

**APPLICATION FOR  
DEVELOPMENT CONSENT**



*Proposal to install a new  
Telecommunications Facility at  
**40-68 Main Street  
Beenleigh QLD 4207  
Lot 26 on RP186286  
RFNSA reference 4207048***

**Town Planning Report**

**February 2022**

**Project Reference: 440717 Beenleigh**

Document prepared by:



Level 1, 110 Pacific Highway  
St Leonards  
NSW 2065 Australia

**T:** 02 9495 9000

**E:** [matthew.johnson@axicom.com.au](mailto:matthew.johnson@axicom.com.au)

**W:** <http://axicom.com.au/>

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## EXECUTIVE SUMMARY

<b>Proposal</b>	<p>Axicom Pty Ltd is seeking development approval for a new mobile telecommunications facility at 40-68 Main Street, Beenleigh.</p> <p>The facility will be owned by Axicom, and will host Vodafone telecommunications equipment. The facility will provide improved Vodafone 3G and 4G services and establish 5G services in the Beenleigh area.</p> <p>The proposal involves:</p> <ul style="list-style-type: none"> <li>• One (1) 30m monopole</li> <li>• Six (6) panel antennas, each up to 2.8m in length, on a new headframe</li> <li>• One (1) three-bay outdoor equipment cabinet at ground level</li> <li>• Ancillary equipment associated with the safety and proper function of the facility, including a group meter panel, submains, elevated cable tray, cabling, antenna mounts and security fencing.</li> </ul> <p>The facility will be located within an approximately 11.05m x 6.57m fenced compound area, and finished in unpainted, non-reflective grey.</p>
<b>Purpose</b>	<p>Axicom, with Vodafone, are deploying a new telecommunications facility to service the Beenleigh area. Vodafone have identified a need to improve mobile coverage in the area, due to shortcomings with local mobile service. This proposal will provide significantly improved Vodafone 3G and 4G services and establish 5G services for residents and businesses in Beenleigh and parts of Mount Warren Park.</p>
<b>Site Information</b>	<p><b>Lot description:</b> Lot 26 on SP186286</p> <p><b>Physical address:</b> 40-68 Main Street, Beenleigh QLD 4207</p>
<b>Planning Considerations</b>	<p><b>LGA:</b> Logan City Council</p> <p><b>Zoning:</b> Centre</p> <p><b>Overlays:</b> Potential and Actual Acid Sulfate Soils Flooding and Inundation area Landslide</p>
<b>Applicant</b>	<p>Axicom Pty Ltd Level 1, 110 Pacific Highway St Leonards NSW 2065</p> <p>Contact Person: Matthew Johnson Email: matthew.johnson@axicom.com.au Our Reference: 440717 Beenleigh</p>

## 1. INTRODUCTION

Axicom are seeking development consent for a new telecommunications facility at 40-68 Main Street, Beenleigh.

The new facility will host Vodafone telecommunications equipment. The purpose of the project is to significantly improved Vodafone 3G and 4G services and establish 5G services for residents and businesses in Beenleigh and parts of Mount Warren Park.

The proposal includes the installation of one 30m monopole, upon which Vodafone telecommunications equipment will be placed.

## 2. BACKGROUND

### 2.1 Demand for Network Service

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. Axicom have partnered with Vodafone to deploy new base stations across Australia. Axicom also provide site acquisition, town planning and engineering services to the telecommunications industry.

Vodafone are currently undertaking a significant expansion of their national mobile network across Australia, both to improve existing 3G and 4G services and establish 5G services. Axicom are working with Vodafone to deploy new infrastructure across Australia.

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 to make and receive calls, has increased to 60% of the adult population<sup>1</sup>, up from 51% in 2018-2019<sup>2</sup>.
- 99% of Australians use a mobile phone<sup>3</sup>, up from 96% in 2018-2019<sup>4</sup>.
- 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<sup>5</sup>. Between 2018 and 2019, for example, the amount of data downloaded by phone handset increased by over 121%<sup>6</sup>.

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<sup>1</sup> <https://www.acma.gov.au/publications/2020-12/report/mobile-only-australia-living-without-fixed-line-home>

<sup>2</sup> <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "At a Glance – How We Engaged", p71

<sup>3</sup> <https://www.acma.gov.au/publications/2021-04/report/communications-and-media-australia-how-we-communicate>

<sup>4</sup> <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "At a Glance – Our Access to Services"

<sup>5</sup> <https://www.acma.gov.au/publications/2021-05/report/communications-and-media-australia-how-we-use-internet> and

<https://www.acma.gov.au/sites/default/files/2021-05/Accessibility%20file%20-%20How%20we%20use%20the%20internet.csv>

<sup>6</sup> <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> "Volume of broadband and mobile data downloaded", p11

- In 2020, covid-19 significantly changed the way that Australians live, work and use mobile data. There has been exponential growth in data usage as more people spent more time living and working from home; according to ACMA, average data consumption increased approximately 50% between June 2018 and June 2020<sup>7</sup>.
- 75.4% of emergency calls were made from a mobile handset in 2018-2019.<sup>8</sup>

With an increasing population density, there is greater demand for mobile and data services, and Beenleigh and the surrounding suburbs have been identified as areas of high network demand. Vodafone has identified a need to improve mobile coverage and network capacity in this area.

If new base stations are not deployed, users may have difficulty connecting to their mobile network or experience call dropouts. This impacts residents, businesses and visitors to the area, and can have significant implications for public safety. Users may also experience reduced data speeds, longer download times and poor network performance at busy times of the day.

### 2.3 Coverage Objectives

This proposal is specifically to improve mobile service around the Beenleigh town centre, as well as the northern parts of Mount Warren Park.

Vodafone have identified issues with network performance and capacity in and around the Beenleigh town centre. There are no existing Vodafone base stations specifically servicing this area – Vodafone’s closest base stations are located at Mount Warren Park to the south and in Beenleigh, adjacent to Logan Street, to the north. These facilities are located approximately 2.2km apart. While they are capable of covering the areas closest to them, they are too far away, and poorly positioned from a technical perspective, to provide reliable mobile service to Vodafone customers in and around the Beenleigh town centre.

Vodafone have also identified that demand in the area is increasing dramatically, both because of the general trends noted above, and because of population growth in the area. With the area already having service issues, and with its population and development density expanding, Vodafone consider there is significant social, economic and safety impetus to improve mobile coverage and network capacity in this location.

To resolve these service issues, Axicom are working with Vodafone to deploy a new telecommunications facility in Beenleigh.

**Figure 1** shows the area that is proposed to be serviced by this new facility.

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<sup>7</sup> <https://www.acma.gov.au/publications/2021-04/report/communications-and-media-australia-supply-and-use-services-2019-20>

<sup>8</sup> <https://www.acma.gov.au/publications/2020-02/report/communications-report-2018-19> “3.1 Emergency Call Service”, p102



*Figure 1: Vodafone's target coverage area, encompassing the Beenleigh Mall, Beenleigh Town Square, Beenleigh Railway Station and surrounding land uses (Nearmap).*

### 3. CANDIDATE SELECTION

#### 3.1 Site selection

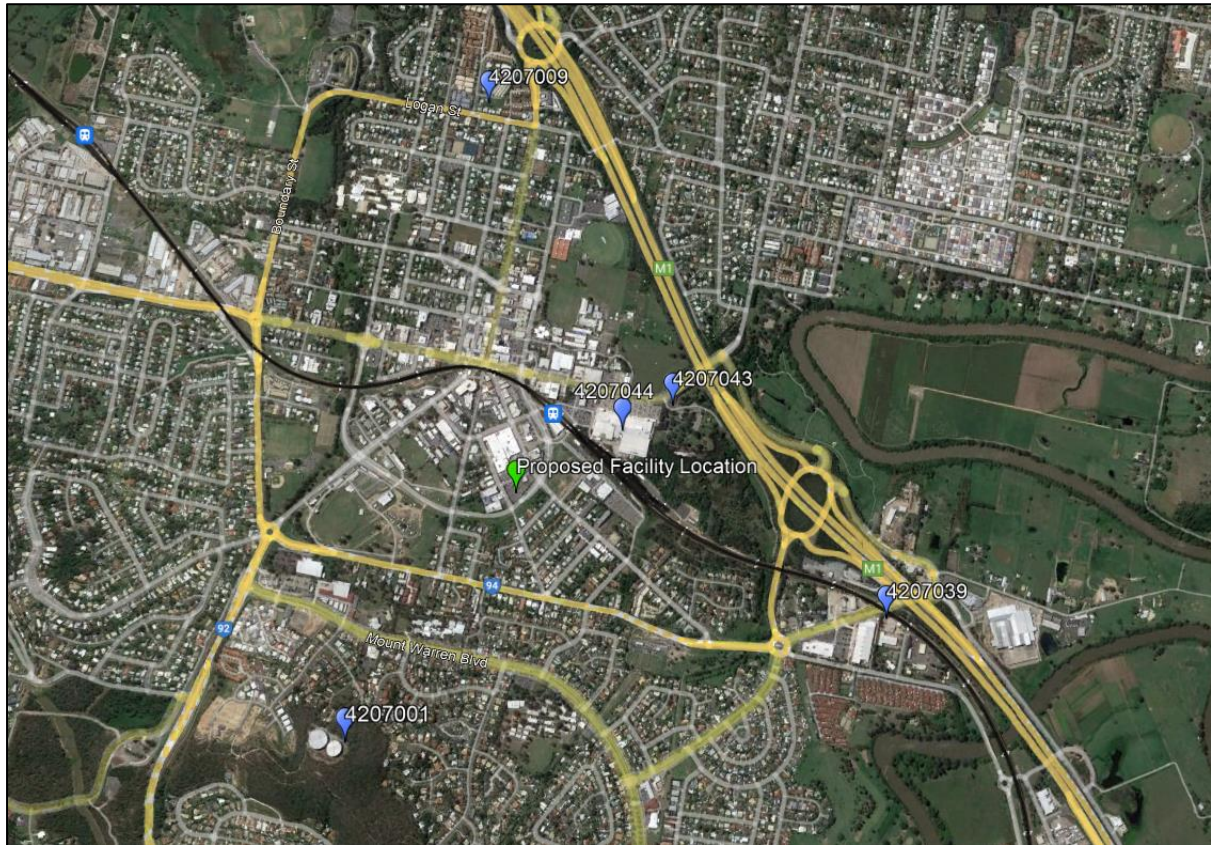
Before proposing a new base station, Vodafone attempt to resolve service issues by reconfiguring or upgrading their existing base stations.

If upgrades will not resolve service issues, Vodafone will consider any opportunities to co-locate on an existing mobile facility, building or other structure.

If there are no co-location opportunities, Vodafone will proceed to deploy a new 'greenfield' base station. Vodafone have confirmed that a new telecommunications tower is needed, and have partnered with Axicom for this purpose.

### 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 the area.



**Figure 2: Existing communications facilities in Beenleigh and the surrounding areas (Google Earth).**

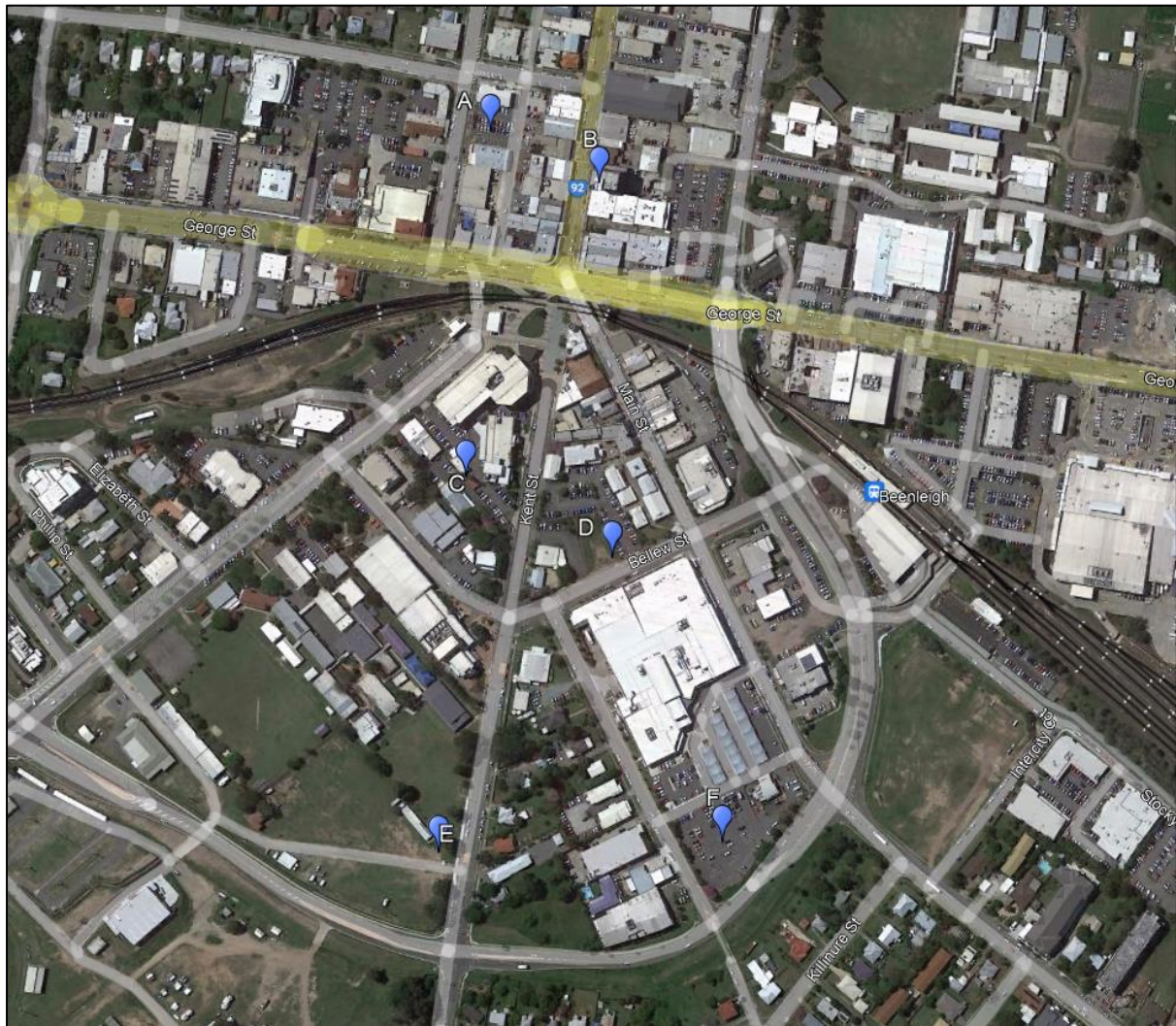
Existing Communications Facilities		
RFNSA Details	Site Address	Comments
<b>4207044</b> Telstra	Beenleigh Marketplace 114-118 George Street Beenleigh QLD 4207	<p>Existing Telstra In-Building Coverage (IBC) site located within the Beenleigh Market.</p> <p>This existing facility is designed to provide specific indoor coverage to the Beenleigh Marketplace and is not considered a viable co-location opportunity for Vodafone to adequately service the broader Beenleigh area.</p>
<b>4207043</b> Optus	30m monopole DTMR Road Reserve, adjacent to corner of George Street and Reisers Road Beenleigh QLD 4207	<p>Existing 30m Optus monopole located adjacent to Hugh Muntz Park.</p> <p>The co-location of Vodafone equipment onto the existing was investigated. Due to the spatial separation of this site from the targeted coverage area, along with the low available mounting height, this candidate was discounted as it would not be able to provide adequate service for the targeted coverage area.</p>
<b>4207001</b> Optus Vodafone Telstra	35m monopole 11 Paisley Court Mount Warren Park QLD 4207	<p>Existing Axicom 35m monopole currently hosting Optus, Vodafone and Telstra equipment.</p> <p>Upgrades to this facility cannot resolve service issues in the targeted coverage area of Beenleigh. Despite being located at a significantly higher elevation, the existing facility is too far south from the targeted coverage area to be able to provide adequate service.</p>
<b>4207039</b> Optus	25m monopole 12 Plantation Road Beenleigh QLD 4207	<p>Existing 30m Optus monopole located adjacent to the railway corridor and the Pacific Motorway (M1).</p> <p>The co-location of Vodafone equipment onto the existing was investigated. Due to the spatial separation of this site from the targeted coverage area, along with the low available mounting height, this candidate was discounted as it would not be able to provide adequate service for the targeted coverage area.</p>
<b>4207009</b> Telstra Optus Vodafone	25m monopole with 5m extension 2 Jireh Court Beenleigh QLD 4207	<p>Existing 25m monopole with 5m extension currently hosting Telstra, Optus and Vodafone.</p> <p>Upgrades to this facility cannot resolve service issues in the targeted coverage area of Beenleigh. Despite being located at a significantly higher elevation, the existing facility is too far south from the targeted coverage area to be able to provide adequate service.</p>

### 3.3 Alternate candidates

Per section 3.2, there are no suitable options for co-location in the Beenleigh area. Vodafone have identified that a new base station is required, and are working with Axicom to deploy a new telecommunications facility in the area.

The target coverage area is towards the centre of Beenleigh. The area acts a primary business hub for the broader locality and is the commercial and retail heart of Beenleigh. In attempting to find a suitable site location, Axicom have sought to focus the investigations around the Beenleigh town centre and avoid nearby residential land uses as much as practicable. Additionally, Axicom have sought to avoid significant environmental constraints where possible.

**Figure 3** shows the candidates that were investigated. Further detail on the candidates is also provided.



**Figure 3: Proposed Candidates (Google Earth).**

Proposed Candidates		
Candidate	Site Address	Comments
<b>A</b>	Rooftop facility 96 York Street Beenleigh QLD 4207	<p>New rooftop facility located atop a large commercial office building located within Beenleigh.</p> <p>This candidate was considered suitable from a service perspective and the co-location of Vodafone telecommunications onto the existing rooftop was considered a reasonable deployment solution from a planning viewpoint. Notwithstanding, discussions with the landowner were unable to progress and tenure was not able to be secured in this location.</p> <p>As such, this candidate was not progressed further.</p>
<b>B</b>	Rooftop facility 106 City Road Beenleigh QLD 4207	<p>New rooftop facility located atop a large commercial office building located within Beenleigh.</p> <p>This candidate was considered suitable from a service perspective and the co-location of Vodafone telecommunications equipment onto the existing rooftop was considered a reasonable deployment solution from a planning viewpoint. Notwithstanding, discussions with the landowner were unable to progress and tenure was not able to be secured in this location.</p> <p>As such, this candidate was not progressed further.</p>
<b>C</b>	Existing QPS lattice tower 2-8 James Street Beenleigh QLD 4207	<p>Proposed co-location onto an existing Queensland Police Service (QPS) lattice tower, located within the curtilage of the Beenleigh Magistrates Court.</p> <p>This candidate was considered suitable from a service perspective and the co-location of Vodafone telecommunications equipment onto the existing lattice tower was considered a reasonable deployment solution from a planning viewpoint, as it prevents the proliferation of structures in the local area. Notwithstanding, a representative from QPS advised that co-location onto this facility would not be suitable, due to ongoing access issues into the secure facility. Additionally, there was insufficient space at ground level for Vodafone to install associated ground equipment.</p> <p>As such, this candidate was not progressed further.</p>
<b>D</b>	New monopole 8 Bellow Street Beenleigh QLD 4207	<p>Proposed 30m monopole sited on an undeveloped lot, located within the Centre Zone.</p> <p>This candidate was considered suitable from a service perspective and provided a reasonable deployment solution from a planning viewpoint. However, after initial contact with the landowner was established, they advised Axicom that they had future development plans of the property and were not interested in entering into lease negotiations.</p> <p>As such, this candidate was not progressed further.</p>

<p><b>E</b></p>	<p>New monopole Beenleigh Showgrounds 2-18 Showgrounds Drive Beenleigh QLD 4207</p>	<p>New 30m monopole sited within the Beenleigh Showgrounds, located within the Centre Zone.</p> <p>This candidate was considered suitable from a service perspective. Axicom conducted a field survey of the site in October 2021 and discussed potential locations with the CEO of the Beenleigh Show Society. Based on this survey it was determined that many significant trees would need to be either extensively trimmed or entirely removed in order to establish a facility in this location. This was thought to be an unfavourable outcome from an environmental viewpoint when compared to other candidates.</p> <p>As such, this candidate was not progressed further.</p>
<p><b>F</b></p>	<p>New monopole Beenleigh Mall 40-68 Main Street Beenleigh QLD 4207</p>	<p>New 30m monopole sited within the carpark of the Beenleigh Mall, located within the Centre Zone.</p> <p>This candidate was considered suitable from a service perspective and Axicom were able to enter into a lease agreement with the current landowner. Additionally, this candidate was considered favourable from a planning viewpoint as it provides reasonable separation from sensitive land uses found within the locality and avoids the need to remove any significant vegetation.</p> <p>As such, this candidate was selected as Axicom’s prime candidate and forms the subject of this Development Application.</p>

#### 4. SITE CONTEXT

This proposal involves establishment of a new 30m Axicom monopole, hosting Vodafone telecommunications equipment, at 40-68 Main Street, Beenleigh (Lot 26 on SP186286).

The subject land is one of several contiguous lots forming a large commercial centre bordered by Main Street to the east, Alamein Street to the south, Tansey Street to the west and Bellew Street to the north. The lots which make up 40-68 Main Street, Beenleigh are:

- Lot 1 on RP170107
- Lot 3 on RP69327
- Lot 2 on RP81268
- Lot 2 on RP82761
- Lot 3 on RP82761
- Lot 1 on RP104214
- Lot 26 on SP186286
- Lot 23 on SP114769
- Lot 22 on SP114769

The site is located within the Beenleigh town centre and holds the Beenleigh Mall, a large shopping complex containing a supermarket and additionally commercial properties, as well as a fast-food outlet (Red Rooster). The majority of the subject site is utilised for carparking associated with the Beenleigh Mall. Development in the surrounding locality is predominately commercial land uses, particularly to the north, east and west of the proposed facility. To the south of the site, on the opposite side of Alamein Street, the predominate land use is low-density residential, with small pockets of medium-high density residential uses scattered throughout.

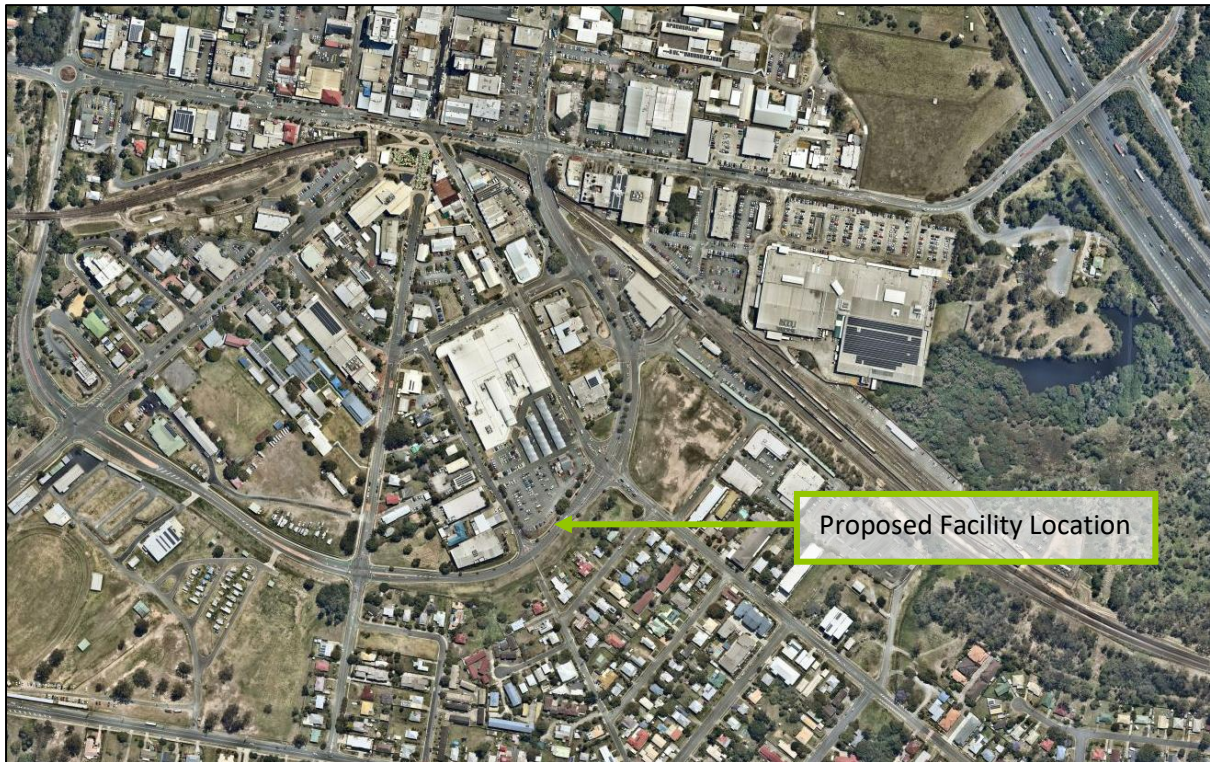
The proposed telecommunications compound will be situated within the carpark of the Beenleigh Mall, approximately 85m south of the centre. The proposed facility location has been selected after careful consideration and discussions with the landowner to reduce impact on the commercial operations of the centre as much as practicable.

The facility is to be located within an approximately 11.05m x 6.57m fenced compound, surrounded by chain-link fencing. Access to the facility will be granted via the existing vehicle crossover and access point located off Tansey Street.

Refer **Figures 4 – 8**.



**Figure 4: Site context. The proposed facility is located within a central area of Beenleigh (Nearmap).**



**Figure 5: Site context. The proposed facility is located within a central area of Beenleigh (Nearmap).**



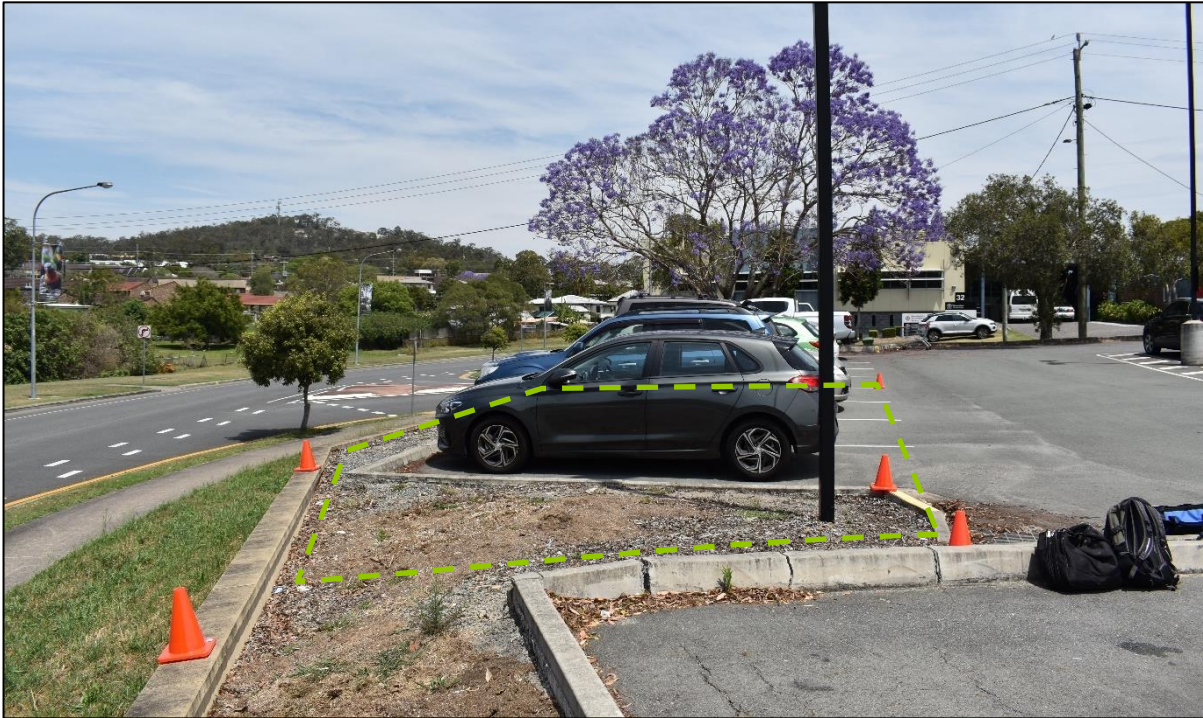
**Figure 6: Site context. The proposed facility location has been sited within the southern portion of the Beenleigh Mall carpark (Nearmap).**



**Figure 7: Proposed alignment of telecommunications compound. The proposed compound location will take approximately three (3) carparking spaces from the Beenleigh Mall carparking area (Nearmap).**



**Figure 8: Proposed alignment of telecommunications compound – facing south (Field survey, 11 October 2021).**



**Figure 9: Proposed alignment of telecommunications compound – facing southwest (Field survey, 11 October 2021).**



**Figure 10: Proposed alignment of telecommunications compound – facing east (Field survey, 11 October 2021).**

## 5. PROPOSED WORKS

### 5.1 Equipment to be installed

The proposed works consist of:

- Installation of one (1) new 30m Axicom monopole, finished in unpainted, non-reflective grey.
- Installation of Vodafone telecommunications equipment on the pole and within the compound, including:
  - Six (6) panel antennas, each up to 2.8m in length, mounted on a new headframe at 31.3m in height.
  - One (1) three-bay outdoor equipment cabinet, mounted at ground level at the base of the pole.
  - One (1) main meter boxed, mounted at ground level at the base of the pole.
  - Ancillary equipment associated with the safety and proper function of the facility, including a group meter panel, submains, elevated cable tray, cabling, antenna mounts and security fencing.

The facility will be located within an approximately 11.05m x 6.57m fenced compound area, surrounded by chain-link fencing. Access to the facility will be granted via an existing crossover and established access point off Tansey Street.

Refer **Appendix A** for proposal plans.

### 5.2 Site Access and Parking

The property will be accessed via an existing crossover and established access point off Tansey Street. From this point, access to the site will be through the existing carpark. The vehicle crossover and current access arrangement are considered sufficient for construction and ongoing maintenance of the facility.

Once the facility is operational, it will require access only 2-4 times annually for routine maintenance. 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. There are no noise sensitive uses in close proximity to the site, and the project is not expected to represent a noise nuisance.

## 5.4 Power and Utilities

The proposal will include installation of underground power infrastructure, via trench, running towards the eastern property boundary approximately 33m from the site to an existing power pole (#21836).

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 current configuration, will not exceed **1.27%** of the relevant standard. Refer Section 8 of this report for further detail.

## 5.6 Environmental Impact

All works will be confined to the existing carparking area associated with the Beenleigh Mall. The land for the proposed facility is currently disturbed and is finished in asphalt. There is no vegetation required to be cleared for the proposal and no environmental impacts are anticipated.

# 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 C564:2018 Mobile Phone Base Station Deployment Code

The Communications Alliance Limited *C564:2018 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, 4.2 and 8.0 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 B**.

## 6.2 Logan Planning Scheme 2015

### 6.2.1 Overview

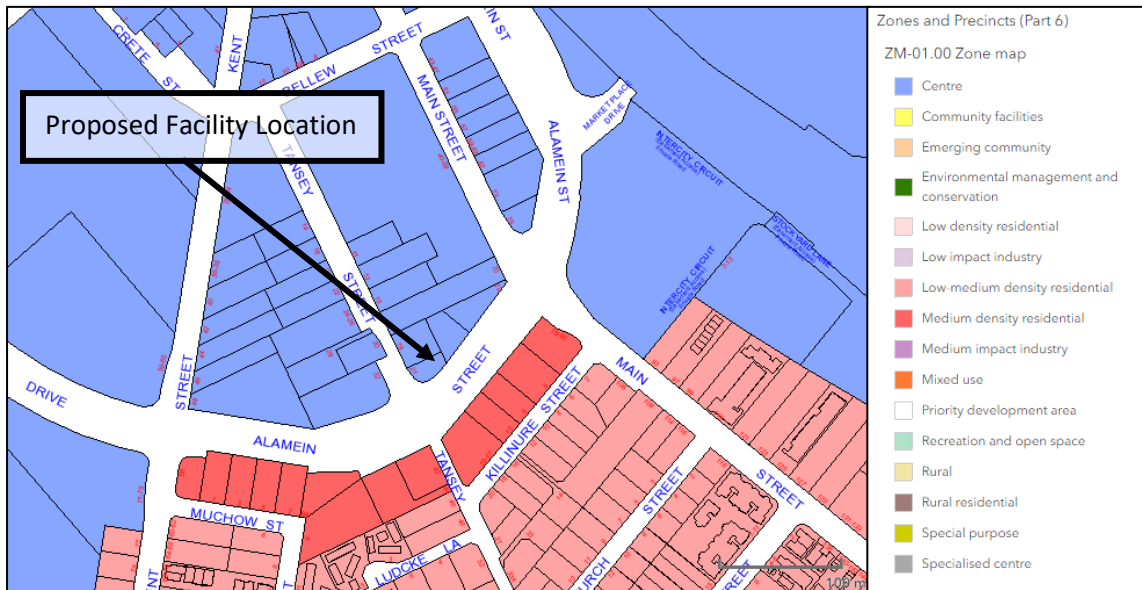
The proposed works trigger a Material Change of Use. The proposal is subject to assessment against the *Logan Planning Scheme 2015*, and is defined as a 'Telecommunications Facility':

*"Telecommunications facility means the use of premises for a facility that is capable of carrying communications and signals by means of guided or unguided electromagnetic energy."*

Table 5.5.1.1 provides that the development of Telecommunications Facilities in the Centre Zone triggers Impact Assessment.

### 6.2.2 Site Zoning

The site is on land retaining a Centre zoning, per **Figure 11**.



**Figure 11: Site Zoning (Logan Planning Scheme 2015).**

### 6.2.3 Overlays

Several Council overlays are applicable.

#### **Acid Sulfate Soils – Potential and Actual Acid Sulfate Soils above 5 metres AHD and at or below 20 metres AHD**

The subject site is affected by two Acid Sulfate Soils Overlays. The majority of the property is affected by ‘Potential and Actual Acid Sulfate Soils above 5 metres AHD and at or below 20 metres AHD’, with a small portion along the southern boundary of the property affected by ‘Potential and Actual Acid Sulfate Soils at or below 5 metres AHD’.

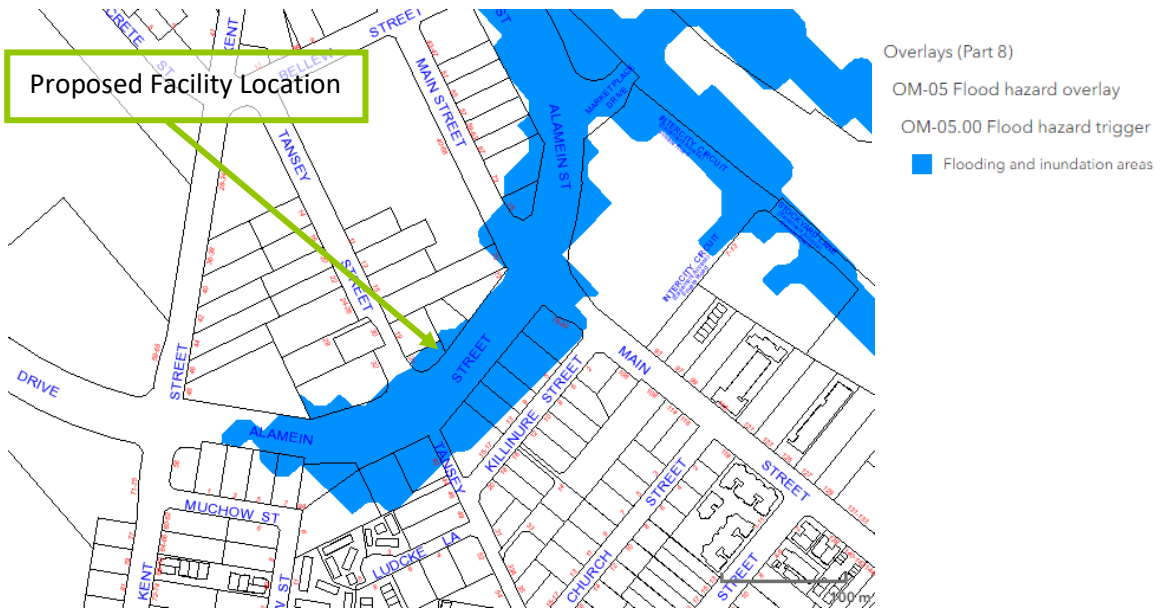


**Figure 12: Acid Sulfate Soils Overlay (Logan Planning Scheme, 2015).**

### Flood Hazard Overlays

Some parts of the subject lot retain Flood Hazard Trigger, Flooding and Inundation Areas Overlay.

The proposed facility contains a very minor footprint and is not anticipated to impact or increase risk of flooding.

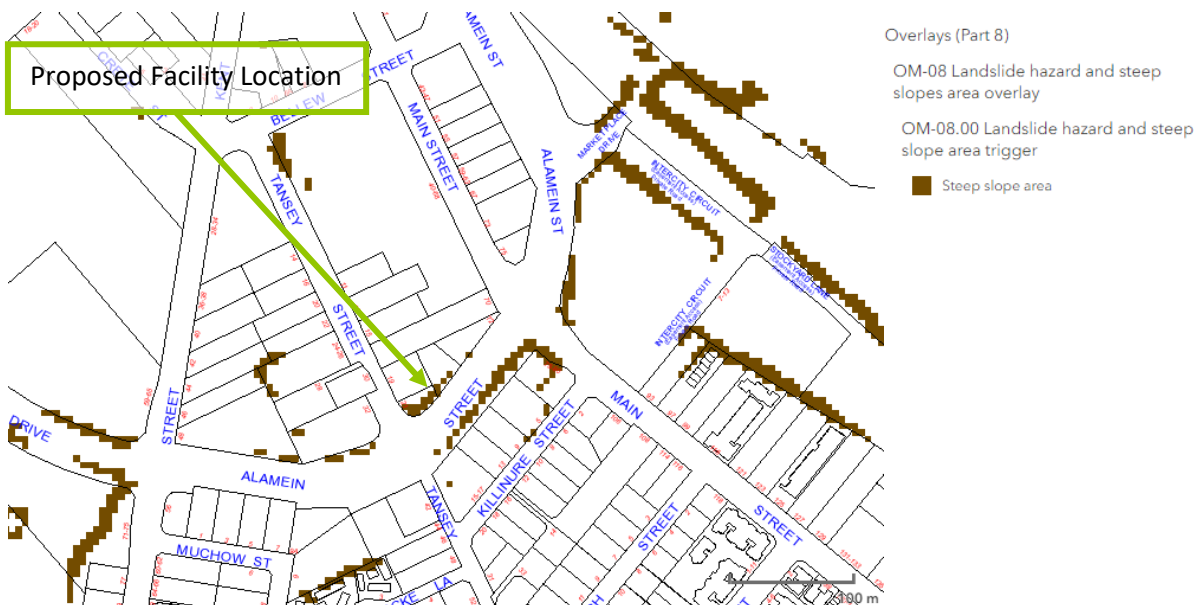


**Figure 13: Flood Hazard Overlay (Logan Planning Scheme, 2015).**

### Landslide Hazards Overlays

Some parts of the subject lot retain Landslide Hazard and Steep Slope Area Trigger, Steep Slope Area Overlay.

Whilst a small portion of the subject allotment is affected by this overlay, the proposed compound location has been sited in an area that is removed from this overlay.



**Figure 14: Landslide Hazard Overlay (Logan Planning Scheme, 2015)**

## 6.3 Logan Planning Scheme 2015 - Assessment

### 6.3.1 Relevant Codes

The following planning scheme provisions are relevant to this project:

- Strategic Framework
- 6.2.1 Centre Zone Code
- 7.2.1 Beenleigh Local Plan Code
- 8.2.1 Acid Sulfate Soils Overlay Code
- 9.3.7 Telecommunications Facilities Code

A detailed assessment of Code compliance is in **Appendix C**.

### 6.3.2 Code Assessment

The proposal has been assessed against relevant planning scheme provisions. Detail on Code compliance is noted below.

#### **Strategic Framework**

The proposal is generally in accordance with Council's strategic framework, noting that the Beenleigh Principal Centre seeks to support medium and high-density housing in a vibrant centre and provide for employment intensive uses. The proposed facility will provide additional capacity of Vodafone mobile services residents and business in the Beenleigh area, both present and future.

#### **6.2.1 Centre Zone Code**

The proposal complies with the Centre Zone Code as far as practicable. Several alternate solutions are proposed as follows:

- PO1 and AO1: Whilst the proposed facility is not a Principal Centre Activity in accordance with Clause 6.2.1.2(3)(b) of the Logan Planning Scheme 2015, the proposed facility will provide increase capacity and coverage to users of the Vodafone mobile network which will assist to support the commercial operations envisioned for the area.
- PO5 and AO5: The proposed facility will not produce any noise, air, light, radiation or vibration emissions that would interfere with the amenity of the surrounding locality. As previously discussed, to provide mobile coverage, the facility will produce electromagnetic EME emissions. Maximum EME levels from the facility, in its current configuration, will not exceed **1.273%** of the relevant standard. Refer Section 8 of this report for further detail. Additionally, the proposed facility will operate compliance with background levels prescribed by Australian Standard AS1055.

- PO9 and AO9: The proposed facility provides a road boundary clearance of approximately 25m to the nearest road boundary.
- PO10 and AO10: The proposed facility provides side and rear boundary clearances that exceeds 3m to premises in a residential zone category.
- PO11 and AO11: The proposed exceeds the specified maximum building height of 8.5m for buildings within a District Centre. Notwithstanding, the proposed height of the monopole is required for the functional requirements of the facility.

### **7.2.1 Beenleigh Local Plan Code**

The proposal generally complies with the Beenleigh Local Plan Code as outlined below.

- PO1 and AO1: The proposal is not for a small-scale commercial tenancy, however, the proposed facility will help support commercial operations within the Beenleigh area by providing access to fast and reliable Vodafone mobile services.
- PO2 and AO2: Complies. The proposed facility will not exceed the 60m building height limit as prescribed in Figure 7.2.1.4.3 of the Logan Planning Scheme 2015.
- PO3 and AO3: Complies. The proposed facility will provide sufficient road boundary, side and rear boundary clearances.
- PO20: The proposed facility is not a Principal Centre Activity, Office or Accommodation Activity. Notwithstanding, the proposed facility will help support commercial and accommodation activities in the Beenleigh area by providing access to fast and reliable Vodafone mobile services.

### **8.2.1 Acid Sulfate Soils Overlay Code**

The proposal is compliant with the Acid Sulfate Soils Overlay Code as outlined below.

- PO1 and AO1.1: Complies. The proposed facility location is sited on an area that is identified as a potential and actual acid sulfate soils area above 5m AHD and at or below 20m AHD and does involve the excavating and/or removal of more than 100m<sup>3</sup> of soil or sediment.
- PO2 and AO2: Should acid sulfate soils be identified on site, the removal of soils will be managed in accordance with an acid sulfate soils management plan prepared in accordance with the current Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines.

### **9.3.7 Telecommunications Facilities Code**

The proposal is compliant with the Telecommunications Facilities Code as far as practicable. Several alternate solutions are proposed as follows:

- PO1 and AO1: The proposed facility is located approximately 50m the nearest boundary of an adjoining lot in a residential zone category. Whilst this is not compliant with the acceptable outcomes outlined in the Telecommunications Facility Code, the proposal is not considered to create any adverse impacts on the intended amenity for the adjacent residential zone. Additionally, the proposed facility location has been sited in coordination with the landowner so as to not interfere with the current commercial operations of the Beenleigh Mall as far as practicable.
- PO2: Complies. The proposed facility has been sited within the carpark of a large retail centre and is not considered to be visually intrusive in the context of the local setting.
- PO3: Complies. As discussed in Section 3.2 of this report, there were no viable co-location opportunities available in the local Beenleigh area that would assist Vodafone in meeting their targeted coverage objectives. Notwithstanding, the proposed facility has been designed to accommodate the addition of future telecommunications equipment should additional carriers wish to co-locate.
- PO4: Complies. The proposed facility is not anticipated to impact on native fauna that may be present in the local area.

A detailed assessment of Code compliance is in **Appendix C**.

## 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 30m is required in order to provide adequate coverage to the Beenleigh area.

While the proposed facility is expected to be visible from some perspectives in the local area, Axicom do not expect that it will be a visual focal point. The proposed facility has been sited in a commercial area and is reasonably removed from sensitive land uses found within the area. Views to the facility from residential land uses in the broader locality will be against the backdrop of the Beenleigh Mall and nearby large commercial properties.

A slim monopole is to be used, and the pole and antennas will be finished in unpainted, non-reflective grey. Grey facilities tend to blend well into the skyline in all weathers, and this colour is considered appropriate given this site's elevated location. However, Axicom will consider an alternate colour scheme, such as pale green, if requested by Council.

Ground equipment at the site is not expected to be obviously visible in the surrounding area, by virtue of location within a commercial carparking area. The proposed facility, including the associated ground equipment, will be located within an enclosed compound area, surrounded by a chain-link fence. This will assist in preventing the trapping of debris within a fenced compound area and will not interfere with the current operations of the site.

With regards to the overall impact to the amenity of the local area, visual impact has been considered from a number of perspectives in the area, as follows.

### **Views from the South**

The primary areas of concerns with relation to visual impact are the residential areas to the south of the subject site, primarily the residences located along Killinure Street. The proposed facility is located approximately 85m from Killinure Street, with views towards the facility from residences on this street to be set against the backdrop of the Beenleigh Mall and nearby commercial buildings.

As outlined in **Figures 15-20**, the proposed facility will be visible from several vantage points within the area to the south of the proposed facility location. Notwithstanding, visual impact from these areas is not considered to be significant, considering the spatial separation and the proposed facility's backdrop of intensive commercial uses and an existing telecommunications facility.



**Figure 15: View towards the proposed facility location from the corner of Killinure Street and Tansey Street, facing north-northwest approximately 125m from the proposed site (Site Survey, 11 October 2021).**



**Figure 16:** View towards the proposed facility location from the corner of Intercity Circuit and Main Street, facing west approximately 155m from the proposed site (Field Survey, 11 October 2021).



**Figure 17:** View towards the proposed facility location from Killnure Street, facing north approximately 87m from the proposed site (Field Survey, 11 October 2021).

### Views from the West

Views towards the proposed facility from the west will be largely from commercial land uses, as well as motorists travelling along Alamein Street. Whilst the facility may be visible to motorists travelling throughout the area, the proposed facility is not considered to create a visual distraction to motorists.



**Figure 18: View towards the proposed facility location from Alamein Street, facing southwest approximately 125m from the proposed site (Google Earth, March 2021).**



**Figure 19: View towards the proposed facility location from Main Street, facing southwest approximately 120m from the proposed site (Google Earth, March 2021).**

### Views from the East / North

Similarly, views towards the proposed facility from the east and the north of site will be largely from commercial land uses and motorists travelling along Tansey Street and Bellew Street. The proposed facility is not considered to impact on the amenity of the surrounding commercial areas or create a visual distraction to motorists travelling through the area.



*Figure 20: View towards the proposed facility location from Tansey Street, facing southeast approximately 100m from the proposed site (Google Earth, September 2019).*

### 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.

- The facility has been designed to be as slim as possible. The facility's grey colour scheme is designed to help it blend into the skyline, and represent a lower impact visual outcome in all weathers. The only views afforded of the facility are generally at a distance, where grey is considered the best colour scheme to help camouflage the facility into the sky and existing backdrop. At Council's request, however, Axicom will consider an alternate colour scheme such as 'pale eucalypt' if required.
- The facility is located in an area where it will benefit from partial screening from vegetation, particularly as a buffer of trees along the western property boundary will be retained.
- The facility has been deliberately sited to preserve the area's local scenic amenity, and is well set back from major landmarks in the area. Visual impact of the facility has been reduced to its lowest extent.

## 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 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 science 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/peh-emf/about/WhatisEMF/en/index1.html>

*Studies to date provide no indication that environmental exposure to RF fields, such as from base stations, increases the risk of cancer or any other disease.*

<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>

*There is no substantiated evidence that EME causes any harm to humans when it is below the limits specified in Australian safety standards.*

<https://www.infrastructure.gov.au/sites/default/files/safety-of-mobile-phone-networks-factsheet.pdf>

*Health authorities around the world, including ARPANSA and the World Health Organization, have examined the scientific evidence regarding possible health effects from base stations. Current research indicates that there are no established health effects from the low exposure to the RF EME from mobile phone base station antennas.*

<https://www.arpansa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/mobile-phone-base-stations>

*Current research indicates that there is no established evidence for health effects from radio waves used in mobile telecommunications.*

[https://www.arpansa.gov.au/sites/default/files/arpansa\\_submission\\_to\\_inquiry\\_into\\_5g\\_in\\_australia\\_1.pdf](https://www.arpansa.gov.au/sites/default/files/arpansa_submission_to_inquiry_into_5g_in_australia_1.pdf)

All mobile carriers must abide by the *Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003*, a safety standard 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 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 **1.27%** 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 **1.27%** of the standard, they will generally be much lower than this level. The ARPANSA EME report is attached as **Appendix B** for Council's reference.

## **9. CONCLUSION**

Axicom are seeking consent to install a new mobile base station at 40-68 Main Street, Beenleigh. Axicom are proposing the facility in conjunction with Vodafone, and it will help to resolve Vodafone 3G and 4G service issues in Beenleigh and introduce 5G service to the area.

The proposed location is the best site for Vodafone to service the area effectively. The project is generally consistent with Council planning requirements, 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.