heritage item and will not detract from the significance of any heritage item or place.</p> <p>The proposed location of the facility is well setback from the road frontage which ensures that the dominant sight lines, views and vistas from adjoining and surrounding residential areas and from surrounding roads, will not be materially impacted by the development. While the proposed facility will introduce a visible element in the landscape, any adverse impacts are substantially mitigated through the site location and slim line profile of the proposed pole and the screening of the lower sections by existing mature vegetation. Given the siting and setbacks, the proposed 40m structure will not materially impact on the visual amenity from any surrounding locations.</p>	
<p>Not be located on sites where environmental, cultural heritage, social and visual landscape values may be compromised;</p>	<p>The proponent has requested advice from DPLH regarding the requirement for a Section 18 approval. Once the advice is obtained, details of the proposal will be referred to the relevant parties and their consent sought if required.</p> <p>Notwithstanding, precaution and due diligence will be exercised during the construction phase and if any items of indigenous or cultural heritage are encountered, works will cease, and the procedures for the management of unanticipated discoveries will be observed in accordance with the Guidelines and the relevant authority contacted immediately.</p>	<p>✓</p>
<p>Display design features, including scale, materials, external colours and finishes that are sympathetic to the surrounding landscape;</p>	<p>This slimline design creates a minimal profile in the landscape, significantly reducing the bulk of the facility. The monopole is proposed to be finished in a recessive colour in order to blend the facility into the sky so it is not a dominant feature. These design features combined with the backdrop and screening of mature vegetation ensures that the facility will integrate well in the locality.</p>	<p>✓</p>

<p>Be located where it will facilitate continuous network coverage and/or improved telecommunications services to the community;</p>	<p>The proposed telecommunications facility located at Kununurra is integral to Telstra's ability to deliver mobile network coverage through the delivery of a high quality and reliable service to the area. Delivering on this objective is vital in order to enhance connectivity, economic development and safety in Kununurra and surrounding communities, and deliver on the stated objectives of the RCP. The proposed location satisfies the coverage objectives for the area.</p>	<p style="text-align: center;">✓</p>
<p>Telecommunications infrastructure should be co-located and whenever possible: Cables and lines should be located within an existing underground conduit or duct; and Overhead lines and towers should be co-located with existing infrastructure and/or within an existing infrastructure corridor and/or mounted on existing or proposed buildings.</p>	<p>No suitable opportunities for co-location at alternative sites were identified. The proposed structure will also allow for other service providers co-locate their infrastructure on the facility.</p> <p>Overhead lines are not applicable to the design of the facility.</p>	<p style="text-align: center;">✓</p>

Overall, the proposed development application is consistent with the intent and requirements of the Statement 5.2

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The provisions of the table are not directly relevant to the development of essential infrastructure such as the proposed telecommunications facility. Importantly, the proposed telecommunications facility has been sited and designed so that it will not compromise future development in the precinct.

The proposed telecommunications structure is an essential form of infrastructure which is proposed under the Regional Connectivity Program. The RCP is designed to improve telecommunications infrastructure and digital connectivity across regional, rural and remote Australia. The subject proposal has been sited on the property to ensure that it is setback from the road in an existing cleared area.

The proposed facility has been designed and sited to minimise interface impacts upon existing land uses within the locality. The facility avoids any significant sight lines from any other residences or sensitive uses. The colour of the facility will be a nonreflective grey steel or concrete finish which will blend the facility into the sky so it is not a dominant feature. The equipment at ground level will be well screened by the existing vegetation and proposed setback.

The objectives of the Scheme and structure plan are well met by the proposed facility location as it:

- Will not compromise the rural residential character of the area;
- will not cause overshadowing or cause impacts on visual amenity from residences or sensitive uses;
- does not require the removal of mature vegetation;
- will not impact on any watercourses or wetlands; and
- the facility will complement local rural and home based businesses, and will provide improved safety and security for road users and surrounding residents in the event of an emergency.

### **7.3 Planning in Bushfire Prone Area**

As the use is not considered a habitable building for the purposes of the bushfire prone area and it does not require a BAL rating.

The facility is proposed within a cleared area with sufficient buffer distances to existing vegetation. Appropriate design measures are employed to ensure that the facility will be protected in the event of fire.

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## 8. Potential Environmental Impacts and Proposed Mitigation Measures

### 8.1 Hazards, Risk and Health Impacts

Mobile phone base stations emit electromagnetic energy (EME). It is mandatory that mobile network operators in Australia comply with current and future Australian Radiation protection and Nuclear Safety Agency (ARPANSA) standards for the operation of the proposed facility. The Australian Communications and Media Authority are the regulatory body for compliance with this standard. The current standard is the Radiation Protection Series (RPS) S-1 (Rev. 1) Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz. This standard maintains a significant safety margin to prevent adverse health effects.

In accordance with RPS S-1, an estimate has been made of the maximum cumulative radiofrequency (RF) electromagnetic energy (EME) levels at ground level emitted from the proposed mobile base station. Estimates of RF EME levels are provided for 360° circular bands at 0-50, 50-100, 100-200, 200-300, 300-350 and 350-500m from the base of the antenna.

The Assessment concludes that the maximum cumulative EME level at 1.5m above ground level will be substantially less than the ARPANSA RPS-S1 limit. A copy of the EME report is provided in Appendix B – [www.rfnsa.com.au/6743027](http://www.rfnsa.com.au/6743027)

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

This involves:

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

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

The World Health Organisation's current advice is:

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

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

### 8.2 Visual Amenity

Whilst undertaking site selection for a new base station facility in the locality, BMM Group considered the nature of existing land uses, visual impact and aesthetics of its facility on the surrounding environment. The facility has been sited and designed to maximise visual integration in the locality and ensure that the existing and future amenity of the locality is not compromised.

Matters such as viewing distance, number of viewers and period of view are key factors taken into consideration in the siting and design of the facility and the mitigation of visual impact.

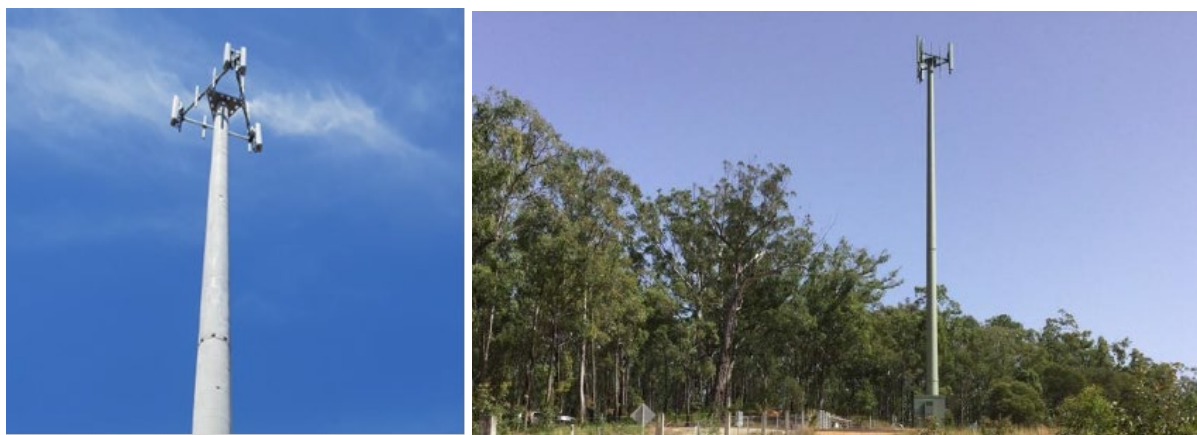
The proposed facility is well located to mitigate any potential visual impact. The purpose of the Rural Residential Zone is to support rural residential living and related ancillary pursuits on rural-residential lots where those activities will be consistent with the amenity of the locality and the conservation and landscape.

The facility has been located so that it will be complimentary to the existing and future use of the adjoining and surrounding land. The proposed location ensures a superior telecommunications service will be provided to the roadways and surrounding rural and rural residential locations.

A key consideration in the selection of the site was the protection of the amenity to any sensitive land uses and heritage items. The location of the facility and the setback from any surrounding residences, ensures that the amenity of the area will not be substantially compromised and the facility will have a very low level of visual impact in the overall context of the location.

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

The proposed facility has been designed and sited to minimise interface impacts upon existing land uses within the locality. The facility avoids any significant sight lines from any sensitive uses. The colour of the facility will be a nonreflective grey steel or concrete finish which will blend the facility into the sky so it is not a dominant feature. Figure 14 below provides an example of a monopole structure similar to the design of the proposed facility at Kununurra (note the monopole in the photo is taller than that proposed).



**Figure 14 – Examples of the proposed monopole design to be installed at Kununurra**

It is considered that the facility will be unlikely to pose significant impacts upon the amenity of the adjoining landowners or the broader locality. The facility comprises a low intensity land use despite being visually noticeable from a broad area given the necessity of the height of the proposal to be effective for the targeted telecommunications coverage to the surrounding roads and rural properties.

Finally, the compatibility between the proposed development and the guiding policies of the Planning and Design Codes are in general terms well met, in that there is a demonstrated need for the facility



which will complement local rural and home based businesses, and will provide improved safety and security for road users and surrounding residents in the event of an emergency.

### 8.3 Socio-Economic Considerations

The proposed facility will enable the upgrade and expansion of the telecommunications service for customers within the surrounding residential and business precincts. Key benefits are:

- Greater business accessibility and flexibility for workers, industrial and commercial businesses, commuters and home-based businesses.
- Reliable personal safety through maintaining a mobile phone for critical communications and emergencies.
- Increased physical capacity for improving telecommunications infrastructure, resulting in improved customer connectivity, and rapid delivery of technology improvements.

The proposed development will enable carriers to remain competitive and increase the choice of mobile telephone services available to consumers. Increased competition in the market brings direct economic benefits for individual consumers and the community as a whole.

The proposed facility will provide improved communication infrastructure, enhancing mobile phone and broadband coverage within the community.

### 8.4 Heritage Significance

Online searches were undertaken in order to determine any natural or cultural values of state or national significance. The following databases were viewed:

- Australian Heritage Places Inventory;
- Register of the National Estate; and
- Western Australia Heritage Register.

Searches of the aforementioned registers established that the site is not subject to, nor has any recorded cultural significance. Notwithstanding, precaution and due diligence will be exercised during the construction phase and if any items of indigenous or cultural heritage are encountered, works will cease, and the Heritage Council will be contacted to provide direction.

Consideration of the Aboriginal Cultural Heritage aspects of the proposal has been undertaken in Section 6 of this report.

### 8.5 Contaminated land

The subject site is not listed on the contaminated lands register and no signs of land contamination are evident. The installation of the proposed telecommunications facility does not require any significant ground disturbance.

### 8.6 Erosion and sediment control

Little or no ground disturbance is proposed during installation of the proposed structure. Given the scale of the works and location of the proposal, potential impacts would be addressed and mitigated with the following soil and water management measures undertaken during construction and continued until the site is established and operational. These measurements include:

- Keeping ground disturbing activities to a minimum;

- Implementing appropriate sediment control measures as required, such as the installation of silt/sediment fences and/or sediment traps;
- Erosion and sediment controls will be checked regularly and immediately prior to and after any rain event;
- Fill in and compact any trenches immediately after services have been laid; and
- Works would not occur during periods of heavy rainfall.

### **8.7 Air Quality**

There is unlikely to be any dust impacts associated with the proposal given the minor extent and short-term duration of any ground disturbance.

Measures such as wetting down exposed surfaces would be undertaken if required to mitigate any construction related impacts due to dust generation. Once established the proposal will have no air pollution and will not generate dust.

### **8.8 Noise and Vibration**

Works would be undertaken only during standard working hours would be minor and of short duration. It is not expected that construction works would cause any significant noise or vibration.

Noise generated during the operational stage of the facility includes air-conditioning units servicing the equipment cabin. The air-conditioning units are similar to those used for cooling of residential premises and will comply with the relevant noise emission guidelines. The air-conditioning units are automatic and will shut down when not required.

### **8.9 Waste Minimisation and Management**

Due to the relatively minor nature of the works, the generation of waste resulting from construction of the proposed facility is expected to be minimal and will be removed from site.

Excess spoil from the earthworks would be reused onsite if suitable, reused off site, or disposed of at an approved waste disposal facility. Other waste packaging material will also be disposed of at an approved waste disposal facility. The ongoing operation of the facility will be unmanned and will not generate any waste or odour emissions.

### **8.10 Traffic and Access**

Access to the facility location for construction and ongoing maintenance is proposed via Berkeley Crescent Road which will link directly to an existing internal access road. It is expected that there would be approximately four additional vehicle movements per day during construction. It is anticipated that construction work will be completed in approximately 8-10 weeks.

There would be a minor increase in traffic volume on the surrounding roads during construction. However, any such impacts are expected to be minor and short term in duration and would occur outside of peak traffic times.

Once constructed, mobile phone base stations are of low maintenance, unmanned and remotely operated. As such, operational and maintenance visits to the site will be approximately three times per year. The proposed facility will not require public transport services or parking facilities. Parking for maintenance vehicles is available on-site.

### 8.11 Associated Infrastructure and Activities

An existing power supply is located on the subject lot.

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

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

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

### 8.12 Cumulative Environmental Effects

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

*A common concern about base station and local wireless network antennas relates to the possible long-term health effects that whole-body exposure to the RF signals may have. To date, the only health effect from RF fields identified in scientific reviews has been related to an increase in body temperature (> 1 °C) from exposure at very high field intensity found only in certain industrial facilities, such as RF heaters. The levels of RF exposure from base stations and wireless networks are so low that the temperature increases are insignificant and do not affect human health.*

*The strength of RF fields is greatest at its source and diminishes quickly with distance. Access near base station antennas is restricted where RF signals may exceed international exposure limits. Recent surveys have indicated that RF exposures from base stations and wireless technologies in publicly accessible areas (including schools and hospitals) are normally thousands of times below international standards.*

*(Electromagnetic fields and public health; WHO Fact Sheet No. 304 May 2006)*

The cumulative levels of EME in the proposed location will fall well within the standard limits set by the ACMA. Any potential environmental impacts during construction are expected to be temporary and mitigated through the implementation of appropriate work practices and management measures specified in this development application report. Consequently, the proposed development is not considered likely to have an adverse cumulative impact on the environment and the community.

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## 9. Conclusion

The proposed telecommunications facility located at Lot 9001, Berkeley Crescent, Kununurra will deliver a high quality and reliable telecommunications service to the local area. Delivering on this objective is vital in order to enhance connectivity, economic development and safety in Kununurra and deliver on the stated objectives of the RCP.

The proposed facility will provide enhanced social and economic benefit, and improved safety and accessibility to the community without compromising the amenity, function and ongoing use and enjoyment of the surrounding land uses.

The siting, colour and design of the facility combine to ensure that the surrounding environment, including the dominant sight lines and views from residences or any sensitive uses will not be materially impacted by the development. The proposed siting and design of the proposed facility also ensures that the natural environment is not negatively impacted and the future use and development of the land for a range of land uses will not be compromised.

The proposed development is considered to be sited and designed so as to be an efficient provision of essential infrastructure whilst still minimising and managing potentially adverse impacts on the character and amenity of the locality. Whilst the proposal is of a moderate scale, it is considered the proposal is unlikely to result in hazards or nuisance to adjacent development or land uses to unreasonable degree. The facility will be complementary to these adjoining uses and provides a modern and efficient means of communications which is not currently available.

From a statutory perspective the proposal is considered acceptable within the Rural Residential Zone under the objectives of Shire of Wyndham East Kimberley Planning Scheme No. 9.

BMM Group has undertaken a thorough analysis of potential site alternatives and during this process has selected the most appropriate site for the facility in the context of the location. Factors such as the ability to meet the required coverage and technical objectives, opportunities for co-location by other carriers, the surrounding landscape, visual amenity, local heritage and environmental and community needs have all been carefully considered as part of this selection process.

It is requested that Council grant a permit to support this development application, subject to relevant and appropriate conditions.

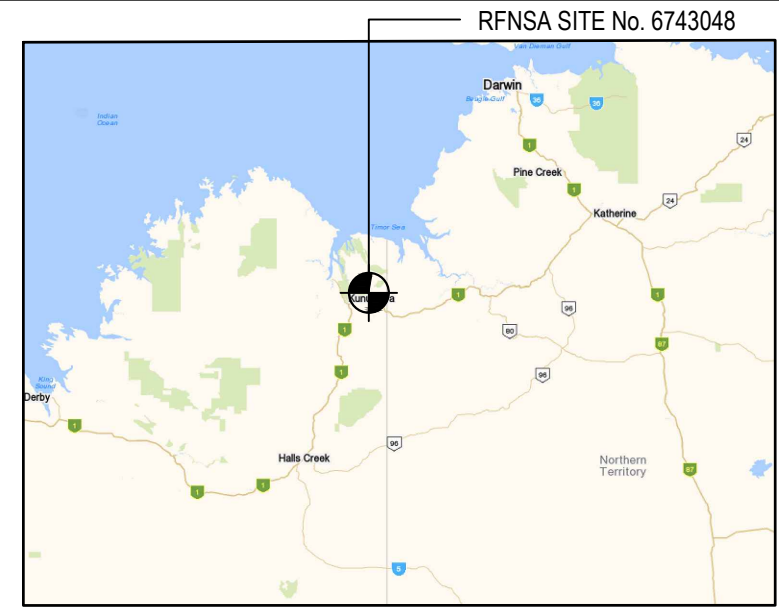
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## Appendix A – Proposal Plans

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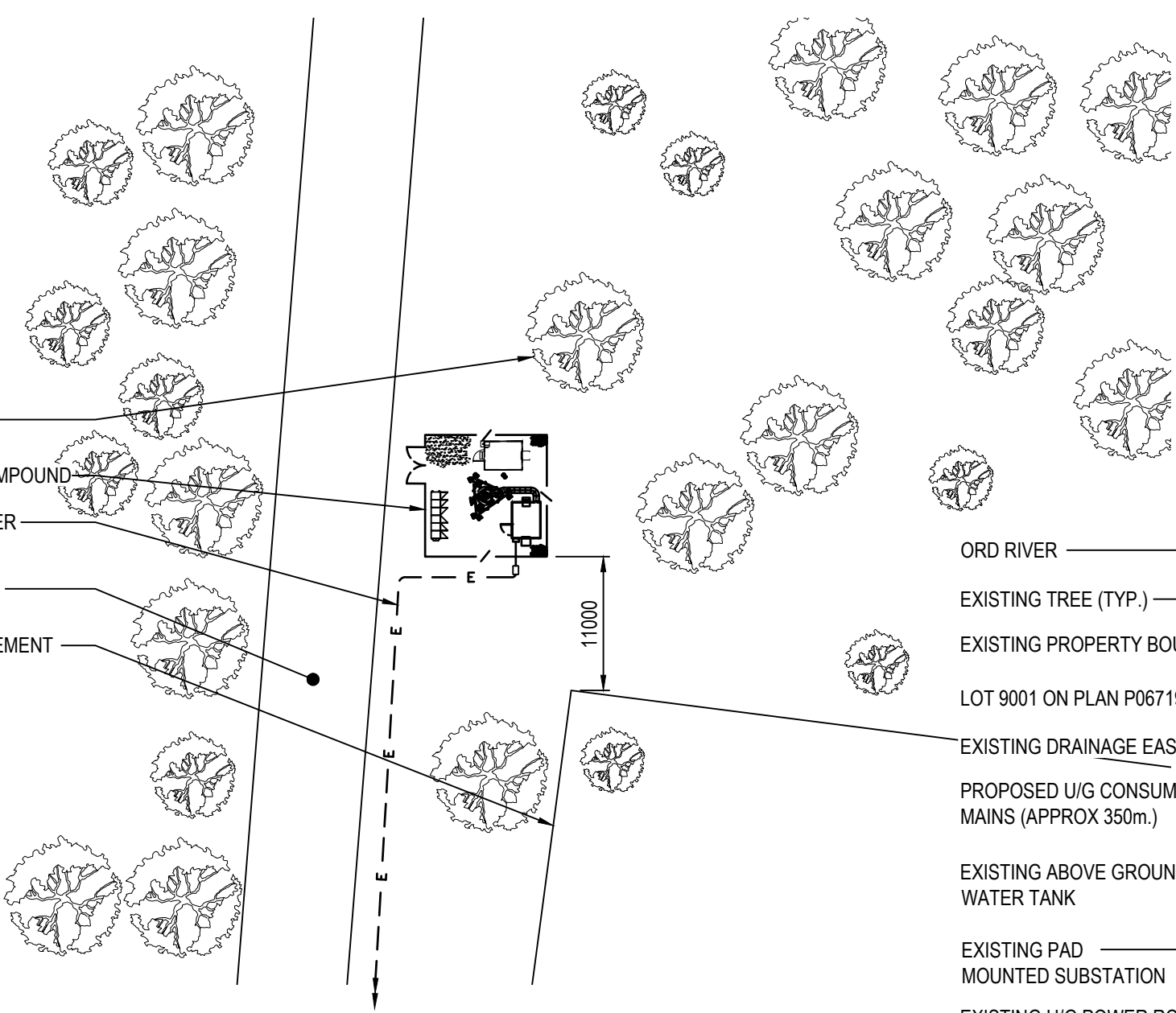




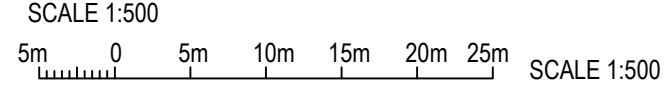
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**LOCALITY PLAN**  
NOT TO SCALE

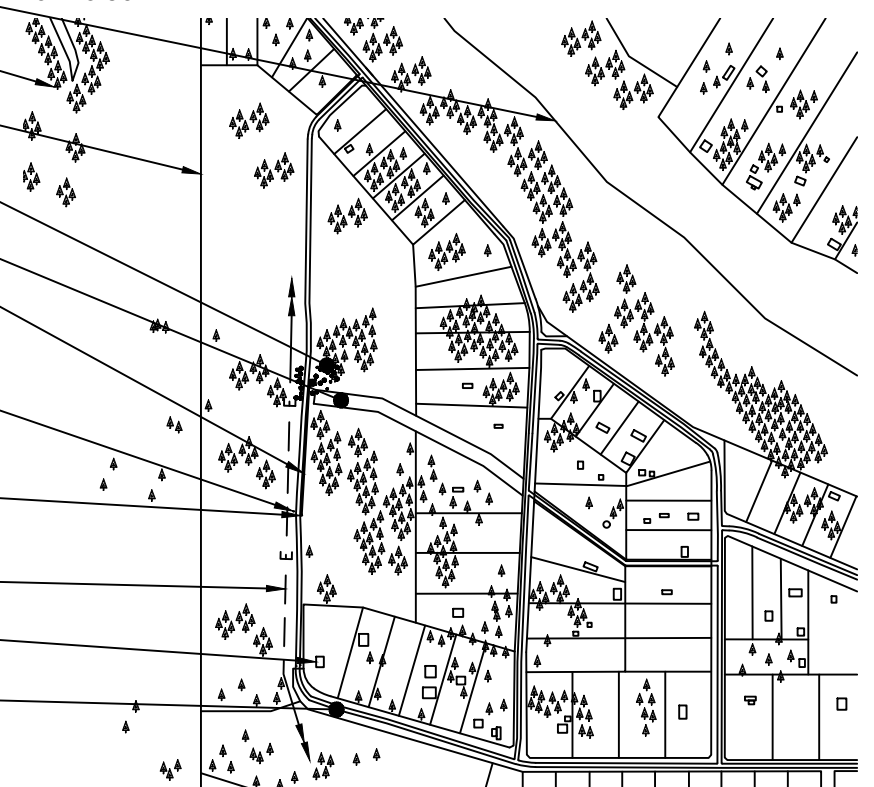
- EXISTING TREE (TYP.)
- PROPOSED AMPLITEL COMPOUND
- PROPOSED U/G CONSUMER MAINS (APPROX 350m.)
- EXISTING ACCESS ROUTE
- EXISTING DRAINAGE EASEMENT



**SITE LAYOUT**  
SCALE 1:500



- ORD RIVER
- EXISTING TREE (TYP.)
- EXISTING PROPERTY BOUNDARY
- LOT 9001 ON PLAN P067199
- EXISTING DRAINAGE EASEMENT
- PROPOSED U/G CONSUMER MAINS (APPROX 350m.)
- EXISTING ABOVE GROUND WATER TANK
- EXISTING PAD MOUNTED SUBSTATION
- EXISTING U/G POWER ROUTE
- EXISTING BUILDING (TYP.)
- BERKELY CRES



**SITE ACCESS**  
NOT TO SCALE

**SERVICES LEGEND**

- FE — FE — ABOVE GROUND FEEDER CABLES
- E — E — BELOW GROUND ELECTRICAL SUPPLY
- T — T — BELOW GROUND FIBRE ROUTE

**NOTES:**

1. THIS DRAWING SET IS A PRELIMINARY DRAWING ONLY AND IS ISSUED FOR COMMENT. IT IS NOT A DETAILED SURVEY / STRUCTURAL DRAWING AND THEREFORE COULD BE SUBJECT TO CHANGE.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.

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

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
BTS-24882	JM	PE	PRELIMINARY - SP30100137WO041BMM	JG	DB	19.01.24	1
BTS-24882	JM	BR	PRELIMINARY - SP30100137WO041BMM	PE	DB	14.03.24	2

**PRELIMINARY**



**TOWER AMS SITE REF WA100162**  
**KUNUNURRA INDUSTRIAL**  
SITE LAYOUT AND ACCESS  
LOT 9001 BERKELEY CRESCENT, KUNUNURRA, WA 6743

**PROPERTY DESCRIPTION**

PART OF LOT 9001  
ON PLAN P067199

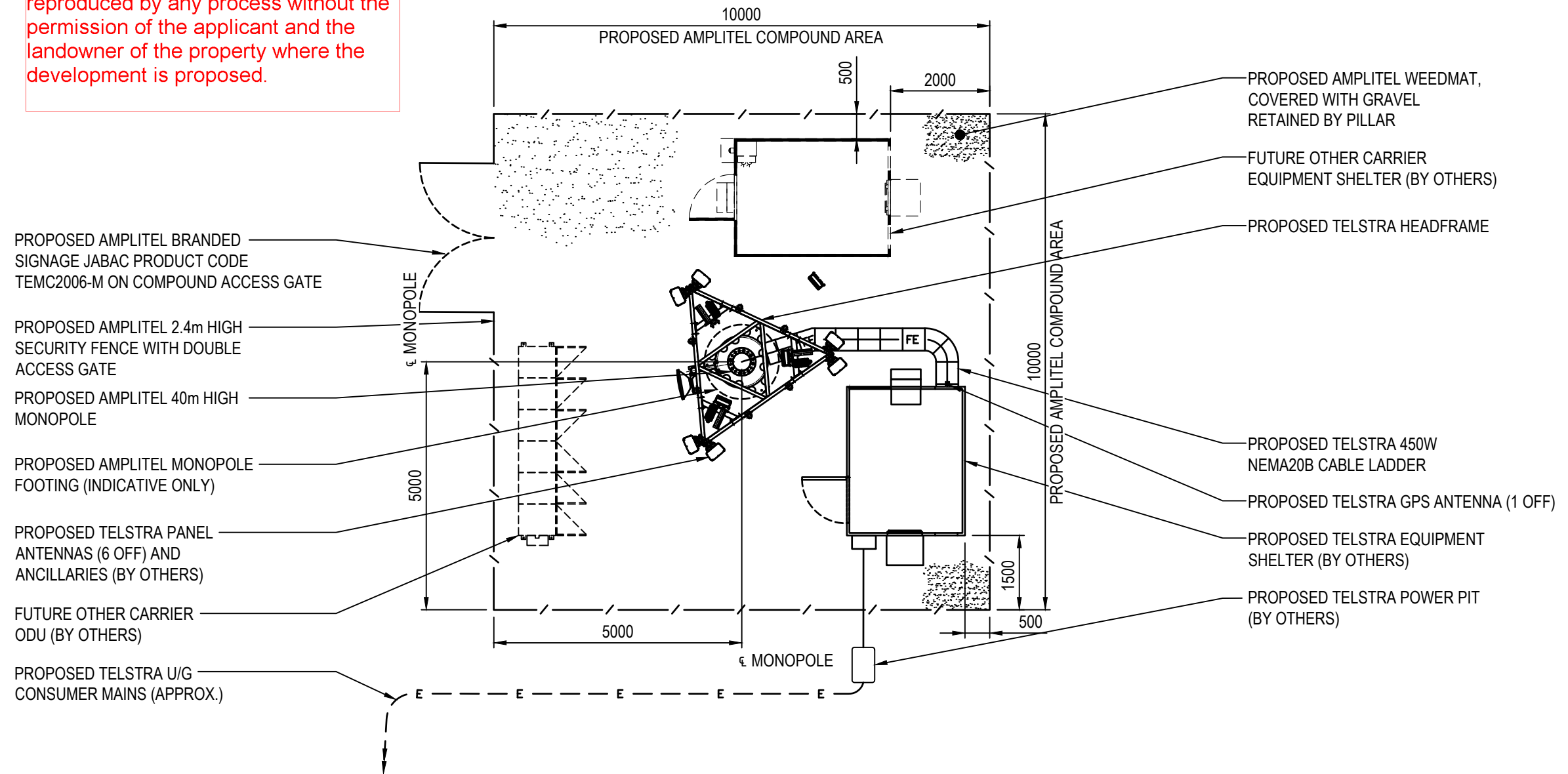
SITE STRUCTURE CO-ORDINATES (GDA94)	
GPS READING ACCURACY: ± 10m CENTRE OF MONOPOLE	
LATITUDE	-15.72901° (GDA94)
LONGITUDE	128.67690° (GDA94)



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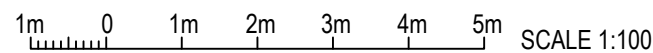
DWG NO. **WA100162** SHT NO. S1

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### SITE SETOUT PLAN

SCALE 1:100



#### SERVICES LEGEND

- FE — FE — ABOVE GROUND FEEDER CABLES
- - - E - - - E - - - BELOW GROUND ELECTRICAL SUPPLY
- - - T - - - T - - - BELOW GROUND FIBRE ROUTE

#### NOTES:

1. THIS DRAWING SET IS A PRELIMINARY DRAWING ONLY AND IS ISSUED FOR COMMENT. IT IS NOT A DETAILED SURVEY / STRUCTURAL DRAWING AND THEREFORE COULD BE SUBJECT TO CHANGE.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.



TO BE READ IN CONJUNCTION WITH SHEET S1 & S3.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
BTS-24882	JM	PE	PRELIMINARY - SP30100137WO041BMM	JG	DB	19.01.24	1
BTS-24882	JM	BR	PRELIMINARY - SP30100137WO041BMM	PE	DB	14.03.24	2

**PRELIMINARY**



TOWER AMS SITE REF WA100162  
KUNUNURRA INDUSTRIAL  
SITE SETOUT PLAN  
LOT 9001 BERKELEY CRESCENT, KUNUNURRA, WA 6743

DWG NO. **WA100162** SHT NO. S1-1

**NOTES:**

- THIS DRAWING SET IS A PRELIMINARY DRAWING ONLY AND IS ISSUED FOR COMMENT. IT IS NOT A DETAILED SURVEY / STRUCTURAL DRAWING AND THEREFORE COULD BE SUBJECT TO CHANGE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.

**SERVICES LEGEND**

- FE — FE — ABOVE GROUND FEEDER CABLES
- - - E - - - E - - - BELOW GROUND ELECTRICAL SUPPLY
- - - T - - - T - - - BELOW GROUND FIBRE ROUTE

- ▽ E.L. 41.3m (±100mm)  
APPROXIMATE OVERALL HEIGHT
- ▽ E.L. 40.0m (±100mm)  
TOP OF PROPOSED AMPLITEL MONOPOLE  
C/L PROPOSED TELSTRA PANEL ANTENNAS  
(6 OFF) AND ANCILLARIES (BY OTHERS)
- ▽ E.L. 37.0m (±100mm)  
C/L PROPOSED TELSTRA PARABOLIC ANTENNA  
(1 OFF) (DETAILS TO BE CONFIRMED) (BY OTHERS)

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PROPOSED AMPLITEL 40m HIGH MONOPOLE WITH TRIANGULAR HEADFRAME

PROPOSED AMPLITEL 2.4m HIGH SECURITY FENCE WITH DOUBLE ACCESS GATE  
FUTURE OTHER CARRIER ODU (BY OTHERS)

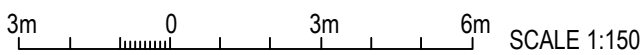
PROPOSED TELSTRA FEEDER CABLES TO RUN INTERNAL TO MONOPOLE  
PROPOSED TELSTRA 450W NEMA20B CABLE LADDER  
FUTURE OTHER CARRIER EQUIPMENT SHELTER (BY OTHERS)  
PROPOSED TELSTRA EQUIPMENT SHELTER (BY OTHERS)

PROPOSED U/G CONSUMER MAINS (APPROX.)  
PROPOSED AMPLITEL MONOPOLE FOOTING (INDICATIVE ONLY)

▽ E.L. 0.00m (±100mm)  
GROUND LEVEL  
PROPOSED TELSTRA POWER PIT (BY OTHERS)

**SOUTH ELEVATION**

SCALE 1:150



DO NOT SCALE

TO BE READ IN CONJUNCTION WITH SHEET S1 & S1-1.

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
BTS-24882	JM	PE	PRELIMINARY - SP30100137WO041BMM	JG	DB	19.01.24	1
BTS-24882	JM	BR	PRELIMINARY - SP30100137WO041BMM	PE	DB	14.03.24	2

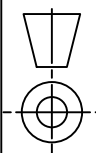
**PRELIMINARY**



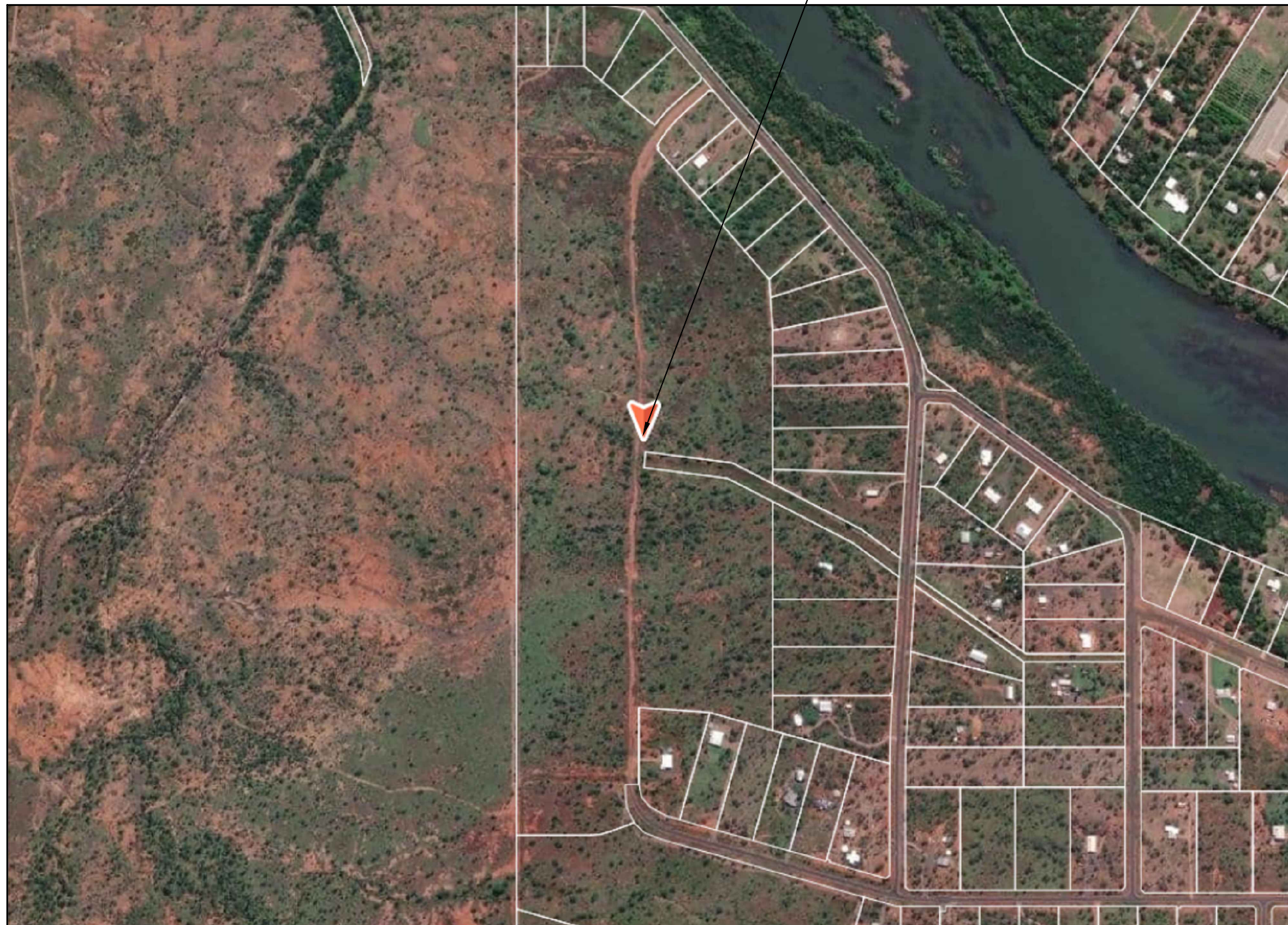
TOWER AMS SITE REF WA100162  
KUNUNURRA INDUSTRIAL  
SOUTH ELEVATION  
LOT 9001 BERKELEY CRESCENT, KUNUNURRA, WA 6743

DWG NO. **WA100162** SHT NO. S3

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PROPOSED AMPLITEL SITE

**AERIAL PHOTO LOCALITY PLAN**  
NOT TO SCALE

**PRELIMINARY**



TOWER AMS SITE REF WA100162  
KUNUNURRA INDUSTRIAL  
AERIAL PHOTO LOCALITY PLAN  
LOT 9001 BERKELEY CRESCENT, KUNUNURRA, WA 6743

DWG NO. **WA100162** SHT NO. **S7**

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ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
BTS-24882	JM	PE	PRELIMINARY - SP30100137W0041BMM	JG	DB	19.01.24	1

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## Appendix B – EME Report

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