

5 Ordinary Business

5.1 T210643 PA - Use and Development of a Telecommunications Facility at 44 Paternoster Road, Cockatoo VIC 3781

Responsible GM: Lili Rosic
Author: Sam Jiang

Recommendation(s)

That Council issue a Notice of Decision to Grant a Permit for the use and development of the land for a Telecommunications Facility at L2 PS608127, 44 Paternoster Road Cockatoo 3781, subject to the following conditions:

Plans required

1. Before the use and development starts, amended plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale and fully dimensioned. The plans must be generally in accordance with the plans prepared by Axiom, Rev 01, dated 03/02/22 submitted with the application but modified to show:
 - a. Setbacks from the north and west property boundaries shown correctly to scale and fully dimensioned.
 - b. The location, width and construction material for the driveway required to access the facility. Within the Tree Protection Zone of Tree 1 (as identified in the Arboricultural Impact Assessment, prepared by Treespace Solutions Pty Ltd and dated 2 December 2021), the driveway must be constructed as a permeable surface at or above the natural grade.
 - c. The location of the EWP moved to the eastern side of the compound.
 - d. A landscape plan in accordance with Condition 2.
2. Before the development starts, a landscape plan prepared by a person suitably qualified and experienced in landscape design to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan will be endorsed and will then form part of the permit. The plan must provide a landscape buffer immediately surrounding the fenced Telecommunications Facility, and must be drawn to scale with dimensions. The plan must show:
 - a. A planting schedule of all proposed trees, shrubs and ground covers, including botanical names, common names, pot sizes, sizes at maturity, and quantities of each plant.

All species selected must be to the satisfaction of the Responsible Authority.

Tree protection

3. All pruning works must be undertaken by a suitably qualified arboricultural contractor in accordance with AS4373-2007 Pruning of amenity trees.

4. Before works start, a fence must be erected around any tree within 15 metres of the proposed buildings and works. This fence will protect the trees by demarcating the tree protection zone and must be erected at a radius of $12 \times$ the diameter at a height of 1.3 metres to a maximum of 15 metres but no less than 2 metres from the base of the trunk of the trees, excepting the approved area of encroachment for construction as shown on endorsed plans to the satisfaction of the Responsible Authority. The protection fence must be constructed of chain mesh or similar, to the satisfaction of the Responsible Authority. The protection fence must remain in place until all works are completed to the satisfaction of the Responsible Authority. Except with the written consent of the Responsible Authority, within the tree protection zone, the following are prohibited:
 - a. Vehicular access.
 - b. Trenching or soil excavation.
 - c. Storage or dumping of any soils, materials, equipment, vehicles, machinery or
 - d. Waste products.
 - e. Entry and exit pits for underground services.
 - f. Any other actions or activities that may result in adverse impacts to retained native vegetation.

Secondary consent:

5. The use and development as shown on the endorsed plans must not be altered without the written consent of the Responsible Authority.

Amenity:

6. The site must be so ordered and maintained as not to prejudicially affect the amenity of the locality by reason of appearance.
7. The exterior colour and cladding of the telecommunication facility must not result in any adverse visual impact on the environment of the area and all external cladding and trim of the equipment shelter, including the roof, must be of a non-reflective nature.

Earthworks:

8. Earthworks must be undertaken in a manner that minimises soil erosion. Exposed areas of soil must be stabilised to prevent soil erosion. The time for which soil remains exposed and unestablished must be minimised to the satisfaction of the Responsible Authority.
9. Sediment control measures must be undertaken during construction to the satisfaction of the Responsible Authority to ensure that the development subject land is adequately managed in such a way that no mud, dirt, sand, soil, clay or stones are washed into or allowed to enter the stormwater drainage system.

Landscaping installation:

10. Within three (3) months of the Telecommunications Facility being completed the landscaping as shown on the endorsed landscaping plan must be carried out and completed to the satisfaction of the Responsible Authority.

Maintenance of Landscaping:

11. The landscaping shown on the endorsed plans must be maintained to the satisfaction of the Responsible Authority and used for no other purpose. Any dead, diseased or damaged plants are to be replaced.

Removal of redundant infrastructure

12. If the telecommunications facility becomes redundant, all infrastructure associated with the facility must be removed and the area reinstated to the satisfaction of the Responsible Authority. All works to comply with this condition must be completed within three (3) months of the facility ceasing to operate and must be at the expense of the permit holder.

Expiry:

13. This permit expires if –
 - a. The development does not start within **two (2) years** after the issue of the permit; or
 - b. The development is not completed within **four (4) years** after the issue of the permit; or
 - c. The use does not start within **two (2) years** of the completion of the development; or
 - d. The use is discontinued for a period of **two (2) years**.

In accordance with Section 69 of the *Planning and Environment Act 1987*, an application may be submitted to the Responsible Authority for an extension of the periods referred to in this condition.

Notes:

- A Building Permit may be required before the development commences. For more information, contact Council's Building Department or a Registered Building Surveyor.
- This Planning Permit does not represent the approval of other departments of Cardinia Shire Council or other authorities.
- A Works Within a Road Reserve (WWRR) Permit must be obtained from Council prior to the commencement of any works within the road reserve.

Attachments

1. T210643 PA - Plans and Documents [5.1.1 - 50 pages]
2. T210643 PA - Locality Map [5.1.2 - 1 page]
3. CONFIDENTIAL - T210643 PA - Copies of objections - Circulated to Councillors only [5.1.3 - 29 pages]

4. CONFIDENTIAL - T210643 PA - Applicant Response to Objector Concerns [5.1.4 - 9 pages]

Executive Summary

APPLICATION NO.:	T210643
APPLICANT:	Axicom Pty Ltd
LAND:	L2 PS608127, 44 Paternoster Road Cockatoo 3781
PROPOSAL:	Use and development of the land for a Telecommunications Facility
PLANNING CONTROLS:	Zone: <ul style="list-style-type: none"> • Green Wedge Zone – Schedule 2 Overlay: <ul style="list-style-type: none"> • Environmental Significance Overlay - Schedule 1 • Bushfire Management Overlay
NOTIFICATION & OBJECTIONS:	Pursuant to Section 52 of the <i>Planning and Environment Act 1987</i> , the application was advertised by the placing of a sign on site and sending notices in the mail to nearby property owners. Sixteen (16) objections were received.
KEY PLANNING CONSIDERATIONS:	<ul style="list-style-type: none"> • Compliance with 'A Code of Practice for Telecommunications Facilities in Victoria' • Proximity to dwellings • Visual impact • Landscape Values • Site location • Protecting agricultural land
RECOMMENDATION:	Notice of Decision to Grant a Permit

Background

The permit history of the site includes:

- Planning Permit T070494 for a two (2) lot boundary re-alignment was issued on 11 September 2007.
- Planning Permit T090204 for the use of the land for the purpose of intensive animal husbandry (the keeping, breeding and selling of chickens) was issued on 21 August 2009.
- Planning permit application T110747 for business identification signage was submitted on 23 November 2011 and lapsed on 20 April 2012.

- Planning Permit T130038 for business identification signage was issued on 7 October 2013.
- Planning Permit T140694 for the development of the land for a replacement dwelling and associated earthworks was issued on 5 August 2015.

Subject Site



Figure 1. Aerial of the subject site.

The site is located on the south side of Paternoster Road, Cockatoo. It is located to the south-east of the Paternoster Road/Bailey Road intersection.

There is an informal access gate to the north western corner of the site (no formal vehicle crossing). The main crossover is located at the centre of the eastern boundary near the existing dwelling and outbuildings.

The site currently contains a dwelling and a number of outbuildings to the eastern area of the site.

The topography of the land slopes down from the north to the south.

There are no title restrictions affecting the subject site.

The site is located within an area subject to Aboriginal Cultural Sensitivity, however, in accordance with the *Aboriginal Heritage Regulations, 2018*, the proposal is not considered a 'high impact activity' and therefore, a Cultural Heritage Management Plan (CHMP) is not required to be prepared.

The trees on the site are mainly located along the western boundary and the south west corner.

The main characteristics of the surrounding area are:

- North and East – these areas consist of small residential lots in the Low Density Residential Zone.

- West – the parcels adjoining the site to the west is 21 and 23 Paternoster Road, these lots are in the Rural Conservation Zone, are largely covered by vegetation and both used for residential purposes.
- South – the parcels adjoining the site to the south are 74 and 100 Paternoster Road, these lots are located in the Green Wedge Zone are used for residential and animal grazing purposes.

Relevance to Council Plan

4.1 We support our productive land and employment land to grow local industries

4.1.1 Facilitate better planning for our agricultural land to support industry, innovation, local food economy and local job growth.

5.1 We practise responsible leadership

5.1.1 Build trust through meaningful community engagement and transparent decision-making.

Proposal

The proposal is for the use and development of a Telecommunications Facility to provide coverage in the Cockatoo area as the current facility providing coverage (located on a water reservoir at 5B Paternoster Road – opposite the site) is being removed at the request of Yarra Valley Water.

The applicant suggests that as the current facility is the only Optus base station in Cockatoo, not establishing a new facility in the same area may result in a significant network blackspot in Cockatoo and will critically impact the ability of local residents and business to access Optus' mobile network.



Figure 2. Locations of the existing and proposed facilities.

The applicant states that there are no opportunities for co-location with another facility (no other base stations for Optus in Cockatoo) and that the subject site is the best option in terms of balancing the need to service both town centre and surrounding rural land uses (a location of high elevation) and limiting visual impact on the environment.

The facility is proposed to be located in the north-western corner of the site, setback approximately 16 metres from the Paternoster Road frontage. The reason for this location is that it is along the high elevation section of the land while being able to blend in with nearby tall trees.



Figure 3. View to the proposed location from Bailey Road



With all equipment, the facility will have a total height of 43 metres above ground level.

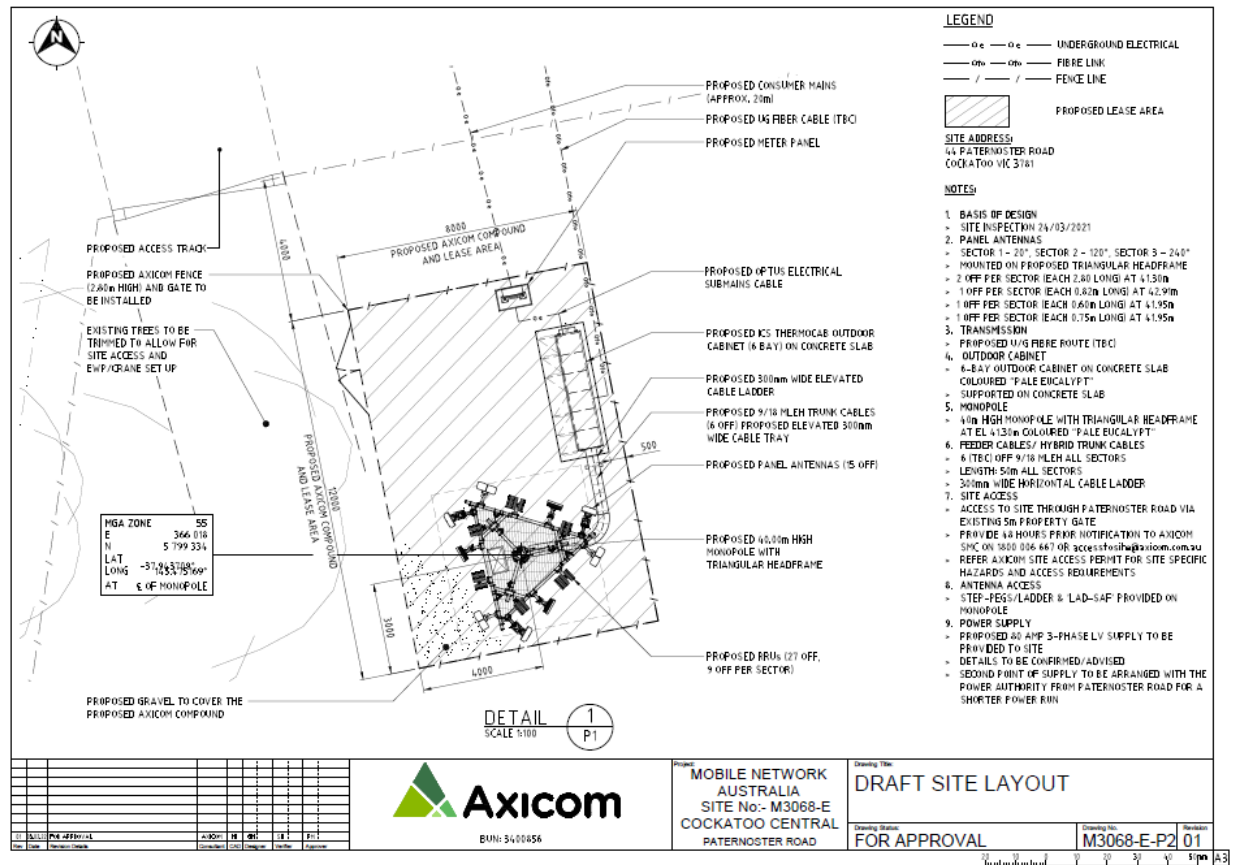


Figure 5. Site setout Plan

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- Clause 12.05-1S Landscape
- Clause 13.07-1S Land use compatibility
- Clause 14.01-1S Protection of agricultural land
- Clause 19.03-4S Telecommunications
- Clause 19.03-4R Telecommunications – Metropolitan Melbourne

Local Planning Policy Framework (LPPF)

The relevant clauses of the LPPF are:

- Clause 21.01 Cardinia Shire Key Issues and Strategic Vision
- Clause 21.01-3 Key Issues: Infrastructure
- Clause 21.02-2 Landscape
- Clause 21.03-4 Rural townships
- Clause 21.04-1 Employment
- Clause 21.04-2 Agriculture
- Clause 21.05-1 Infrastructure provision

Relevant Particular/ General Provisions and relevant incorporated or reference documents

The relevant provisions/ documents are:

- Clause 51.02 Metropolitan Green Wedge Land: Core Planning Provisions
- Clause 52.19 Telecommunications Facility
- Clause 65 Decision Guidelines
- Clause 71.02-3 Integrated Decision Making

Planning Permit Triggers

The proposal requires a planning permit under the following clauses of the Cardinia Planning Scheme:

- Pursuant to Clause 35.04-1 (GWZ) a planning permit is required to use the land for a Telecommunications Facility.
- Pursuant to Clause 35.04-5 (GWZ) a planning permit is required to construct or carry out works associated with a section 2 use.
- Pursuant to Clause 42.01-2 (ESO) a planning permit is required to construct a building or carry out works.

It is noted that the proposal does not require a planning permit under Clause 44.06 (Bushfire Management Overlay) as the development is not associated with any uses specified in Clause 44.06-2.

Public Notification

The application has been advertised pursuant to Section 52 of the *Planning and Environment Act 1987*, by:

- Sending notices to the owners and occupiers of adjoining land; and
- Placing one (1) sign on site facing Paternoster Road.

Council has received sixteen (16) objections to date. The key issues that were raised in the objections are:

- Negative visual impacts to the landscape and rural character of the area;
- The close proximity of dwellings to the proposed telecommunications facility;
- Concerns relating to EME, Health and safety;
- The need for the facility;
- Impacts on property value;
- Whether the public notification process was sufficient; and
- Compliance with the planning scheme.

Referrals

The application was not required to be referred to any external authorities or departments.

Discussion

The proposal for the use and development of the land for a Telecommunications Facility is considered generally consistent with the aims and objectives of the objectives of the Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement, as well as the zone and overlay which apply to the subject site as discussed below.

Planning Policy Framework (PPF) and Municipal Planning Strategy (MPS)

Several state and local policies are relevant to this application. Whilst sometimes it is perceived that rural/agricultural areas have a limited 'landscape character', the Environmental Significance Overlay (Schedule 1) in which the site sits, does recognise that the northern hills has significant environmental and landscape values and asks the Responsible Authority to consider the impact of buildings and works on the character or appearance of the area.

Therefore, Clauses 12.05-2S (Landscape) and 21.02-2 (Landscape), which aim to protect landscapes and significant open spaces that contribute to the character, identity and sustainable environments and ensure the sensitive siting of buildings and other structures having regard to the protection of prominent ridgelines, significant views and areas of remnant vegetation are relevant to the application.

Additionally, the impact that the use, along with the buildings and works may have on the agricultural productivity of the area should also be considered. Clause 11.01-1R (Green wedges) aims to protect the green wedges of metropolitan Melbourne from inappropriate development, with specific strategies including the protection of areas of environmental, landscape and scenic value and support for development that provides for environmental, economic and social benefits.

The need for these types of facilities and the benefit they provide to the wider community must also be taken into consideration. Clause 19.03-4S (Telecommunications) aims to facilitate the orderly development, extension and maintenance of telecommunication infrastructure. The clause aims encourage the continued deployment of broadband telecommunications services and ensure that modern telecommunications facilities are widely accessible to business, industry and the community.

The provision of infrastructure to meet the needs of the existing and future community is also highlighted as a key issue in Clause 21.01 (Cardinia Shire Key Issues and Strategic Vision), and reinforced by Clause 21.05-1 (Infrastructure provision), which encourages the provision of high capacity telecommunications infrastructure.

Although the proposal will be visible within a generally agricultural and scenic landscape, this infrastructure is not uncommon within the wider site context of the Shire. The simple design of the facility together with a requirement for screen planting, and the camouflaging of nearby tall trees will minimise the impact on the rural landscape and provide an appropriate balance between the policy directions of the provision of appropriate telecommunications for the immediate and wider area and the impacts on the surrounding landscape.

Green Wedge Zone and Environmental Significance Overlay

The subject site is located within the Green Wedge Zone (Schedule 2) and therefore particular consideration must be given to the impacts that a Telecommunications Facility may have on the agricultural productivity of the site and the surrounding sites.

It is also located within the Environmental Significance Overlay (Schedule 1), which identifies the hills in the northern part of the municipality as having significant landscape and environmental values. Schedule 1 has a number of environmental objectives to be achieved:

- To protect and enhance the significant environmental and landscape values in the northern hills area including the retention and enhancement of indigenous vegetation.
- To ensure that the siting and design of buildings and works does not adversely impact on environmental values including the diverse and interesting landscape, areas of remnant vegetation, hollow bearing trees, habitat of botanical and zoological significance and water quality and quantity.
- To ensure that the siting and design of buildings and works addresses environmental hazards including slope, erosion and fire risk, the protection of view lines and maintenance of vegetation as the predominant feature of the landscape.
- To protect and enhance biolinks across the landscape and ensure that vegetation is suitable for maintaining the health of species, communities and ecological processes, including the prevention of the incremental loss of vegetation.

In terms of the considerations relating to the use of the land, it is noted that the site is currently utilised for animal grazing and residential purposes. While no intensive levels of agriculture exists on the land, consideration to the impacts on any future use of the site for other/more intensive forms of agriculture must be considered.

While the use does not directly relate to the rural land use of the area, it supports the surrounding community through the provision of improved telecommunications infrastructure. The site has capacity for the installation of a telecommunications facility without compromising agricultural uses or causing any irreversible land impacts.

The proposed buildings and works are consistent with the setback requirements of the Green Wedge Zone (Schedule 2) with the tower itself being 20 metres from a boundary, the area of the works is considered minor, and limited to an area of 96 square metres. In terms of any loss to agricultural land, the facility and driveway will occupy less than 0.0005 percent of the 18.67Ha site.

The siting of the facility is appropriate in this rural context given the extent of vegetation coverage in the vicinity and setbacks from title boundaries. Expansive views will still be maintained from adjoining land. No vegetation removal is required

Overall, the proposed facility is considered to positively contribute to the residents, agricultural and other businesses within the area by providing more efficient and widespread telecommunications coverage that is currently lacking. While there is some visual impact, this impact is considered acceptable when balanced against the benefit of the facility.

Clause 52.19 and A Code of Practice for Telecommunications Facilities in Victoria

In line with the decision guidelines outlined at Clause 52.19-6 (Telecommunications Facility), the principles for the design, siting, construction and operation of a telecommunication facility must be assessed against 'A Code of Practice for Telecommunication Facility in Victoria'. Each principal of this code has been addressed as follows:

Principle 1: A telecommunication facility should be sited to minimise visual impact

At a maximum height of 43 metres, it is acknowledged that the telecommunications facility will be visible from land outside of the subject site. However, as highlighted in the VCAT decision, *White v Ballarat CC* [2014] the simple visibility of the tower from surrounding land does not mean that there is an unacceptable planning or visual impact.

It is considered by Council officers that the location of this telecommunication facility is appropriately placed. The proposed compound is sited approximately 16 metres from the northern Paternoster Road frontage, approximately 8.5 metres from the western boundary, approximately 233 metres from the eastern Paternoster Road frontage, approximately 340 metres from the dwelling on the site, and approximately 90 metres from the nearest dwelling at 1 Paternoster Road.

As well as being a strategic location to ensure efficient coverage is provided, the monopole has been sited near trees of a similar height to reduce the abruptness of the structure from the surrounding properties and the road as much as possible.

When discussing Principle 1, in regards to the previously highlighted *White v Ballarat CC* [2014], Council was directed to consider aspects such as distances of the facility from the road, viewing points, and extent of any vegetation in the vicinity to obscure the pole. The VCAT decision also states that minimising an adverse impact on visual amenity does not mean that the telecommunication pole must be sited so that it cannot be seen by most or many people.

Visibility cannot be equated to adverse visual impact. It is the extent to which a development is compatible with the particular location and how policies seek to guide change that is most relevant.

Whilst it is acknowledged that the facility will be visible from adjoining land given the overall 40 metre height, the visual impact is not unreasonable in this rural context given its slimline design and less exposed location. The location of the facility will still allow for expansive, open views to be maintained from adjoining and opposite land.

The applicant has stated that the proposed 40 metre monopole is the smallest structure capable of meeting coverage and operational objectives as the proposed site is approximately 10 metres lower than the existing facility (25 metres tall) at 5B Paternoster Road, which is already experiencing degradation in service because its signal is being obstructed by the surrounding tree canopy due to the lack of height.

Having regard to the above, it is considered that the siting of the facility is appropriate.

Principle 2: Telecommunication facilities should be co-located wherever practical

The applicant has advised that there are no existing telecommunications facilities within the Cockatoo area that would be capable of replacing this facility, and as such, a new base station is needed.

Principle 3: Health standards for exposure to radio emissions will be met

In accordance with A Code of Practice for Telecommunications Facilities in Victoria, July 2004, a telecommunications facility must be designed and installed so that the maximum human exposure levels to radio frequency emissions comply with Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300 GHz, Arpana, May 2002.

As with all mobile telecommunications facilities in Australia, the proposed facility is required to comply at all time with the relevant Radiation Protection Standard, and once operational, must have this compliance certified by an accredited body.

Principle 4: Disturbance and risk relating to siting and construction should be minimised

Excavation will be required for a new crossover and to install the footings for the monopole and the fencing. Standard engineering conditions will be placed on any permit to ensure erosion and drainage will be appropriate for the site.

In addition to these principles, the decision guidelines of Clause 52.19-5 also ask the Responsible Authority to consider (as appropriate) the effect of the proposal on adjoining land, and if the proposal is located in an overlay listed, the decision guidelines of that said overlay.

The proposal is located in the Environmental Significance Overlay (Schedule 1), which relates to the protection of remnant vegetation, landscape characters and limiting environmental hazards in the Northern Hills area. As discussed above, no vegetation is proposed to be removed, the facility has been sited at a location that will not result in unreasonable visual impact to the landscape character of the area (refer to figure 3), and conditions will be on any permit to manage earthworks and minimise erosion.

As discussed above, the effect the proposal may have on adjoining land in terms of visual and health impacts have been considered above. The effect the proposal may have on other important aspects of the surrounding land, including the impact to the agriculture significance of the Green Wedge Zone (Schedule 2) are considered below.

Response to objections

Need for the facility

The applicant has provided the following response:

Cockatoo currently receives Optus services from a co-located facility on a Yarra Valley Water reservoir at Aspect Avenue Reserve, 5B Paternoster Road. Optus' antennas are

mounted at the top of the 25m water reservoir. Vodafone also has antennas present. It is understood that the facility has been established since around 2005. The existing facility is Optus' only base station in the vicinity of Cockatoo, meaning it is of critical importance in providing Optus services to local residents and businesses.

Optus' presence on the water tower is secured via a lease. The water authority has recently advised a preference for removal of carrier equipment from their water reservoirs, and has advised Optus that the lease to utilise the reservoir will not be renewed. The water authority would not accommodate a new standalone tower adjoining the water reservoirs. Optus are required to decommission and remove the existing facility shortly.

If it is not replaced, removal of this facility will create a significant network blackspot in Cockatoo, critically impacting the ability of residents and businesses to access Optus' mobile network.

This proposal, at 44 Paternoster Road, Cockatoo, is intended to replace the existing communications facility, ensuring continuity of mobile services in the locality. The proposal includes installation of upgraded Optus equipment, both to improve local 4G coverage for both carriers and establish 5G services in the Cockatoo area.

Planning Scheme Compliance

This has been discussed in the above sections, it is further noted that it is not uncommon for Telecommunications facilities to be located in Green Wedge/Rural Conservation Zones.

Environmental Impacts

No trees are proposed/required to be removed for the construction and operation of the facility.

An arboricultural impact assessment has been undertaken, confirming that the trimming of the tree will not be adversely impacted by the proposal.

Adequacy of the public notification process

The application has been notified in accordance with Section 52 of the *Planning and Environment Act 1987*, the procedure includes sending letters to all adjoining properties, properties opposite the site and erection of a public notice at the site frontage.

Loss of property value

Some objector's submissions raised issues surrounding loss of property value. Loss of property value is not considered an objection on planning merit, and therefore, cannot be considered by Council.

However, it is considered that having better access to telecommunications within a rural area such as this to be a positive.

Alternative locations

Some objections raised the possibility of other more suitable sites as they would have less amenity impact. This is not possible due to the need of coverage requirements (location of future coverage blackhole) and the need to be located at high altitude.

Visual Impact

Several objectors consider that the proposal will have negative visual impacts to the landscape and rural character of the area. Whilst it is acknowledged that the facility will be visible from adjoining land, it is not considered to have an unreasonable adverse impact given the corner location on the site, the use of tall vegetation as backdrop, and the use of Pale Eucalypt green colours. As previously stated, the findings of *White v Ballarat CC* [2014], determined that the simple visibility of the tower from surrounding land does not mean that there is an unacceptable planning or visual impact.

As discussed, the applicant has sought the shortest possible tower to service the required area and has proposed a monopole instead of a lattice tower to further reduce visual bulk. A condition can be placed on any permit issued requiring screen planting around the proposed development to obscure the lower form of the development. The simple form of the structure combined with a condition requiring landscaping of the compound will help to minimise impact on the immediate and wider site context.

A condition of approval will require that external materials must be non-reflective.

Health risks

Several objectors have raised concerns over health risks associated with the facility.

As discussed above, telecommunication towers are required by law to comply with A Code of Practice for Telecommunications Facilities in Victoria, July 2004. This legislation requires that telecommunications facilities must be designed and installed so that the maximum human exposure levels to radio frequency emissions comply with Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300 GHz, Arpana, May 2002. This exposure range outlined by this report has been considered safe for humans.

Additionally, the applicant has provided an additional response to these concerns, explaining that:

All mobile phone Carriers must strictly adhere to Commonwealth Legislation and regulations regarding mobile phone facilities and equipment administered by the Australian Communications and Media Authority (ACMA).

In 2020 the ACMA adopted a technical standard for exposure of the general public to RF EME from mobile base stations. The standard, known as the Standard for Limiting Exposure to Radiofrequency Fields – 100kHz to 300GHz (2021) RPS S-1 (Rev 1), was prepared by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and is the same as that recommended by ICNIRP (International Commission for Non-Ionising Radiation Protection), an agency associated with the World Health Organisation (WHO).

Mobile carriers must comply with the Australian Standard on exposure to EME set by the ACMA.

Due to the specific mandated operational standards these facilities must comply with in Australia, the frequencies used do not impact the use or operation of medical devices or medical equipment. Mobile telecommunications base station facilities are commonly installed on the rooftop of Hospitals and Medical Centres to assist in the provision of up-to-date mobile telecommunications technology.

Decision Guidelines

The proposal is consistent with the PPF and LPPF, the purpose of the zone, overlay and relevant provisions. The proposal does not undermine the orderly planning of the area and the siting, design and visual impact of the facility is considered appropriate when regard is given to the social and economic benefits provided by improved and enhanced telecommunications.

Conclusion

The proposed facility, comprising a 40-metre-high monopole with attached antennas and equipment cabinets are to be located within the site so that it reduces visual amenity issues, whilst ensuring adequate coverage is achieved. The proposal satisfies the requirements of the Code of Practice for Telecommunications Facilities in Victoria, whilst also addressing coverage deficiencies within the local area.

The proposal is also consistent with the stated objectives of the Cardinia Planning Scheme and, in particular, Clause 52.19 relating to telecommunications facilities. It is not considered to have any unreasonable impact to the amenity of the surrounding area, although visible, has been sited and designed to provide an appropriate balance between visual impacts and the provision of improved services for the wider site context.

It is therefore recommended that a Notice of Decision to Grant a Permit be issued for Planning Permit Application T210643 for the use and development of the land for a Telecommunications Facility and associated works at L2 PS608127, 44 Paternoster Road Cockatoo 3781, subject to the following conditions:

Conditions

Plans required

1. Before the use and development starts, amended plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale and fully dimensioned. The plans must be generally in accordance with the plans prepared by Axiom, Rev 01, dated 03/02/22 submitted with the application but modified to show:
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- 3. All pruning works must be undertaken by a suitably qualified arboricultural contractor in accordance with AS4373-2007 Pruning of amenity trees.
- 4. Before works start, a fence must be erected around any tree within 15 metres of the proposed buildings and works. This fence will protect the trees by demarcating the tree protection zone and must be erected at a radius of $12 \times$ the diameter at a height of 1.3 metres to a maximum of 15 metres but no less than 2 metres from the base of the trunk of the trees, excepting the approved area of encroachment for construction as shown on endorsed plans to the satisfaction of the Responsible Authority. The protection fence must be constructed of chain mesh or similar, to the satisfaction of the Responsible Authority. The protection fence must remain in place until all works are completed to the satisfaction of the Responsible Authority. Except with the written consent of the Responsible Authority, within the tree protection zone, the following are prohibited:
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Secondary consent:

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- 7. The exterior colour and cladding of the telecommunication facility must not result in any adverse visual impact on the environment of the area and all external cladding and trim of the equipment shelter, including the roof, must be of a non-reflective nature.

Earthworks:

- 8. Earthworks must be undertaken in a manner that minimises soil erosion. Exposed areas of soil must be stabilised to prevent soil erosion. The time for which soil remains

exposed and unestablished must be minimised to the satisfaction of the Responsible Authority.

9. Sediment control measures must be undertaken during construction to the satisfaction of the Responsible Authority to ensure that the development subject land is adequately managed in such a way that no mud, dirt, sand, soil, clay or stones are washed into or allowed to enter the stormwater drainage system.

Landscaping installation:

10. Within three (3) months of the Telecommunications Facility being completed the landscaping as shown on the endorsed landscaping plan must be carried out and completed to the satisfaction of the Responsible Authority.

Maintenance of Landscaping:

11. The landscaping shown on the endorsed plans must be maintained to the satisfaction of the Responsible Authority and used for no other purpose. Any dead, diseased or damaged plants are to be replaced.

Removal of redundant infrastructure

12. If the telecommunications facility becomes redundant, all infrastructure associated with the facility must be removed and the area reinstated to the satisfaction of the Responsible Authority. All works to comply with this condition must be completed within three (3) months of the facility ceasing to operate and must be at the expense of the permit holder.

Expiry:

13. This permit expires if –
 - e. The development does not start within **two (2) years** after the issue of the permit; or
 - f. The development is not completed within **four (4) years** after the issue of the permit; or
 - g. The use does not start within **two (2) years** of the completion of the development; or
 - h. The use is discontinued for a period of **two (2) years**.

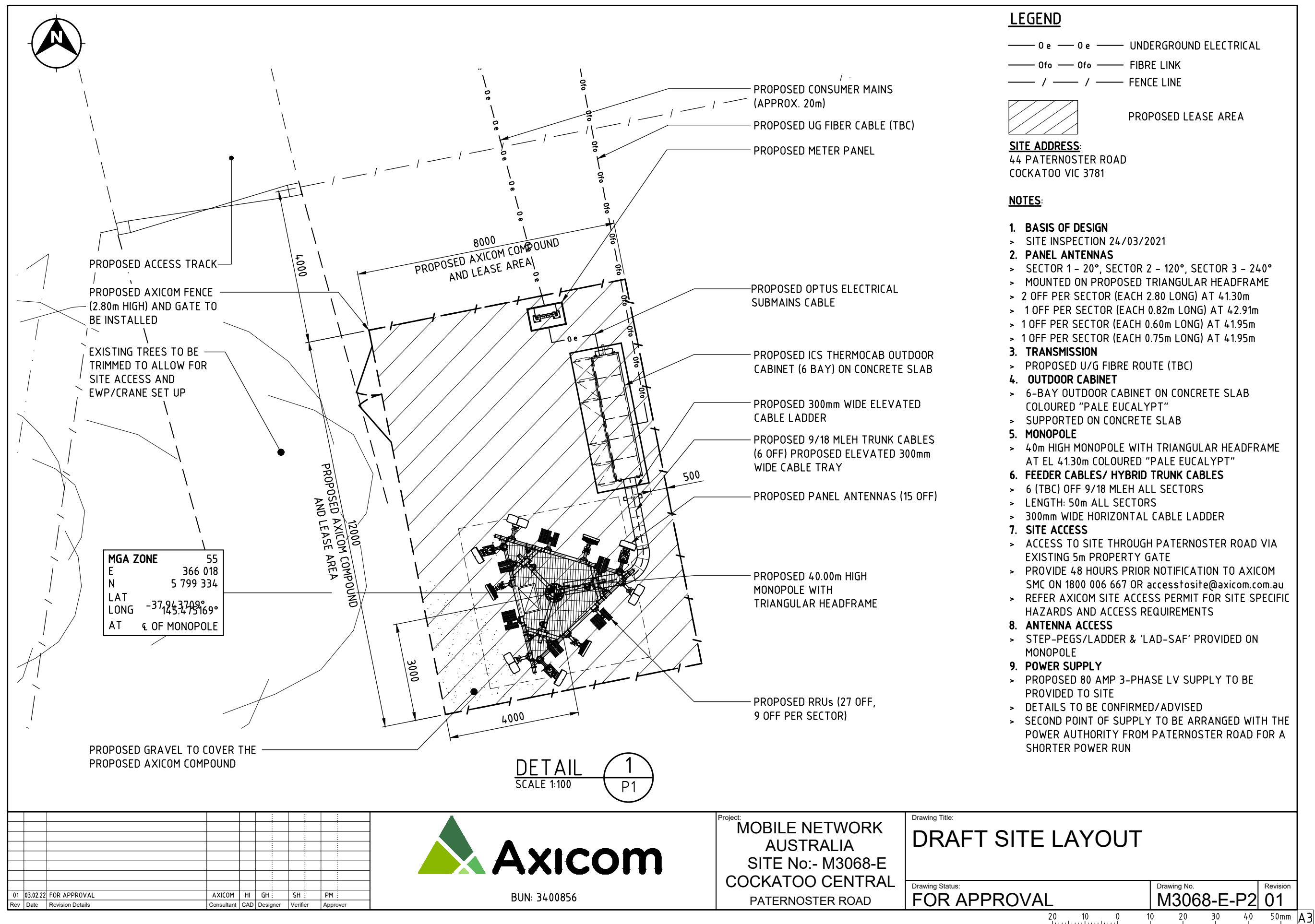
In accordance with Section 69 of the *Planning and Environment Act 1987*, an application may be submitted to the Responsible Authority for an extension of the periods referred to in this condition.

Notes:

- A Building Permit may be required before the development commences. For more information, contact Council's Building Department or a Registered Building Surveyor.
- This Planning Permit does not represent the approval of other departments of Cardinia Shire Council or other authorities.

- A Works Within a Road Reserve (WWRR) Permit must be obtained from Council prior to the commencement of any works within the road reserve.





A3

DEVELOPMENT APPLICATION FOR PLANNING CONSENT



*Proposal to install a new
Telecommunications Facility at
**44 Paternoster Road,
Cockatoo VIC 3781
Lot 2/PS608127***

Town Planning Report

August 2021

Project Reference: M3068 Cockatoo Central

RFNSA Reference: 3781006



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EXECUTIVE SUMMARY

Proposal	<p>Axicom, with Optus, is seeking development approval for a new mobile telecommunications facility at 44 Paternoster Road, Cockatoo VIC 3781 (Lot 2/PS608127). The new facility is to replace an existing base station that will be decommissioned shortly.</p> <p>The new facility will provide Optus mobile communications services.</p> <p>The proposal involves:</p> <ul style="list-style-type: none"> • One (1) Axicom 40m monopole • One (1) new antenna headframe supporting the following equipment <ul style="list-style-type: none"> - Three (3) Optus 3G/4G panel antennas, each up to 2.8m in length - Six (6) Optus 5G panel antennas, each up to 1m in length • One (1) outdoor equipment cabinet at ground level • Ancillary equipment associated with operation and safety of the facility, including remote radio units, cabling and antenna mounts <p>The facility will be located within a fenced compound. The monopole, outdoor equipment cabinet and associated equipment is proposed to be painted Colorbond "Pale Eucalypt" green.</p>
Purpose	<p>Axicom, with Optus, are deploying a new telecommunications facility to service the Cockatoo area.</p> <p>Optus currently service the Cockatoo area from an existing facility on a water reservoir at 5B Paternoster Road. The carriers have been advised that the lease to utilise the reservoir is not being renewed, and the facility must be decommissioned and removed.</p> <p>To ensure continuity of mobile services in the Cockatoo area, Axicom and Optus are proposing a new facility at 44 Paternoster Road, Cockatoo VIC 3781. The proposal will also include equipment upgrades to improve local 4G coverage and establish 5G services in the area.</p>
Site Information	<p>Lot description: Lot 2/PS608127</p> <p>Physical address: 44 Paternoster Road, Cockatoo</p>
Planning Considerations	<p>LGA: Cardinia Council</p> <p>Zoning: GWZ2 – Green Wedge 2 Zone</p> <p>Overlays: BMO – Bushfire Management Overlay ESO – Environmental Significance Overlay</p>
Applicant	<p>Axicom Pty Ltd Level 1, 110 Pacific Highway St Leonards NSW 2065</p> <p>Contact Person: Chan Chen Email: chan.chen@axicom.com.au Our Reference: M3068 Cockatoo Central</p>



1. INTRODUCTION

Axicom, with Optus, are seeking development consent for a new telecommunications facility at 44 Paternoster Road, Cockatoo.

Optus currently service the Cockatoo area from an existing facility mounted on a water reservoir at 5B Paternoster Road. However, Optus has been advised that the water authority is not renewing its lease, meaning the facility must be decommissioned and removed.

This proposal, at 44 Paternoster Road, Cockatoo, is intended to replace the existing communications facility, ensuring continuity of mobile services in the locality. The proposal includes installation of upgraded Optus equipment, both to improve local 4G coverage for both carriers and establish 5G services in the Cockatoo area.

Axicom are seeking approval to install a new telecommunications facility at the above premises, comprised of:

- One (1) Axicom 40m monopole
- One (1) new antenna headframe supporting the following equipment
 - Three (3) Optus 3G/4G panel antennas, each up to 2.8m in length
 - Six (6) Optus 5G panel antennas, each up to 1m in length
- One (1) outdoor equipment cabinet at ground level
- Ancillary equipment associated with operation and safety of the facility, including remote radio units, cabling and antenna mounts

The facility will be located within a fenced compound. The monopole, outdoor equipment cabinet and associated equipment is proposed to be finished in Colorbond "Pale Eucalypt" green.

2. BACKGROUND

2.1 About Axicom

Axicom is Australia's leading independent owner and provider of shared wireless telecommunications infrastructure. Axicom build and manage telecommunications facilities that are shared by Australia's mobile carriers, government agencies and other wireless service providers.

Optus has embarked on a nationwide rollout to deliver an improved, reliable telecommunications network to the Australian public. The rollout will expand the coverage footprint and offer seamless mobile services in metropolitan, regional and rural areas throughout Australia.

Axicom are working with Optus as a part of its national rollout, and are supporting Optus' proposed replacement of the Cockatoo facility.



2.2 The Existing Facility

Cockatoo currently receives Optus services from a co-located facility on a Yarra Valley Water reservoir at Aspect Avenue Reserve, 5B Paternoster Road – RFNSA 3781001. Optus' antennas are mounted at the top of the 25m water reservoir. Vodafone also has antennas present. It is understood that the facility has been established since around 2005. The existing facility is Optus' only base station in the vicinity of Cockatoo, meaning it is of critical importance in providing Optus services to local residents and businesses.

Optus' presence on the water tower is secured via a lease. The water authority has recently advised a preference for removal of carrier equipment from their water reservoirs, and has advised Optus that the lease will not be renewed. Optus are required to decommission and remove the existing facility shortly.

If it is not replaced, removal of this facility will create a significant network blackspot in Cockatoo, critically impacting the ability of residents and businesses to access Optus' mobile network.

To ensure that local residents and businesses will still be able to access the network, Axicom and Optus are seeking to deploy a new standalone facility at 44 Paternoster Road, Cockatoo. **Figure 1** demonstrates the location of the existing telecommunications facility and the location of the new proposed facility.



Figure 1: Location of existing facility and the proposed location of new facility (Google Earth)



2.3 Demand for Network Service

Access to high quality telecommunications coverage is vitally important to the local community. Nationally, mobile usage continues to trend upward:

- The number of Australians who have no landline phone, but exclusively rely on their mobile phone, has increased to over 51% of the adult population¹.
- 96% of Australians have a mobile phone, and 83% use a smartphone².
- The volume of data downloaded by mobile handset increases significantly each year, as more Australians use their phones to browse the internet and stream content. Between 2018 and 2019 (the most recent years for which ACMA published data), the amount of data downloaded by phone handset increased by **over 121%**³.
- In 2020, covid-19 significantly changed the way that Australians live, work and use mobile data. Optus have seen exponential growth in data usage as more people spent more time living and working from home.
- 75.4% of emergency calls were made from a mobile handset in 2018-2019.⁴

These statistics clearly demonstrate the importance of mobile phone service to Australians and, by extension, the importance of mobile phone infrastructure being sufficient to meet this demand.

For Cockatoo, loss of the existing 5B Paternoster Road site will result in significantly degraded mobile services for local residents and businesses. In the worst case, the community may completely lose access to the Optus network – Optus does not have any other base stations in Cockatoo, with the closest base stations being at Emerald, Gembrook and Avonsleigh. The undulating terrain of Cockatoo means that these surrounding facilities cannot reliably service the town.

There is also major public safety impetus for strong mobile coverage in this area, noting that reliable mobile services are of particular importance during natural disasters, including bushfires.

¹ <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "At a Glance – How We Engaged", p71

² <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "At a Glance – Our Access to Services"

³ <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "Volume of broadband and mobile data downloaded", p11

⁴ <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "3.1 Emergency Call Service", p102



3. CANDIDATE SELECTION

3.1 Site Selection

Before proposing a new base station, Optus attempt to resolve service issues by reconfiguring or upgrading their existing base stations.

If upgrades will not resolve service issues, Optus will consider any opportunities to co-locate on an existing mobile facility, building or other structure. If there are no co-location opportunities, Optus will proceed to deploy a new 'greenfield' base station.

In this case, the proposal involves replacement of an existing facility, that must be decommissioned, with a new standalone facility capable of servicing the town of Cockatoo. Optus have confirmed that a new telecommunications tower is needed, and have partnered with Axicom for this purpose.

Mobile base stations are sensitive to placement, both due to the technical requirements and limitations of the frequencies used by the carriers, and because the site is a 'cell' forming part of the wider telecommunications network, and needs to fit within the network appropriately.

Mobile base stations are also highly sensitive to elevation and terrain features, and must be tall enough to protrude above surrounding obstructions and vegetation.

Because this facility replaces an existing, established facility, the replacement facility needs to be relatively close to the original site to ensure it will still work from a technical perspective. The specific terrain challenges in Cockatoo also limit locations from which a new telecommunications facility would be feasible.

3.2 Upgrade and co-location opportunities

Existing telecommunications facilities in the area have been assessed to confirm if they are feasible for co-location. **Figure 2** shows the locations of existing telecommunications facilities in Cockatoo and the surrounding area, based information from the Radio Frequency National Site Archive database (www.rfnsa.com.au).

Note there are no existing telecommunications facilities within the Cockatoo area that would be capable of replacing this facility; a new base station is needed.

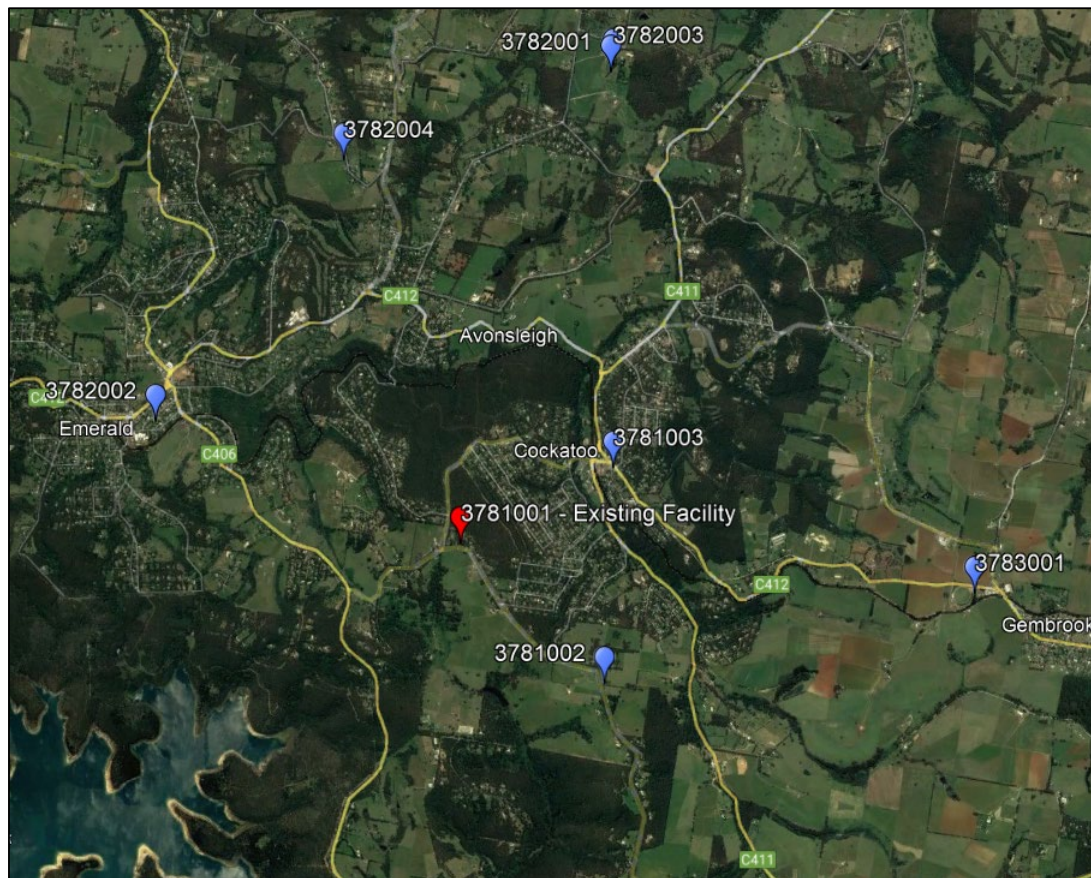


Figure 3: Existing Communications Facilities in Cockatoo and surrounding area (Google Earth)

Existing Communications Facilities		
RFNSA Details	Site Address	Comments
3781001 Optus Vodafone	Water Reservoir Colocation 5B Paternoster Road Cockatoo Vic 3781	Optus' existing facility. It has been confirmed that Optus are unable to remain on this facility, and the site will be decommissioned and removed shortly. Note that there are no suitable locations available for a new telecommunications tower on the subject land, as it is heavily vegetated and a new site in this location would require substantial environmental impact.



Existing Communications Facilities		
RFNSA Details	Site Address	Comments
3781003 Telstra	Small Cell Facility 2 Boronia Crescent Cockatoo Vic 3781	<p>The only telecommunications facility within Cockatoo town centre is a Telstra small cell facility – a single antenna mounted on the rooftop of a telephone exchange, at a height of 6.5m.</p> <p>This site is not suitable for co-location. To service Cockatoo and surrounding area, Optus require a full-sized base station rather than a small cell (which is only intended to cover a few hundred metres), and it needs sufficient elevation to service the area effectively.</p> <p>Due to the hilly nature of the Cockatoo area, this site is approximately 150m lower in elevation than Optus' existing facility. Optus would not be able to achieve a feasible service outcome from this location given its low height. It should also be noted that Optus' required equipment is much larger and bulkier than the Telstra small cell antenna currently in place.</p>
3781002 Telstra	Lattice Tower Paternoster Road Cockatoo Vic 3781	<p>The closest existing, full-size telecommunications facility is a Telstra lattice tower located on Paternoster Road, approximately 1.8km south of Optus' existing facility.</p> <p>The tower has been considered as a potential opportunity for colocation, but has been confirmed unsuitable because of its southerly position, increased setback from the Cockatoo town centre and 40m lower elevation. A facility at this location would result in a considerably worse coverage outcome for Cockatoo.</p>
3782002 Optus Telstra Vodafone	Water Reservoir Co-Location 10 Kings Road Emerald Vic 3782	<p>Closest existing Optus base station to the west, a co-located water reservoir site in the Emerald town centre</p> <p>This site is approximately 3.1km northwest of Optus' existing facility and 4km west of the Cockatoo town centre. Upgrades to this facility would not be able to replace the existing Cockatoo Optus facility, noting its distance and the local terrain.</p>
3782004 Optus	Monopole 7 Paton Road Emerald Vic 3782	<p>Closest existing Optus base station to the north.</p> <p>Upgrades to this facility would not be able to replace the existing Cockatoo Optus facility, noting it is approximately 3.8km north of the existing Optus facility and a similar distance from Cockatoo town centre. It is over 90m lower in elevation than Optus' existing facility, and would be heavily impacted by local terrain.</p>



Existing Communications Facilities		
RFNSA Details	Site Address	Comments
3782002 Optus Telstra Vodafone	Monopole 48 Merretts Road Avonsleigh Vic 3782	Existing Optus base station 4.7km northeast of existing site, and 3.5km north of Cockatoo town centre. Too far from Cockatoo for upgrades to improve service, and at least 120m lower in elevation than the existing site – would be heavily impacted by terrain.
3782003 NBN	Monopole 48 Merretts Road Avonsleigh Vic 3782	Existing NBN facility adjacent to 3782002. Unfeasible for colocation noting it is within 70m of the existing Optus facility. Site is also too far from Cockatoo and too low in elevation.
3783001 Optus Vodafone	Monopole Belgrave-Gembrook Road Gembrook Vic 3783	Closest existing Optus base station east of Cockatoo. The site is 3.2km east of Cockatoo town centre, and too far away for upgrades to improve service.

3.3 Alternate candidates

Per section 3.2, there are no suitable options for co-location. Optus have identified that a new base station is required, and are working with Axicom to deploy a new telecommunications facility to service Cockatoo. Axicom and Optus have undertaken a robust investigation of the Cockatoo area.

From a technical perspective, Cockatoo is a difficult area to service because of its significant terrain variation; the town is located in a valley with significant elevation changes. The existing Optus facility has a ground elevation of around 355m, while parts of the town centre, 1.6km from the site, have an elevation as low as 170m.

Axicom and Optus considered several options on public land within central Cockatoo, but did not proceed because of the area's low elevation. A site in the township itself would be incapable of servicing rural residential properties on the town's periphery, whilst being likely to have a substantial visual impact on the town and the Puffing Billy railway line.

Axicom and Optus have identified that the best options for a new telecommunications facility were in the vicinity of the existing site. Because of its high elevation, a site in this area can service both the Cockatoo town centre and surrounding rural land uses; the size of the structure could also be minimised.

In identifying a candidate, Axicom and Optus have sought to maximise separation from residences and sensitive uses where possible, whilst also endeavouring to minimise impacts on the environment and scenic amenity as far as practicable. Axicom engaged with several landholders in the local area and have identified a suitable candidate at 44 Paternoster Road, Cockatoo.



4. SITE CONTEXT

This proposal involves establishment of a new Axicom telecommunications monopole, hosting Optus telecommunications equipment, at 44 Paternoster Road, Cockatoo VIC 3781 (Lot 2/PS608127). The new site will be approximately 180m southwest of the existing facility, at a slightly lower elevation.

The site is located to the west of the town of Cockatoo, on rural land near the intersection of Paternoster and Bailey Roads. The subject site retains a GWZ2 – Green Wedge Zone under the *Cardinia Planning Scheme* and is constrained by the following overlays:

- ESO – Environmental Significance Overlay
- BMO – Bushfire Management Overlay

It is acknowledged that there are significant vistas to the south from Paternoster Road, and Axicom has sought to minimise the visual impact of the proposed facility as far as practicable. The proposed site is located in the vicinity of a large stand of mature trees, which will help to reduce its visual impact from surrounding land uses whilst minimising impacts on vistas to the south. It was considered that the facility's proposed position will have a lower impact than siting it further east, where there is less tree cover and the facility would be more starkly visible. The facility will also be finished in a shade of pale green to help it best blend into the surrounding rural environment.

A 40m monopole is required at this location, for two reasons. The new site is approximately 10m lower than the existing site on the water reservoir, meaning a larger tower is needed to overcome this reduction in elevation; additionally, mature trees in the area are of a sufficient height that they would obstruct a shorter tower. The existing reservoir site is understood to be experiencing some degradation in service because its signal is being obstructed by the surrounding tree canopy.

Figures 4 – 9 show the proposed site.

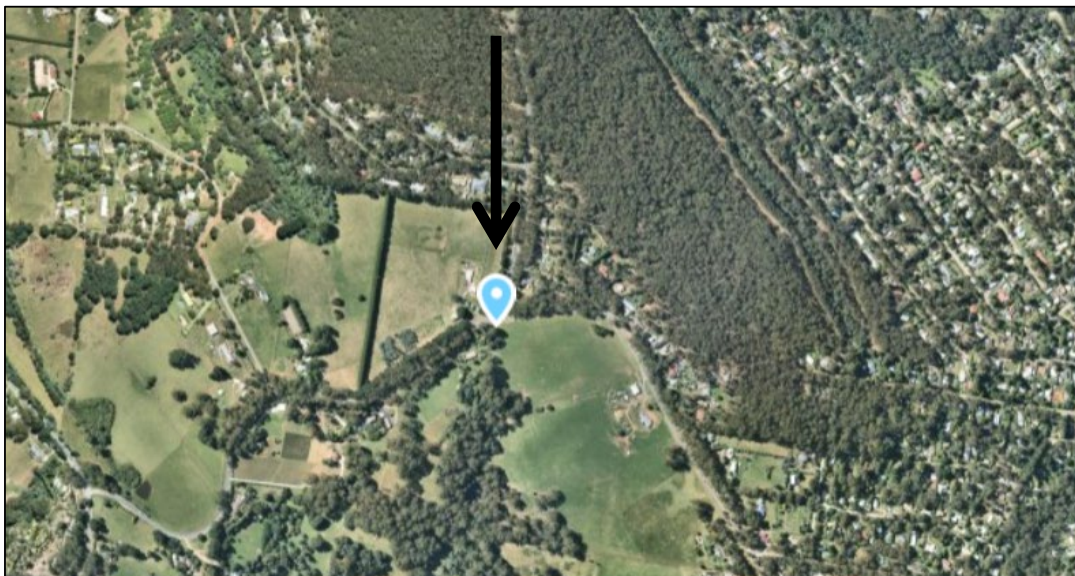


Figure 4: Site context. The proposed facility is located on paddock on a rural residential property. The lot is surrounded by rural and rural residential land uses (Nearmap)



Figure 5: Site context. The new facility will be located at the intersection of Paternoster and Bailey Roads, within a wider rural residential area. The facility has been deliberately sited close to mature trees to reduce its visual prominence and impacts on vistas to the south (Nearmap)



Figure 6: View looking west onto proposed site. The facility will be partially backdropped by mature vegetation, helping to screen the facility. The facility is proposed to be finished in a shade of green to help it better blend with the surrounding environment.

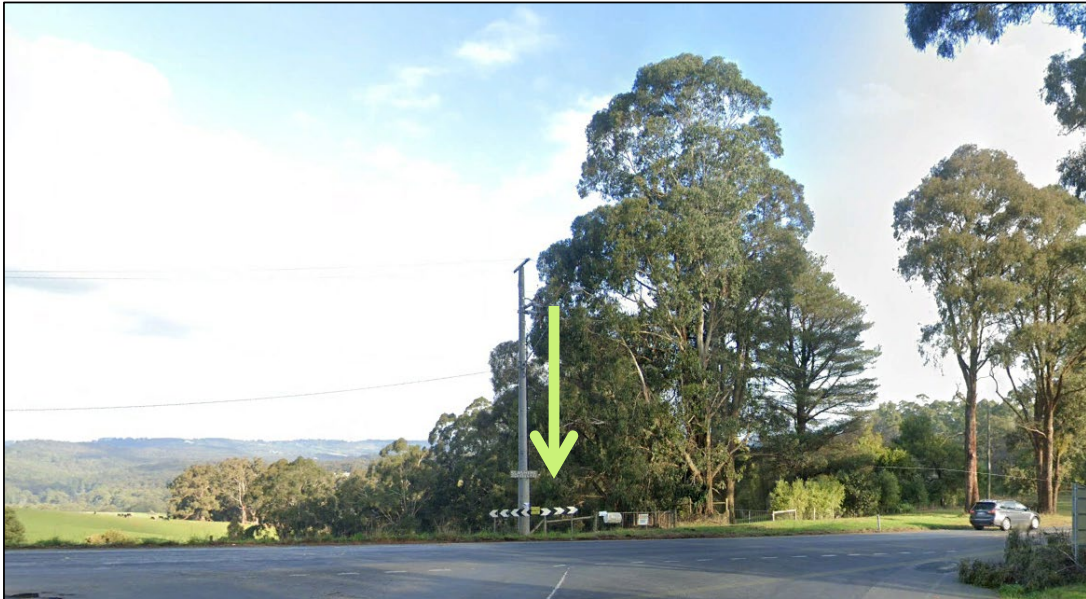


Figure 7: View from intersection of Paternoster Road and Bailey Road looking south toward proposed site. The facility has been sited close to large trees to offset its appearance within the surrounding area.



Figure 8: View looking southwest toward proposed site. The facility will also be partially backdropped by mature vegetation, helping to minimise its visual impact.



Figure 9: A 40m tower is required at this location in order to clear surrounding vegetation and terrain obstacles. The trees in the vicinity of the proposed facility are significant (refer Figures 6-8); additionally, trees near the existing facility are known to be impacting its service at a height of 25m (Nearmap)

5. PROPOSED WORKS

5.1 Equipment to be installed

The proposed works consist of:

- Installation of one (1) new 40m Axicom monopole, painted in Colorbond “Pale Eucalypt” green.
- Installation of Optus telecommunications equipment on the pole and within the compound, including:
 - Three (3) 3G/4G panel antennas, each up to 2.8m in length, mounted on a new headframe at 41.3m in height.
 - Six (6) 5G panel antennas, each up to 1m in length, mounted on the new headframe.
 - One (1) outdoor equipment cabinet, painted in Colorbond “Pale Eucalypt” green and mounted at ground level at the base of the pole.
 - Ancillary equipment associated with operation and safety of the facility, including remote radio units, cabling and safety equipment.



The facility will be located within a fenced compound enclosed by a chain-link security fence, the monopole, outdoor equipment cabinet and associated equipment is proposed to be painted with Colorbond "Pale Eucalypt" green. With all equipment, the facility will have a total height of 43m above ground level.

Refer **Appendix 2** for proposal plans.

5.2 Site Access and Parking

The property can be accessed via an existing crossover and gate off Paternoster Road. The current crossover is proposed to be upgraded to local Council's design guidelines. A separate crossover permit application will be submitted. A new gravel access track of approximately 8m is required to the proposed compound.

Once the facility is operational, it will require access only 2-4 times annually for routine maintenance. A four wheel drive will be used. The facility will otherwise operate on an unmanned basis, and will not generate significant vehicle traffic.

5.3 Acoustics

The facility will not be a significant generator of noise. The only part of the facility that generates noise is the cooling fans on the equipment cabinet.

The cooling fans will not operate continuously, but will only turn on when required. Fans will operate at levels generally comparable to a domestic air conditioner, in compliance with background levels prescribed by Australian Standard AS1055. The project is not expected to represent a noise nuisance, noting its separation from residences and other sensitive land uses.

5.4 Power and Utilities

The proposal will include installation of underground power and fibre infrastructure, via trench. No works associated with stormwater drainage, or connections to reticulated water and sewerage, are proposed or required.

5.5 Emissions

The facility will not emit dust, heat, smoke, gaseous plumes or particulates.

To provide mobile coverage, the facility will produce electromagnetic EME emissions. These will be within the levels prescribed by ARPANSA and regulated by ACMA. An ARPANSA EME Report, demonstrating compliance with Australian safety standards, is attached.

Maximum EME levels from the facility, in its proposed configuration, will not exceed **0.80%** of the relevant standard. Refer section 8 of this report for further detail.



5.6 Environmental Impact

Environmental impacts are expected to be minimal. The facility is sited in a paddock on cleared ground. However, in order to deploy the site, trimming of one tree will be required. Trimming of tree will be limited to the smallest possible extent (refer **Figure 10**).



Figure 10: *Trimming of one tree is required to facilitate access and installation of the facility.*

6. LEGISLATIVE CONTEXT

6.1 Commonwealth Legislation

6.1.1 Telecommunications Act 1997 and Telecommunications (Low-Impact Facilities) Determination 2018

The *Telecommunications Act 1997* regulates telecommunications carrier activities, and gives certain powers to carriers to undertake maintenance and installation works. The *Telecommunications (Low-Impact Facilities) Determination 2018* provides that certain proposals are 'Low Impact' and do not require development approval, providing they fall within the parameters of the Determination.

This proposal involves establishment of a new tower. New towers are not permitted as 'Low Impact', meaning Council development consent is needed.

6.1.2 Telecommunications Code of Practice 2018

The *Telecommunications Code of Practice 2018* (the Code), established under the *Telecommunications Act 1997*, emphasizes the "best practice" for the installation of facilities, compliance with industry standards and minimisation of adverse impacts on the environment.



The proposal has been designed with consideration for the Code of Practice. All steps will be taken to do as little damage as practicable; the facility will be constructed and operated in accordance with industry standards and good engineering practice; and the design of the facility will be in accordance with industry best practice.

6.1.3 C564:2020 Mobile Phone Base Station Deployment Code

The Communications Alliance Limited *C564:2020 Mobile Phone Base Station Deployment Code* (the Deployment Code) is an industry code of practice registered by the Australian Communications and Media Authority. The Code applies to all licenced telecommunications carriers.

The Code sets guidelines for site selection, community consultation, design, installation and operation of telecommunications facilities.

Sections 4.1 and 4.2 are relevant to this proposal. These sections require completion of precautionary approach checklists for site selection, infrastructure design and site operation. The proposal has been sited and designed with consideration for these principles. The checklists are available on request.

It is also a requirement of the Code that an ARPANSA EME compliance report be prepared for all new mobile base stations. The report is enclosed in Appendix 2.

6.2 State Legislation

6.2.1 Victoria Planning Provisions

The Victoria Planning Provisions (VPPs) are a comprehensive set of planning provisions that apply across the state of Victoria. They provide a consistent policy direction that is included in every planning scheme.

The VPPs recognise the importance of telecommunications networks to Victoria, while also identifying that deployment of telecommunications infrastructure must be balanced against adverse environmental impacts.

Clause 19.03-4S of the VPPs provides guidelines for Councils to consider. This VPP has been adopted as part of the *Cardinia Planning Scheme*, and the proposal is generally compliant with its objectives and strategies.



Compliance with 19.03-4S Telecommunications	
Objective	
To facilitate the orderly development, extension and maintenance of telecommunication infrastructure.	This proposal replaces an existing facility that is required to be decommissioned. The project will provide continuity of mobile service to Cockatoo residents and businesses, improve existing 4G coverage and establish 5G services in the local area.
Strategies	
Facilitate the upgrading and maintenance of telecommunications facilities.	Complies, noting that the existing site is being decommissioned, and the new proposal will result in an upgrade of mobile services to the Cockatoo area.
Ensure that modern telecommunications facilities are widely accessible to business, industry and the community.	<p>This proposal achieves this objective. The project will provide continuity of mobile service to Cockatoo residents and businesses, improve existing 4G coverage and establish 5G services in the local area.</p> <p>If the existing facility on 5B Paternoster Road is decommissioned and not replaced, many parts of Cockatoo will experience a partial or total loss of service.</p>
Ensure the communications technology needs of business, domestic, entertainment and community services are met.	This proposal achieves this objective. The project ensures Cockatoo businesses, residents and emergency services organisations have access to reliable, high quality Optus service.
Ensure that the use of land for a telecommunications facility is not prohibited in any zone.	The proposal is permissible under clause 52.19 of the Scheme.
<p>Encourage the continued deployment of broadband telecommunications services that are easily accessible by:</p> <ul style="list-style-type: none"> Increasing and improving access for all sectors of the community to the broadband telecommunications trunk network. Supporting access to transport and other public corridors for the deployment of broadband networks in order to encourage infrastructure investment and reduce investor risk. 	This proposal achieves this objective. The project ensures Cockatoo businesses, residents and emergency services organisations will retain access to, and see improvements in, the Optus mobile network.
Compliance with 19.03-4S Telecommunications	
Strategies	
Ensure a balance between the provision of important telecommunications services and the need to protect the environment from adverse impacts arising from telecommunications infrastructure.	Proposal has been designed to minimise environmental impacts as far as practicable. The site is located on land that has been previously cleared. While some tree trimming works are required to establish access to the site, the location of the facility has been chosen because it will minimise visual impacts within the wider area.
Planning should have regard to national implications of a telecommunications network and the need for consistency in infrastructure design and placement.	This proposal achieves this objective. The project will ensure the town of Cockatoo retains access to the national Optus mobile network, noting the existing site is being decommissioned and cannot remain in service.



An incorporated document in all Victorian planning schemes is *A Code of Practice for Telecommunications Facilities in Victoria* (the Vic Code), which allows for certain types of telecommunications infrastructure to be installed without a planning permit.

Where a facility does not meet the requirements of the Vic Code, as outlined in Section 5, an application for planning permit is required. This proposal does not meet the requirements of Section 5 and therefore requires a planning permit.

Section 4 of the Vic Code provides guidelines that mobile carriers must consider when deploying new sites in Victoria. This proposal is consistent with Section 4 – see section 6.2.2 of this report.

6.2.2 A Code of Practice for Telecommunications Facilities in Victoria (Vic Code)

The Vic Code provides that certain types of telecommunications proposals do not require development consent.

Because this facility is a new standalone facility, it cannot be progressed under the exemptions afforded by the Vic Code. Development consent is needed.

Telecommunications facilities must be assessed against the principles of the Vic Code, section 4. The proposal is generally compliant with these principles.

Compliance with Vic Code, Section 4	
Principle 1: A Telecommunications facility should be sited to minimise visual impact.	
On, or in the vicinity of a heritage place, a telecommunications facility should be sited and designed with external colours, finishes and scale sympathetic to those of the heritage place. A heritage place is a heritage place listed in the schedule to the Heritage Overlay in the planning scheme.	Not applicable – the site is not on or in vicinity of a heritage place.
A telecommunications facility mounted on a building should be integrated with the design and appearance of the building.	Not applicable – works are not on a building.
Equipment associated with the telecommunications facility should be screened or housed to reduce its visibility.	Complies. The equipment being installed on the tower is small and with minimal bulk. The equipment will be housed within equipment cabinets and will be finished in pale green to help it blend with surrounding vegetation. The facility, overall, has been sited in a location where it will receive some backdropping and screening from nearby trees.
The relevant officer of the responsible authority should be consulted before any street tree is pruned, lopped, destroyed or removed.	The facility is sited in a paddock on cleared ground. However, in order to deploy the site, trimming of one branch will be required. The applicant will provide Council with information on vegetation impacts, if required, as part of an information request during assessment of the application.



Compliance with Vic Code, Section 4	
Principle 1: A Telecommunications facility should be sited to minimise visual impact.	
A telecommunications facility should be located so as to minimise any interruption to a significant view of a heritage place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land.	<p>Complies. For technical reasons, Optus are limited in the locations from which they can service the Cockatoo area.</p> <p>It is acknowledged there are wide vistas from Paternoster Road looking to the south. The site has deliberately been chosen in consideration of reducing impact on these views. The facility will be sited at the edge of a vegetated area, where surrounding trees will provide some backdropping and screening benefit. The current location was considered more appropriate than placing the facility further east, where it would be more visually prominent.</p> <p>The facility is expected to be screened by vegetation for traffic approaching on Paternoster Road from the west. For traffic approaching from the east, the facility will only be visible for a short time and will be backdropped by vegetation, and finished in a shade of green, to minimise its impact.</p> <p>The facility has been sited to, as far as practicable, avoid direct views from residences in the area.</p>
Principle 2: Telecommunications facilities should be collocated wherever practical.	
Wherever practical, telecommunications lines should be located within an existing underground conduit or duct.	Complies. The proposal will include installation of underground power and fibre infrastructure.
Overhead lines and antennae should be attached to existing utility poles, towers or other radiocommunications equipment to minimise unnecessary clutter.	<p>No overhead lines are proposed as part of this development.</p> <p>In relation to antennas, this facility is required only because the existing water reservoir facility is being decommissioned. The facility has been designed to minimise visual impact where possible, including through use of a slim monopole rather than lattice tower, and through use of a green colour scheme. Axicom's facilities are also developed with the capability to co-locate multiple mobile carriers, reducing the likelihood that an additional tower will be needed in the local area.</p>
Principle 3: Health standards for exposure to radio emissions will be met.	
A telecommunications facility must be designed and installed so that the maximum human exposure levels to radio frequency emissions comply with <i>Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300 GHz</i> , Arpansa, May 2002.	<p>Complies. The proposal has been designed, and will be installed, to satisfy the requirements of the <i>Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300 GHz</i>.</p> <p>The facility will always operate at levels many times below the standard. Refer attached EME Report.</p>



Compliance with Vic Code, Section 4	
Principle 4: Disturbance and risk relating to siting and construction should be minimised. Construction activity and site location should comply with State environment protection policies and best practice environmental management guidelines.	
Soil erosion during construction and soil instability during operation should be minimised in accordance with any relevant policy or guideline issued by the Environment Protection Authority.	Complies. the facility will comply with necessary erosion and sediment control measures during construction of the facility.
Construction should be carried out in a safe and effective manner in accordance with relevant requirements of the <i>Occupational Health and Safety Act 1985</i> .	Complies. The facility will be constructed in line with the requirements of the Act.
Obstruction or danger to pedestrians or vehicles caused by the location of the facility, construction activity or materials used in construction should be minimised.	Complies. The proposed upgrade will not interfere with pedestrian or traffic flow once it is operational. For construction, Axicom and Optus are willing to coordinate construction works with Council to minimise impacts to Paternoster Road.
Where practical, construction should be carried out during times that cause minimum disruption to adjoining properties and public access.	Complies. Axicom and Optus are willing to coordinate construction works with Council to minimise disruption to the local community.
Traffic control measures should be taken during construction in accordance with <i>Australian Standard AS1742.3 – 2002 Manual of uniform traffic control devices – Traffic control devices on roads</i> .	Complies. Axicom and Optus' construction contractors will consider the requirements of the standard where traffic control is needed.
Open trenching should be guarded in accordance with <i>Australian Standard Section 93.080 – Road Engineering AS 1165 – 1982 – Traffic hazard warning lamps</i> .	Complies. Axicom and Optus' construction contractors will comply with requirements of the standard where open trenching is required.
Disturbance to flora and fauna should be minimised during construction and vegetation replaced to the satisfaction of the land owner or responsible authority at the conclusion of work.	Proposal is not expected to have an adverse disturbance to flora and fauna. Trimming of one branch from a tree will be needed to establish the site. No clearing or other environmental impacts are anticipated.
Street furniture, paving or other existing facilities removed or damaged during construction should be reinstated (at the telecommunication carrier's expense) to at least the same condition as that which existed prior to the telecommunications facility being installed.	Complies. Any removal or damage of street furniture, paving or existing infrastructure will be made good during the construction phase.



6.3 Local Planning Legislation – Cardinia Planning Scheme

6.3.1 Zone Provisions

The site is zoned GW22 – Green Wedge Zone – Schedule 2. The purpose of this zone is to:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for the use of land for agriculture.
- To recognise, protect and conserve green wedge land for its agricultural, environmental, historic, landscape, recreational and tourism opportunities, and mineral and stone resources.
- To encourage use and development that is consistent with sustainable land management practices.
- To encourage sustainable farming activities and provide opportunity for a variety of productive agricultural uses.
- To protect, conserve and enhance the cultural heritage significance and the character of open rural and scenic non-urban landscapes.
- To protect and enhance the biodiversity of the area.

Under Clause 35.04-1 (table of uses), telecommunications facilities are not listed as a permissible or prohibited use; they instead fall under the aegis of Clause 62.01.

Per Clause 62.01, telecommunications facilities are permissible where buildings and works comply with Clause 52.19. The proposal requires a planning permit pursuant to Clause 52.19, but generally complies with the requirements of the clause. See 6.3.2 of this report.

6.3.2 Particular Provisions – Clause 52.19 Telecommunications Facility

Clause 52.19 provides specific requirements that telecommunications facilities must comply with. The proposal accords with the purposes of 52.19:

Clause 52.19 Telecommunications Facility - Purpose	
To ensure that telecommunications infrastructure and services are provided in an efficient and cost effective manner to meet community needs.	<p>Complies. The proposal involves decommissioning of the existing telecommunications facility on water tower as the water authority have requested removal of equipment, and will not renew Optus' lease.</p> <p>The new standalone facility ensures a more secure future tenure for Optus, whilst also guaranteeing that community need for mobile services is met in the future.</p>
To facilitate an effective statewide telecommunications network in a manner consistent with orderly and proper planning.	<p>Complies. The facility will form part of Optus' wider telecommunications network. The project will provide continuity of mobile service to Cockatoo residents and businesses, following decommissioning of an existing site, whilst improving existing 4G coverage and establish 5G services in the local area. Development consent is being sought for the work.</p>



Clause 52.19 Telecommunications Facility – Purpose	
To encourage the provision of telecommunications facilities with minimal impact on the amenity of the area.	<p>Complies. Axicom has sited the facility in consideration of local visual amenity, and has attempted to reduce the visual impact of the facility as far as practicable through its siting near mature trees, use of a monopole and a proposed green colour scheme.</p> <p>The purpose provides that impact be ‘minimal’, acknowledging that telecommunications facilities are required to protrude above the surrounding environment and therefore will always have some visibility. Axicom have minimised the visual impact of this facility as far as practicable.</p>

Per 52.19-1, the proposed works will require a development permit as they cannot be progressed under the *Telecommunications Act 1997*, *Telecommunications (Low Impact Facilities) Determination 2018* or Vic Code.

Under 52.19-5, the following decision guidelines must also be considered by Council in assessment of this application.

52.19-5 Decision Guidelines	
The principles for the design, siting, construction and operation of a Telecommunications facility set out in <i>A Code of Practice for Telecommunications Facilities in Victoria, July 2004</i> .	Compliance with the Vic Code has been addressed, refer section 6.2.2 of this report.
The effect of the proposal on adjacent land.	The proposal is not expected to adversely impact on adjoining land. Section 7 of this report provides an overview of environmental considerations, including visual impact.
If the Telecommunications facility is located in an Environmental Significance Overlay, a Vegetation Protection Overlay, a Significant Landscape Overlay, a Heritage Overlay, a Design and Development Overlay or an Erosion Management Overlay, the decision guidelines in those overlays and the schedules to those overlays.	<p>The site of the proposed telecommunications facility is affected by the Environmental Significance Overlay, Schedule 1. The proposal is assessed against the decision guidelines in further detail in section 6.3.1 below.</p> <p>The proposal is intended to replace the existing communications tower, ensuring continuity of mobile services. The facility has been sited against a backdrop of mature vegetation to help it blend into the surrounding environment.</p>



6.3.1 Overlays

The land is subject to the following overlays:

- Clause 42.01 - ESO – Environmental Significance Overlay

The proposed facility is located within the Environmental Significance Overlay, Schedule 1 (ESO1) relating to the Northern Hills.

Under Clause's 62.01-1 and 62.02-1 any requirement in the Planning Scheme relating to the use of land or buildings and works does not apply to a telecommunications facility on the condition that the associated buildings and works meet the requirements of Clause 52.19.

Therefore, there is no permit trigger for buildings and works for a telecommunications facility under the Environmental Significance Overlay. Notwithstanding the above, the current proposal does need to be considered, where appropriate, against the decision guidelines of the Environmental Significance Overlay – Schedule 1 in accordance with the Decision Guidelines at Clause 52.19-5.

The ESO1 relates to the Northern Hills.

The environmental significance of this area is characterised by a geology of Devonian Granitic and Silurian Sediment origin, moderate to steep slopes, and areas of remnant vegetation. These characteristics contribute to environmental values including landscape quality, water quality, and habitat of botanical and zoological significance. These characteristics are also a significant factor in terms of environmental hazards including erosion and fire risk.

The proposal addresses the decision guidelines of the ESO1 in that:

- The removal of vegetation has been avoided and only trimming of a branch will be required to facilitate access to site.
- There will be no impact on habitat of botanical and zoological significance and threatened species;
- The facility has been sited to minimise impacts on the landscape character of the area, including prominent ridgelines and significant views;
- Environmental hazards will not be increased as a result of the proposal. The proposal will assist in providing reliable telecommunications during times of emergency such as bushfires;
- There will be no impacts to water quality or waterways.

- Clause 44.06 - BMO – Bushfire Management Overlay

The site is located in a Bushfire Management Overlay, and the region is identified as an area of extremely high fire danger. The proposal will not result in any changes to the land that would increase bushfire risk or intensity.

The proposed telecommunications facility will assist in providing essential communications including during times of emergency, to assist in the protection of property and life.



7. VISUAL IMPACT

By their nature, telecommunications facilities are required to protrude above the surrounding environment to provide service. At this location, a monopole of 40m is required. The total height of the facility, including equipment, will be approximately 43m above ground level.

While the facility will be visible from a number of perspectives within the local area, Axicom and Optus have attempted to minimise the visual impact of the proposed facility as far as possible. The facility has been sited to capitalise on the natural screening elements so that public views to the facility from the surrounding road network will be limited from these locations.

A slim monopole is to be used, and the pole and antennas is proposed to be finished in a shade of green to help it better blend with the surrounding environment.

Visual impact has been considered from a number of perspectives in the area, as follows.

Views from the North

By virtue of its size, the facility will be visible from some residential land uses north of the facility. The facility will benefit from screening against a backdrop of mature vegetation which will assist in its assimilation of the majority of the structure into this landscape.

Refer **Figures 11-12**.

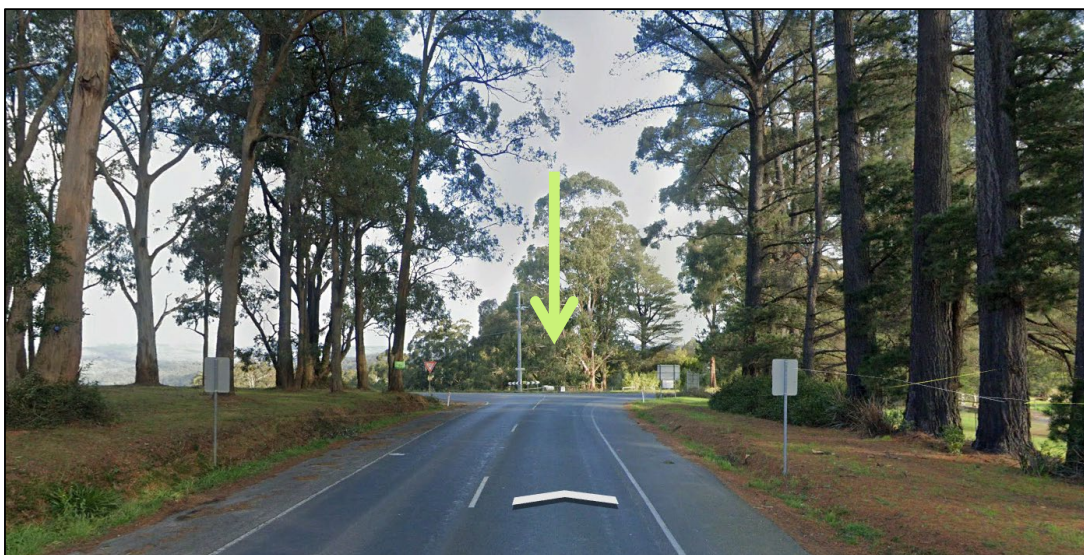


Figure 11: View from Bailey Road toward the site. The tower will be visible from this location, however it will benefit from screening against a backdrop of mature vegetation and the existing power infrastructure. Rural residential dwellings from these locations do not directly address the tower, and it will benefit greatly from the extensive vegetation on properties and the road verge. Views to the site will be predominantly screened by vegetation. (Google Streetview)



Figure 12: View from the Bailey Road and Majestic Drive intersection toward the site. The views are contained due to orientation of the road and tall mature vegetation. Views to the site will be predominantly screened by vegetation (Google Streetview)

Views from the East

The most prominent short-range views will be from the east of the site. However, the proposal has been sited so it does not interrupt with views of the ridgelines as the facility has been tucked to have a backdrop of mature trees. In addition, the facility is proposed to be finished in a shade of green to help it better blend with the surrounding environment. Refer **Figures 13-15**.



Figure 13: View from intersection of Paternoster Road and Aspect Avenue toward the site. The proposal has been sited to avoid obstructing vistas to the south by being sited close to the road frontage in the vicinity of mature trees (Google Streetview)



Figure 14: View from existing residences east of Paternoster Road toward the site. The proposal has been sited to avoid impacting on vistas to the south, while the facility's vegetated backdrop will help to reduce its impact upon viewing from the east (Google Streetview)



Figure 15: View from existing residences east of Paternoster Road toward the site. The proposal will not be a focal point from traffic or residences from this view as only part of the top of the monopole will be visible. The facility has been sited close to vegetation rather than being placed prominently in a 'standalone' location on the road frontage (Google Streetview)



Views from the South

The facility adjoins a large rural property to the south. The facility is set back 1.7km from nearest road to the south and it is not expected to have a significant visual impact. The proposal is not expected to be visible from the nearest road in the south - Hepner Road due to the setback and elevation changes.

Views from the West

The views from the west are contained due to orientation of the road and tall mature vegetation. Views to the site will be predominantly screened by vegetation. Refer **Figures 16-17**.



Figure 16: View on Paternoster Road looking east toward the site. The views are contained due to orientation of the road and tall mature vegetation. Views to the site will be predominantly screened by vegetation (Google Streetview)



Figure 16: View from Ulmer Road and Paternoster Road looking east toward the site. Again, the views are contained due to orientation of the road and tall mature vegetation. Views to the site will be predominantly screened by vegetation and is not expected to be visible (Google Streetview)

Overall Comments on Visual Impact

Telecommunications facilities, by their nature, must be tall enough to protrude above the surrounding environment to function. Axicom acknowledge the facility will be visible from a number of perspectives within the area – however, visual impact of this project is considered appropriate in context.

- Axicom and Optus have elected to use a slim monopole, rather than a lattice tower, to reduce the visual prominence of the proposed facility. The facility will be finished in a shade of pale green to help it blend into its rural setting. The facility is the smallest possible height capable of achieving a feasible level of service for the Cockatoo area.
- Axicom and Optus are aware of the significant vistas from Paternoster Road to the south. The only vacant land in the area suitable for the facility is along this frontage; in recognition of the area's visual sensitivity, the chosen site is as close as possible to large, well established mature trees. The proximity of large trees ensures that the site will be backdropped by vegetation from some perspectives, will be screened from others, and will have as little impact as possible on views in the area.
- The facility has deliberately not been sited further east along Paternoster Road, where it would be much less protected by vegetation, and would be much more prominent for passing traffic and residents.



8. RADIOFREQUENCY EMISSIONS AND HEALTH

Axicom are a builder and manager of telecommunications facilities. While Axicom does not operate its own telecommunications networks, we provide the means for Australia's mobile carriers, government agencies and wireless service providers to do so.

Axicom acknowledge some people are genuinely concerned about the safety of electromagnetic energy (EME) from mobile phone base stations.

Axicom acknowledge some people are genuinely concerned about the safety of electromagnetic energy (EME) from mobile phone base stations. As 5G networks begin to be rolled out across Australia, there has been heightened community sensitivity regarding telecommunications infrastructure.

Axicom rely on the advice of the Australian government, other international governments, and peak health bodies such as the World Health Organization (WHO). These organizations take the view, based on the latest scientific consensus, that mobile base stations are safe.

World Health Organization

Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.

<https://www.who.int/news-room/q-a-detail/radiation-electromagnetic-fields>

To date, and after much research performed, no adverse health effect has been causally linked with exposure to wireless technologies...

Provided that the overall exposure remains below international guidelines, no consequences for public health are anticipated.

<https://www.who.int/features/qa/30/en/>

The Australian Government

Mobile phone networks and other wireless telecommunications emit low-powered radio waves also known as radiofrequency (RF) electromagnetic energy (EME). This is different to ionising radiation associated with nuclear energy or use in medicine. The radio waves to which the general public is exposed from telecommunications are not hazardous to human health.

<https://www.health.gov.au/news/safety-of-5g-technology>

The EME in telecommunications uses energy levels that are too weak to cause harm...

Australia's strict standards regulate and monitor EME emissions to ensure they stay within these low levels. These standards are based on decades of Australian and international scientific research.

<https://www.communications.gov.au/what-we-do/spectrum/5g-and-eme/what-eme>



What do we know about EME? Answer: extensive scientific research confirms that mobile technology has no long or short term health effects; and the Australian Government is focused on capturing the benefits of advanced telecommunications while ensuring strict protections and safety standards are met.

The EME standard set by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) defines the maximum exposure limit for all wireless equipment and is strictly enforced by the Australian Communications and Media Authority (ACMA). Measurements undertaken by carriers and ACMA show that mobile telecommunication sites emit a tiny fraction of maximum EME exposure limits. The exposure limits are themselves very conservative. As such, sites which operate at 100% of the limit are still considered safe.

This standard is informed by decades of quality studies undertaken by expert Australian and international scientists which show the low levels of EME produced by telecommunications equipment have no adverse effects. This includes previous generations of mobile technology, like 3G and 4G, and the higher, more efficient, radio waves used for 5G.

<https://www.communications.gov.au/departmental-news/5g-and-electromagnetic-energy>

There is no substantiated scientific evidence to support any adverse health effects from low-level exposure to RF EME associated with telecommunications and wireless technology below the limits set within the ARPANSA RF Standard.

<https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpss-1-qa>

Current research indicates that there is no established evidence for health effects from radio waves used in mobile telecommunications. This includes the upcoming roll-out of the 5G network. ARPANSA's assessment is that 5G is safe.

https://www.arpansa.gov.au/sites/default/files/arpansa_submission_to_inquiry_into_5g_in_australia_1.pdf

All mobile carriers must abide by strict safety standards prepared by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), based on the recommendations of ICNIRP (International Commission for Non-Ionising Radiation Protection):

- The current standard is the *Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003* (RPS-3)
- A new standard, the *Standard for Limiting Exposure to Radiofrequency Fields – 100 KHz to 300 GHz* (RPS S-1), has recently been introduced and is expected to be phased in later in 2021. ARPANSA has advised that the exposure limits in the new standard are similar to those in the RPS3 standard, with the main changes being “additional restrictions for RF EME exposure at higher frequencies, above 6 GHz” (<https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rpss-1-qa>)



The Australian Communications and Media Authority (ACMA) regulate compliance with the standard. The safety standard applies to all mobile frequencies currently used in Australia, including 3G, 4G and 5G.

The Standard operates by placing a limit on the strength of the signal (or RF EME) that mobile carriers can transmit to and from any network base station. The environmental standard restricts the signal strength to a level low enough to protect all people at all times. It has a significant safety margin, or precautionary approach, built into it.

An ARPANSA format compliance report has been prepared and is attached. The compliance report demonstrates the maximum signal strength of a proposed facility, assuming that it is handling the maximum number of users 24-hours a day.

This proposal will comply with the ACMA mandated exposure standard. Maximum EME levels from this facility will equate to **0.80%** of the standard.

Note mobile base stations are designed to operate at minimum, not maximum, power levels at all times. The facility will only operate at a level necessary to accommodate the number of customers using the facility at any one time.

Accordingly, while EME levels from the facility cannot exceed 0.80% of the standard, they will generally be lower than this level. The ARPANSA EME report is attached for Council's reference.

9. CONCLUSION

Axicom and Optus are seeking consent to install a new mobile base station at 44 Paternoster Road, Cockatoo. The new facility is to replace an existing base station that will be decommissioned shortly, ensuring that Cockatoo retains access to the Optus mobile network. The proposal includes upgrades to improve 4G services and establish 5G.

The proposed location is considered a favourable location from which to service Cockatoo. The facility has been sited to minimise impacts on the landscape character of the area as far as practicable, generally accords with planning requirements for the site, and has as small as possible a visual impact.

Given the significant public benefit afforded by the proposal, it is requested that consent be granted to undertake the project.



APPENDIX 1: CERTIFICATE OF TITLE



APPENDIX 2: PROPOSAL PLANS



APPENDIX 3: ARPANSA EME REPORT

ARBORICULTURAL IMPACT ASSESSMENT

PROPOSED OPTUS TELECOMMUNICATIONS FACILITY
M3068-E COCKATOO CENTRAL
44 PATERNOSTER ROAD, COCKATOO
VIC 3781

PREPARED BY:
MATTHEW NEES
CONSULTANT ARBORIST
B.APP. SCI(HORT) DIP HORT (ARB)

2 DECEMBER 2021



Treespace Solutions Pty Ltd
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1.0 INTRODUCTION

- 1.1.1 Treespace Solutions Pty Ltd has been engaged by OPTUS C/o Titanium Services Group to provide an Arboricultural Impact Assessment for an existing tree in proximity to the proposed telecommunications facility and compound at 44 Paternoster Road, Cockatoo (site M3068-E Cockatoo Central).
- 1.1.2 Scope of work:
- Provide an assessment of the subject tree including an identification of the species, estimated age, health, structure, form, SULE and retention value.
 - Preparation an impact by the proposal in accordance with AS4970-2009 Protection of trees on development sites with consideration of potential mitigation methods to safeguard the subject tree.
- 1.1.3 The site and trees were assessed by Matthew Nees of Treespace Solutions on 17 November 2021 using a TruPulse 200 / B laser height meter, Avalon 8X32 Mini HD Binoculars and a Richter 10m Fibreglass Diameter Tape. Direct access was available to the tree.
- 1.1.4 The assessment has been prepared with the drawings M3068-E-P2 (Revision 1) *Draft Overall Site Layout* plan & M3068-E-P1 (Revision 1) *Draft Site Layout* plan prepared by Axicom 4 August 2021.

2.0 DISCUSSION

- 2.1.1 The proposed site for the telecommunications facility and compound is located on the western boundary of edge of 44 Paternoster Road, Cockatoo in proximity to 23 Paternoster Road, Cockatoo to the west and the intersection of Paternoster Road and Bailey Rd to the north.
- 2.1.2 With reference to drawing M3068-E-P1 (Revision 1) *Draft Site Layout*, the proposed compound is positioned 4.5m from the northern boundary (road reserve), 7.0m from the western boundary and approximately. The western side of the proposed compound is approximately 9.6m from the tree's buttress.
- 2.1.3 The subject tree is a maturing Mountain Grey Gum which is an indigenous species endemic to the Cockatoo region. The tree is growing within an area between the adjacent property to the west 23 Paternoster Road, Cockatoo and the subject site 44 Paternoster Road, Cockatoo.
- 2.1.4 The tree was measured at 33.0m in height with an average canopy span of 15.0m and positioned 2.6m from the west boundary fence and 9.6 from the northern boundary fence.
- 2.1.5 The tree appears to be in good general health with abundant foliage albeit with an asymmetrical canopy form that extends approximately 11.7m to the east (approximately 2.0m into the compound's footprint) and approximately 5.0m to the west. The northern portion of the canopy has been reduced way from the powerlines.
- 2.1.6 Several additional trees are in the vicinity of the proposal. One tree positioned to the east of the assessed specimen within the adjacent property and several trees positioned to the south of the subject tree. However, there will be no encroachment upon the TPZ of these trees and it is anticipated that these trees will not be impacted by the proposal.
- 2.1.7 A summary of assessed trees listed in Table 1 below. Refer to 5.0 Tree Assessment Data for further details.

TABLE 1 TREES WITHIN LEASE AREA

ID	No. of trees	Taxon, Common Name	DBH (cm)	TPZ (m)	Height (m)	Canopy (m)	Health	Retention Value
1	1	<i>Eucalyptus cypellocarpa</i> Mountain Grey Gum	137	15.0	33	15	Good	High

3.0 LEASE PLAN & TREE IMPACT ASSESSMENT

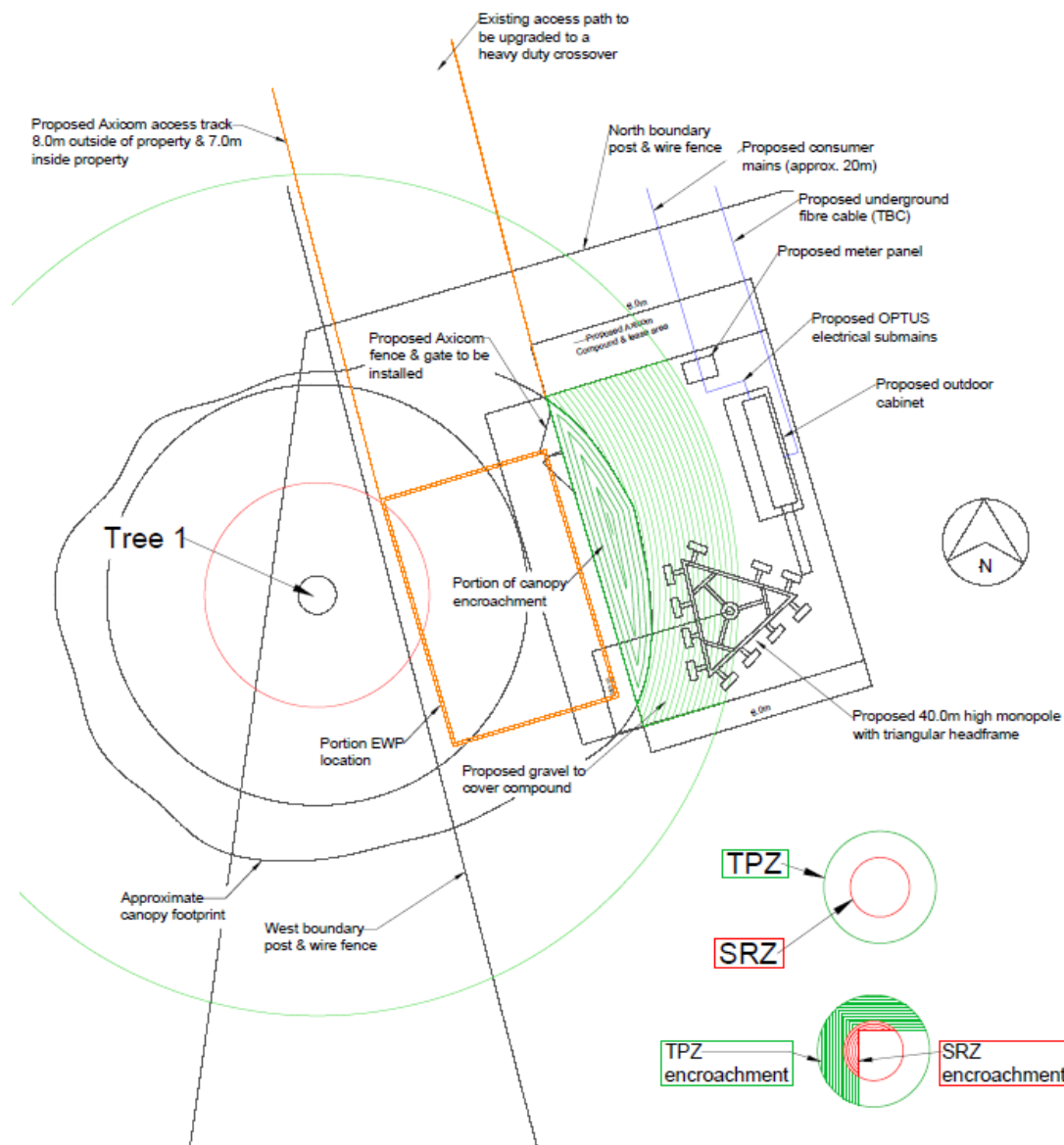


Figure 1: Site Plan

4.0 TREE IMPACT ASSESSMENT

- 4.1.1 In addition to the 40.0m monopole, the proposal includes the construction of an enclosed compound with gravel surfacing and serviced by an upgraded access track which includes the construction of a heavy-duty crossover. The existing 5.0m farm gate will be retained for access from Paternoster Road.
- 4.1.2 The proposed compound and telecommunications facility will make an encroachment of 58.9m² (8.3%) upon the TPZ of Tree 1 but with no SRZ encroachment. A portion of the canopy (less than 10% of the total canopy) also extends over and above the proposed compound location and will need to be reduced. With reference to AS4970-2009 *Protection of trees on development sites*, an encroachment of 8.3% is considered minor and provided the recommendations are enforced, it is anticipated that the tree will not be adversely impacted by the proposal.
- 4.1.3 The proposed access track and EWP location will further encroach the TPZ. To accommodate the proposed EWP location, a significant portion of the tree's canopy will need to be reduced. Therefore, the EWP location must be changed to the eastern side of the compound. If extending the access track to the eastern side is not feasible, a temporary ground protection system can be installed to provide stable, short-term access for the EWP. On this basis and provided the recommendations are enforced, the extent of canopy reduction will be limited to less than 20% of the total canopy.
- 4.1.4 The location of the heavy-duty crossover will not encroach the TPZ.
- 4.1.5 The proposed access track will encroach the TPZ however, provided the access track is constructed as a permeable surface at or above the natural grade, it is anticipated that it will not adversely impact Tree 1.

5.0 RECOMENDATIONS

- 5.1.1 Construct the access track as a permeable surface at or above the natural grade within the TPZ of Tree 1.
- 5.1.2 Change the EWP location from the western side of the compound to the east to ensure that the extent of overall canopy pruning required is less than the 20%. If extending the access track to the eastern side is not feasible, a temporary ground protection system can be installed to provide stable, short-term access for the EWP.
- 5.1.3 Reduce the eastern canopy of Tree 1 by approximately 2.0m so that there is no portion of the canopy overhanging the compound. This will include the reduction of one low-hanging scaffold branches and a second upper limb positioned on the eastern side of the tree. Refer to photographs.
- 5.1.4 Prior to the commencement of works, the Project Arborist must meet with the site manager and a suitably qualified arboricultural contractor to inspect the pruning works. The arboricultural contractor must be suitably qualified and experience with a minimum Level 3 qualification.
- 5.1.5 All pruning works must be in accordance with AS4373-2007 Pruning of amenity trees.

6.0 PHOTOGRAPHS



Figure 2: Tree 1 & the 2 x Pruning points required – southern view



Figure 3: Tree 1 & the 2 x Pruning points required – northern view

7.0 TREE ASSESSMENT DATA

Tree	Taxon	Common Name	Origin	DBH (cm)	TPZ (m)	DAB (cm)	SRZ (m)	Height (m)	Canopy (m)	Age	SULE Years	Health	Structure	Arboricultural Value	Notes
1	<i>Eucalyptus cypellocarpa</i>	Mountain Grey Gum	Victoria	137	15.0	152	4.0	33	15	Mature	20+years	Good	Good	High	9.1m from corner fence and 2.6m from boundary. Canopy has been reduced for power line clearance pruning. Canopy extends 11.7m into site perpendicular to fence. Removal of lower eastern secondary scaffold branches limbs will accommodate compound and monopole.

8.0 DESCRIPTORS

Tree Protection Zone (TPZ) The principal means of protecting trees on development sites. The TPZ is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.

Structural Root Zone (SRZ) The area required for tree stability. The SRZ is typically calculated when a major encroachment into a TPZ is proposed.

Taxon: Botanical name of tree.

Common Name: Accepted common name of taxon

Sources for Taxon and Common Names:

Flora of Victoria online (<https://vicflora.rbg.vic.gov.au/>)

Horticultural Flora of South-Eastern Australia (Vols. 1-5)

Origin:

Indigenous Naturally occurring taxon within locale. Considered Native under planning scheme provisions

Victoria Naturally occurring taxon within Victoria. Considered Native under planning scheme provisions

Australia Australian native. Occurs naturally within Australia, but outside Victoria.

Exotic. Introduced taxon to Australia.

DBH: Diameter at breast height (1.4m), in centimetres.

DAB: Diameter of trunk immediately above root buttress, in centimetres.

Height: Height of tree, in metres.

Width: Estimated width of tree, in metres.

TPZ: Tree Protection Zone calculated in accordance with AS4970-2009 Protection of Trees on Development Sites.

SRZ: Structural Root Zone calculated in accordance with AS4970-2009 Protection of Trees on Development Sites.

Form Shape of tree crown

Age

Juvenile: Young, recently planted tree.

Semi-mature: Tree is developing and established.

Mature: Specimen has reached expected size in current situation, limited extension growth.

Over-mature: Specimen entering stage of decline, declining health.

Senescent Tree is in advancing decline.

Health

Good: Optimal vigour for this taxon. Crown full with good density, foliage entire, with good colour, minimal or no pathogen damage. Good growth indicators, e.g. extension growth. No or minimal canopy dieback. Good wound-wood and callus formation.

Fair: Tree is exhibiting one or more of the following:
Tree has <30% deadwood. Or can have minor canopy dieback. Foliage generally with good colour, some

discolouration **may** be present, minor pathogen damage present. Typical growth indicators, e.g. extension growth, leaf size, canopy density for species in location may be slightly abnormal.

Poor: Tree has >30% deadwood. Canopy dieback present. Discoloured or distorted leaves and/or excessive epicormic re-growth. Pathogen is present and/or stress symptoms that could lead to or are contributing to the decline of tree.

Dead: Tree is dead.

Structure

Good: Optimal structure for this taxon. Sound branch attachment and/or no minor structural defects. Trunk and scaffold branches sound or only minor damage. Good trunk and scaffold branch taper. No branch over extension. No damage to structural roots, good buttressing present. No obvious root pests or diseases.

Fair: Some minor structural defects and/or minimal damage to trunk. Bark missing. Cavities could be present. Minimal or no damage to structural roots. Typical structure for species.

Poor: Major structural defects and/or trunk damaged and/or missing bark. Large cavities and/or girdling or damaged roots that are problematic.

Useful Life Expectancy (ULE)

The length of time a tree can be maintained as a useful amenity specimen. Contingent on a number of factors including expected life-span of the taxon, health and structure, pest, and diseases, weed status.

Arboricultural Value

None Tree with severe health and/or structural defects that cannot be rectified through reasonably practicable Arboricultural works; Tree may be inter dependent with surrounding trees and will be unable to be retained once adjacent shelter trees are removed; The tree is classed as a noxious or environmental weed species and is detrimental to the environment.

Low A tree that offers little in terms of contributing to the of the future landscape for reasons of poor health, structural condition, and/or species suitability, including propensity to weediness; A tree that is not significant due to its size and/or age and can be easily replaced; Tree with a ULE of under 10 years; Trees classed as having a low retention value may be able to be retained in the mid to short term if they do not require a disproportionate expenditure of resources (i.e. design modification).

Moderate A tree with some attributes that may benefit the site in relation to botanical, horticultural, historical, or local significance but may be limited to some degree by their current health condition or future growth in relation to existing or future site conditions and/or immediate/future maintenance requirements. The tree is likely to tolerate changes in its environment and will respond to arboricultural treatments. Trees classed as having a moderate retention **value should** be considered for retention if reasonably practicable. Arboricultural works may be required but should remain within reasonable limits. Tree may have a ULE of over 10 years if managed appropriately.

High A tree in good overall condition that has the potential to positively contribute to the landscape in the long-term if appropriately managed. Species is suited to its existing site conditions and can tolerate certain changes in its environment. Ideally, trees with a high retention value should be retained and incorporated into any development plans. The tree is worthy of retention wherever possible.

9.0 ASSESSMENT METHODOLOGY

- 9.1.1 17 November 2021, Matthew Nees carried out a site inspection at the above-mentioned site. The trees were inspected from the ground only and no diagnostic tests have been carried out. Observations were recorded, and photographs were taken during the inspection.
- 9.1.2 The inspection was carried out in accordance with steps one and two of the internationally recognised Visual Tree Assessment (VTA). This method for assessing trees was developed by Matteck and Breloer (1994) and is included in standard arboricultural texts by Harris, Clarke, and Matheny (2004) and Lonsdale (1999).
- 9.1.3 No evasive or diagnostic tests were carried out. If step three of the VTA process is deemed necessary, it will be recommended in this report.
- 9.1.4 Tree measurements were recorded using a TruPulse 200 / B laser height meter, Avalon 8X32 Mini HD Binoculars and a Richter 10m Fibreglass Diameter Tape.
- 9.1.5 Diameter at Breast Height (DBH) is measured at 1.4m as per the Australian Standard 4970 - 2009 Protection of trees on development sites assessment guidelines. Where direct or full access to the tree was restricted, the DBH has been estimated to the nearest 5cm.
- 9.1.6 Tree Protection Zones (TPZ) have been calculated at DBH x 12 as per the Australian Standard 4970 - 2009 Protection of trees on development sites.
- 9.1.7 Tree health and structure were assessed based on descriptors from the aforementioned arboricultural texts.
- 9.1.8 Trees are assessed based on size, location, health, structure, significance, management requirements and local by-laws.
- 9.1.9 Based on the above-mentioned descriptors, trees are categorised having an arboricultural value of none, low, moderate, or high.
- 9.1.10 All photographs were taken with an iPhone 6 by the report's author.
- 9.1.11 Trees are assessed based on size, location, health, structure, significance, management requirements and local by-laws.
- 9.1.12 Based on the above-mentioned descriptors, trees are categorised having an arboricultural value of none, low, moderate, or high.

T210643 PA - Locality Map

508.0 0 254.00 508.0 Meters

1: 10,000

Data Source: State & Local Government. © CARDINIA SHIRE COUNCIL

31-Aug-2022

Notes

