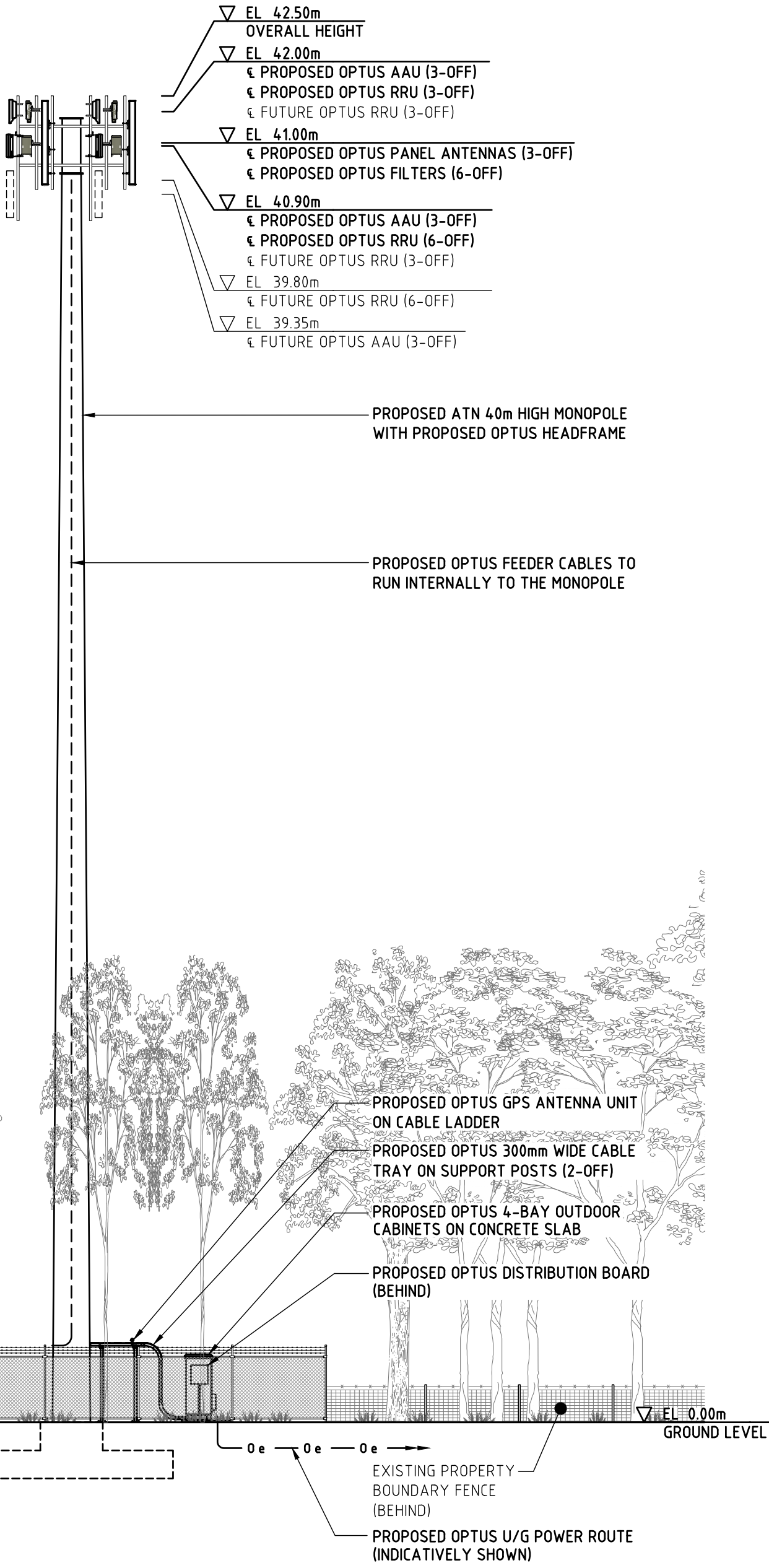


NOTE:
THIS DRAWING IS DIAGRAMMATIC ONLY
AND SHOULD NOT BE SCALED.



SOUTH ELEVATION
SCALE 1:150

Rev	Date	Revision Details	Consultant	CAD Designer	Verifier	Approver
03	31/05/23	ISSUED FOR APPROVAL (COMPOUND RELOCATED)	SSMC	RL	CM	SY
02	06/04/23	ISSUED FOR APPROVAL (RF BRIEF REVISED)	SSMC	RL	CM	SY
01	18/10/22	ISSUED FOR APPROVAL	SSMC	RL	CM	SY

Client: **ServiceStream**

Project: **MOBILE NETWORK AUSTRALIA**
SITE No: P1333
BYFORD WEST
10 CHAROLAIS COURT, OAKFORD

Drawing Title: **DRAFT SITE ELEVATION**

Drawing Status: **FOR APPROVAL**

Drawing No: **P1333-P2**

Revision: **03**

Scale: 20 10 0 10 20 30 40 50mm

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SAQ Consulting Pty Ltd

ABN 76 864 757 592

P O Box 50

Clayfield QLD 4011

14 April 2023

Shire of Serpentine Jarrahdale
6 Paterson Street
MUNDIJONG WA 6123

Email: customer@rockingham.wa.gov.au

Attention: Planning Department

**RE: New Planning Application
Proposed telecommunications facility
10 Charolais Court, OAKFORD**

I advise **SAQ Consulting Pty Ltd** acts on behalf of Australia Tower Network Pty Ltd ('ATN') in respect of this application. The proposal by ATN is to establish a telecommunications facility, in the form of a mobile telephone base station, at 10 Charolais Court, Oakford. The telecommunications facility will be used by Optus as part its mobile network.

The proposed facility comprises a 40m-tall monopole, panel antennas and equipment cabinets near the northern-eastern corner of the subject land. The subject land is located within the *Special Rural Zone* as set out in the Shire of Serpentine Jarrahdale Planning Scheme No.2.

Please find **attached** the proposal drawings, Certificate of Title and application form.

I will shortly a planning statement to assist in the determination of the application and a 'standard form' EME report detailing the predicted electromagnetic emissions from the facility. Please advise the lodgement fee payable.

Should you have any immediate questions, please do not hesitate to contact me.

Yours sincerely

MARK BAADE

B. Plan (Hons)

M: 0417 088 000

mark@saqconsulting.com.au

Enc.

Our ref: Byford West

26 April 2023

Shire of Serpentine Jarrahdale
6 Paterson Street
MUNDIJONG WA 6123

Email: info@sjshire.wa.gov.au

Attention: Planning Department

RE: Planning Application - PA23/290
Proposed telecommunications facility - 10 Charolais Court, OAKFORD

As Council has been previously advised, **SAQ Consulting Pty Ltd** acts on behalf Australia Tower Network ('ATN') in respect of this application.

The proposal by ATN is to establish a telecommunications facility, in the form of a mobile telephone base station, at 10 Charolais Court, Oakford. The telecommunications facility will be used by Optus as part of its mobile network.

The proposed facility comprises a 40m-tall monopole, panel antennas and equipment cabinets near the north-eastern corner of the subject land. The subject land is located within the *Special Rural Zone* as set out in the Shire of Serpentine Jarrahdale Planning Scheme No.2.

A cover letter was provided at the time of lodgement and this letter constitutes a detailed planning statement as to the merits of the proposal to assist Council in its assessment of the application. The applicable fees have been paid.

Need for the Facility

The proposed facility is needed to provide improved Optus network coverage and capacity in the area generally and in particular to the Byford residential area to the east of Hopkinson Road. Significant coverage improvements will also be made in the existing rural living area of Oakford and surrounds, as well as to major transport routes in the area, such as Thomas Road and the southern end of the Tonkin Highway (which is to be extended past the subject land in the future).

Figure 1 below shows an extract from www.rfnsa.com.au, which is essentially a database of all existing (and proposed) facilities in Australia and gives a snapshot of existing facilities in the wider area. In short, there are relatively few facilities serving this area.

In Figure 1, the proposed facility is marked in orange, existing Optus facilities in blue and Telstra facilities in green. There is also an NBN facility about 2.1 kilometres to the west of the proposed location as marked (which does not contribute to mobile phone coverage).



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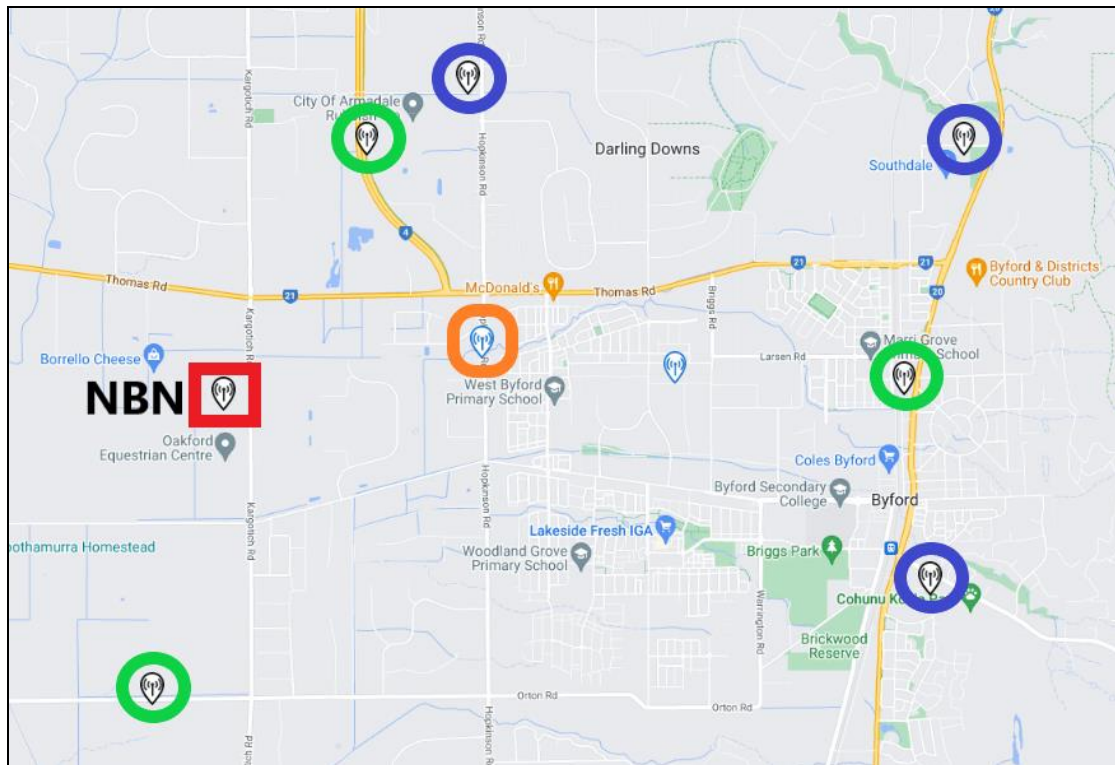


Figure 1: Proposed Location and existing facilities in the surrounding area

All existing Optus facilities are between two and more than four kilometres from the proposed facility, with the nearest mobile phone base station of any type a Telstra facility 1.85km to the north-west on Kellet Drive, Darling Downs. Figure 1 also shows a proposed facility (blue pin west of Briggs Road), which was previously investigated by Optus but abandoned in favour of the location now proposed.

As a general rule, at distances of more than 1 kilometre between base-stations, particularly in urban areas where there are significant population concentrations, such as Byford and the surrounding rural residential areas, 4G services are unreliable with generally poor data performance and indoor service.

As such, based on the location of the existing Optus (all more than 2 kilometres away), there is a clear need for a new facility in this area. The existing facilities are simply too far for upgrading or expansion of those facilities to achieve the required improvements.

The situation is even more problematic for 5G services, which require an even greater density of facilities than 4G. 5G services are not available in the area and will be expanded significantly as part of the subject proposal. The current Optus 5G coverage available in the wider area is shown in dark purple in Figure 2 below.

Accordingly, it is quite clear there are no opportunities for collocation in the area nor is there any ability for existing facilities to be modified or expanded to meet the coverage shortfall, nor are there any other existing structures or buildings on which to locate the required base-station equipment. Accordingly, a new structure is required.



In selecting a suitable location for a new facility, Optus and ATN have had regard to the 'precautionary principle' as set out in Appendix A of the *Industry Code C564:2020* for mobile phone base station deployment.

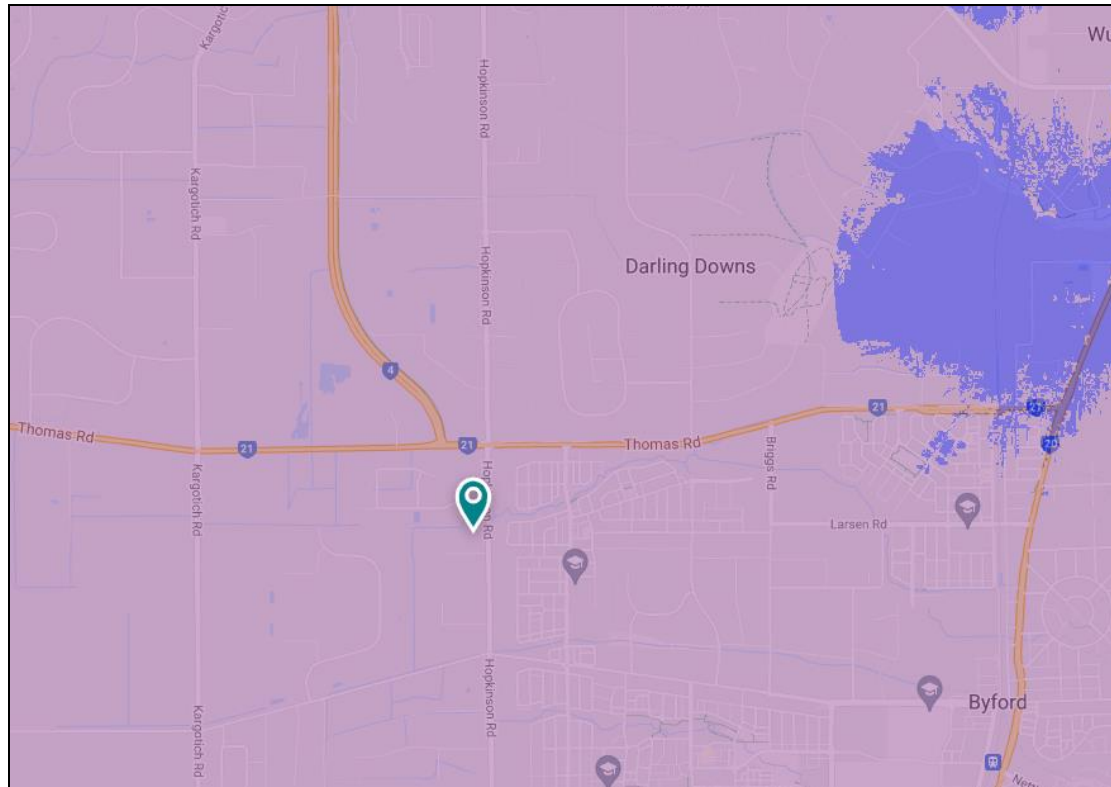


Figure 2: Existing Optus 5G coverage in the area (dark purple, subject land marked)

The Proposal

The proposal is to establish a telecommunications facility at 10 Charolais Court (Lot 11), Oakford, as shown on the proposal plans. The proposal will accommodate the requirements for the Optus mobile network (4G and 5G) in this area.

More particularly, the proposal consists of the following elements:

- a 40-metre tall ATN monopole located within a 9m x 10m compound area near the north-eastern corner of the subject land. A triangular headframe will be mounted to the top of the headframe to accommodate the necessary telecommunications equipment, with a maximum finished height of approximately 42.5 metres;
- Three (3) 4G panel antennas (each 2.69m in length) and six (6) 5G panel antennas (each less than 1m in length) mounted to the new headframe on the top of the proposed monopole;
- Ancillary equipment such as remote radio units (RRUs), filters and combiners mounted on the proposed headframe adjacent to and/or behind the antennas;
- A 4-bay equipment cabinet (dimensions 2.32m H x 0.75m D x 2.87m L) to house the necessary base-station equipment, located at the base of the monopole;



- A cable tray connecting the equipment cabinets to the monopole; and
- Fencing.

Access will be via the existing driveway arrangement from Charolais Court and then across the paddock. However, it is noted that there is an existing double-gate access directly into the paddock from Hopkinson Road. Both access routes are noted on the proposal plans.

Several small trees will need to be removed to accommodate the facility, but these are within the paddock and do not contribute to any screening. The main group of trees along the road and northern boundaries will remain in place and will provide substantial screening of the facility.

The monopole and antennas can also be painted should this be a desired outcome to further reduce visual impact. N53 Blue-Grey is suggested as a suitable choice but Council can nominate any colour should it choose to do so.

Whilst not a relevant planning issue, it is worthy of note that the maximum levels of electromagnetic energy from the proposed facility at 1.5m above the ground is estimated at **0.91%** of the exposure limits mandated by the Commonwealth Government. A copy of the standard form EME report is **attached** for Council's information.

The proposed infrastructure will be in compliance with the ACMA EME regulatory arrangements. The facility will also comply with Australian government regulations in relation to emission of electromagnetic energy (EME), this specifically being Australian Standard Radiation Protection Series S-1 Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) in 2021.

The Subject Land

The subject land is located at 10 Charolais Court at Oakford, on the western side of Hopkinson Road. The lot is roughly rectangular in shape, has an area of around 2.09 hectares, a frontage of 112 metres to Charolais Court and of 161 metres to Hopkinson Road.

The subject land's formal description is Lot 11 on diagram 82168 with Certificate of Title details of 1921/934. The land is located in the *Special Rural Zone* and is used for rural residential purposes.

A dwelling and outbuildings are located in the north-western portion of the land along with a large farm building (shed). The buildings are well set back from the road and access from Charolais Court. The land is flat with about half cleared but there is a significant vegetation buffer along both road frontages.

The proposed facility will be in the north-eastern corner of the land as indicated by Figure 3 below. A small number of relatively juvenile trees will need to be removed to allow the compound and facility to be installed. However, this clearance does not include any of the more significant screening vegetation along the Hopkinson Road boundary.



The location occupied by the proposed facility is not currently used for any particular purpose and will be accessed via the existing entry from Charolais Court.



Figure 3 – Subject land and proposed facility location (yellow dot)

The Locality

The locality is predominantly residential in nature with large areas of rural residential in the west, south and north and the denser residential area of Byford to the east, which also includes a small commercial area. Figure 4 shows the locality with the subject land marked.

The wide, unmade road reserve between the Byford residential area and the subject land is set aside for the future extension of the Tonkin Highway, which currently terminates a short distance to the north. As such, the unmade road reserve acts both now and in future as a significant physical buffer between the rural residential and residential areas, separating the two by about 130 metres.

There are no existing dwellings (that are not on the subject land) within 100 metres of the proposed location, with the nearest about 110 metres to the north (7 Jersey Road), which is separated from the proposal by Lot 50, a heavily vegetated lot associated with a drainage



area/creek. There are no other dwellings within 150 metres. The closest dwelling in the Byford residential area is more than 160 metres away.

As noted above, there are no existing telecommunications facilities in the locality.



Figure 4 – Locality with subject land shown

Assessment against the Serpentine-Jarrahdale Town Planning Scheme No.2

The subject land and proposed facility are located within the *Special Rural Zone*.

Although a commonly used term, ‘telecommunications infrastructure’ (or similar) is not defined by the Shire’s planning scheme.

However, the proposed facility does fit within the definition of ‘radio, TV and communication installation’, which is defined by the planning scheme as meaning the following:

“...any land or buildings used for the transmission, relay or reception of signals or pictures, both commercial and domestic, but does not include a communications antenna domestic.”

The proposed facility is clearly used for the transmission and reception of signals and comfortably fits within this definition.

The use is therefore designed as an ‘AA’ use in the *Special Rural Zone* as per the zoning table, meaning it is able to be permitted in the zone with approval, with Council able to exercise its



discretion with respect to the application with no specific requirements for the giving of notice.

Part 5 of the planning scheme deals with Development Requirements, including specific zone provisions.

Clause 5.1 states that Council may approve development if:

- It is satisfied that it would be consistent with the orderly and proper planning of the locality and the preservation of the amenity of the locality;
- Any non-compliance would not have any adverse effect on the inhabitants of the locality or the likely future development of the locality; and
- The spirit and purpose of (any) requirement will not be unreasonably departed from thereby.

The Shire has a local planning policy (LPP 4.6) which deals specifically with telecommunications infrastructure and recognises that the planning scheme has no provisions relating to telecommunications infrastructure. The LPP is discussed in more detail below.

Having considered the provisions of the *Special Rural Zone*, it is obvious there are no provisions that can be readily applied to the subject proposal, as they primarily relate to subdivision. However, it is noteworthy that none of the purposes, intents, desired outcomes or the provisions more generally for the zone are materially impacted by the proposed facility, particularly in the location selected on the subject land.

Part 7 of the planning scheme deals with general development provisions that can, at high level, be used to assess the subject proposal, as per the comments below:

- As telecommunications facilities need to be suitably tall to operate effectively, the proposed location has sought to minimise the impact on the locality by separating itself from the Byford residential area by more than 150 metres (to the closest dwelling) and using the future highway corridor as a buffer, whilst to west, north and south existing tree cover will screen much of the facility from the locality.
- The proposed facility does not emit any nuisance such as odour, smoke, fumes or similar, does not make any appreciable noise (limiting to cooling within the equipment cabinets) and is not lit.
- No new arrangements are required to access the location.
- There is ample on-site parking for construction, operation and maintenance of the facility.
- No additional landscaping is proposed nor required in this instance, given existing vegetation already adequately screens the base of the facility.
- A small number of relatively juvenile trees will need to be removed to accommodate the facility (but not impacting on the more established trees), which can be replaced elsewhere if Council desires.



Local Planning Policy 4.6

As noted above, a Local Planning Policy (LPP) has been prepared by the Shire to specifically address telecommunications infrastructure in recognition that the planning scheme does not have any useful provisions relating to such infrastructure.

The objectives of the LPP are stated as follows:

1. *To facilitate the coordinated development of Telecommunications Infrastructure in appropriate locations within the Shire.*
2. *To minimise adverse impacts of Telecommunications Infrastructure, including amenity, environment, and heritage.*

As explained in the 'need' section above, there is clearly a need for additional telecommunications infrastructure in this area given the significant residential and rural residential population, the current service levels and the proximity of existing facilities.

The proposed facility has minimised its impact on amenity through siting, particularly with regard to the nearest dwellings and the Byford residential area. Although tall, the proposed facility is unlikely to be a dominant element much beyond its immediate surrounds, with vegetation playing a significant mitigating role.

In terms of other requirements of the LPP, the following comments are made:

- *Co-location*
The proposed monopole is 40 metres tall and capable of accommodating collocation. Given the height clear of the treeline, up to two additional carriers can be located on the monopole.
- *Location*
The location is very close to the unmade highway reserve to the east and therefore as close to a public utility corridor as practicable. The facility's location is away from the local street of Charolais Court and screened from Hopkinson Road by existing vegetation.

The facility is within about 130 metres of the urban zone to the east, but the existence of the future highway corridor and tree cover along Hopkinson Road provides a sufficient physical buffer to make the location acceptable (as anticipated by the LPP).

There are no telecommunications facilities within 1.85 kilometres and as such there is no 'incremental' impact from the facility as described by the LPP.

- *General Requirements*
Should the proposed facility no longer be required in the future it can be removed and the applicant is accepting of an approval condition that requires this to be the case.



- *Planning Application Requirements*

This planning statement clearly sets out the need for the proposal, location of existing facilities and collocation opportunities with the proposal plans providing sufficient information against which to assess the proposed facility.

Should Council require any more specific and/or additional information it is at liberty to request it.

Overall, the proposed facility meets the intent of the LPP and has been designed and sited to balance the need for service with impacts on amenity. Collocation availability is a specific feature of the monopole design.

State Planning Policy 5.2 – Telecommunications Infrastructure

Western Australia has a State Planning Policy relating to telecommunications known as SPP 5.2, the background to which states:

Adequate and reliable telecommunications are essential for all aspects of contemporary community life, from supporting the State's economy to creating and maintaining connected and cohesive social networks. Contact between emergency services and the community increasingly relies on the telecommunications networks.

The importance of telecommunications services in Western Australia is recognised in the Western Australian Planning Commission's (WAPC's) State Planning Strategy 2050 (2014), which advocates for the provision of an effective state-wide telecommunications network. This network includes both above and below ground infrastructure to support both fixed line and wireless telecommunications.

(emphasis added)

The proposal and its rationale set out above is consistent with the policy principles set out in the SPP, which seeks to minimise the visual impact of such facilities through siting and design and facilitate improved telecommunications services to the community.

The assessment of the proposal against SPP5.2 is as follows:

5.1.1 The benefit of improved telecommunications services should be balanced with the visual impact on the surrounding area.

This outcome has generally been achieved as set out above. Further:

- the visual impact has been assessed with specific regard to this proposal;
- the location selected is not prominently visible from a significant viewing location, including scenic routes, lookouts and recreation sites;
- the proposal does not detract from heritage items or landmarks and has been sited to minimise its impacts on streetscapes, particularly those in the residential areas to the east;
- the proposal is not located on land where environmental, cultural heritage, social and visual landscape values are compromised;
- the external colours and finishes can be selected to be sympathetic to the surrounding landscape, which in this location is commercial;



- the location selected will facilitate new and improved telecommunications services to the community; and
- no collocation opportunities are available (but the facility will be designed to facilitate collocation).

All application requirements set out under 6.3.1 have been addressed.

As such, the proposed facility demonstrates a high level of compliance and consistency with SPP5.2, which is the pre-eminent document against which such infrastructure must be assessed in Western Australia.

Other State Planning Policies

The land is subject to a number of State Planning Policies, namely:

- Planning in Bushfire Prone Area (SPP 3.7)
- Peel-Harvey Coastal Plain Catchment Policy (SPP 2.1)
- Basic Raw Materials Policy (SPP 2.4)
- Road and Rail Noise (SPP 2.5)

SPPs 2.1, 2.4 and 2.5 are not relevant to the subject application.

However, the subject land is within a bushfire prone area and as such SPP3.7 applies.

In accordance with the WAPC Planning Bulletin 111/2016 the proposed type of infrastructure should be exempted from the requirements of the SPP for the following reasons:

- it does not result in the intensification of development (or land use) on the subject land;
- it does not result in an increase of residents or employees;
- it does not involve the occupation of employees on site for any considerable amount of time; and
- it does not result in an increase to the bushfire threat.

Accordingly, no bushfire assessment or further information is required in this respect.

**Conclusion**

The proposed facility at 10 Charolais Court, Oakford will provide significantly improved coverage and capacity for the Optus network in the Oakford and Byford areas, which are currently poorly served due to the location of existing Optus infrastructure – the closest of which is more than 2 kilometres away.

The current arrangement and amount of telecommunications infrastructure in the wider locality is not consistent with meeting modern demands for telecommunications and existing facilities cannot be upgraded or expanded to improve the situation. The need for the facility has been set out above and it has been demonstrated there are no suitable collocation opportunities in the area.

The proposed facility is well set back from existing dwellings, appropriately separated from the Byford residential area and makes good use of existing vegetation to mitigate visual impact.

The *Special Rural Zone* is an appropriate zone type for the facility, which will have no material impact on the use of the subject land, the use of adjoining land or the outcomes desired by the zone. The proposal is also consistent with the policy objectives of Local Planning Policy 4.6 and the outcomes desired by the State as set out in State Planning Policy 5.2

Accordingly, the proposal represents an orderly placement and development of what is now an essential piece of modern infrastructure and I consider the subject proposal warrants planning consent.

Should you have any questions, please do not hesitate to contact me.

Yours sincerely

MARK BAADE

B. Plan (Hons)

M: 0417 088 000

mark@saqconsulting.com.au

Attached:

EME report

Environmental EME Report

Location	10 Charolais Court, OAKFORD WA 6121		
Date	08/03/2023	RFNSA No.	6121006

How does this report work?

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at 10 Charolais Court, OAKFORD WA 6121. These levels have been calculated by Service Stream Mobile Communications 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.

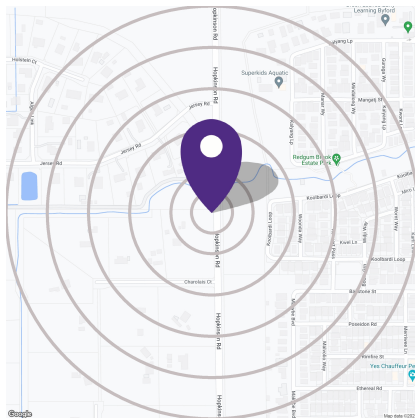
The maximum EME level calculated for the **proposed** changes at this site is

0.91%

out of 100% of the public exposure limit, 249 m from the location.

EME levels with the proposed changes

Distance from the site	Percentage of the public exposure limit
0-50 m	0.49%
50-100 m	0.53%
100-200 m	0.75%
200-300 m	0.91%
300-400 m	0.83%
400-500 m	0.53%



For additional information please refer to the EME ARPANSA Report annexure for this site which can be found at <http://www.rfnsa.com.au/6121006>.

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.

Carrier	Existing		Proposed	
	Systems	Configuration	Systems	Configuration
Optus			4G, 5G	NR/LTE700 (proposed), NR3500 (proposed), NR2300 (proposed), NR/LTE900 (proposed), LTE1800 (proposed), LTE2600 (proposed), NR/LTE2100 (proposed)

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 360° circular bands.

Distance from the site	Existing configuration			Proposed configuration		
	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				3.68	35.99	0.49%
50-100m				4.28	48.51	0.53%
100-200m				4.95	65.12	0.75%
200-300m				4.94	64.81	0.91%
300-400m				4.72	59.16	0.83%
400-500m				3.79	38.11	0.53%

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				