

# Development Application for Planning Consent

*Proposed New Telecommunications Facility*

Landsdale Forum Shopping Centre

127 The Broadview

Landsdale WA 6065

Lot 991 on DP39373

## Town Planning Report

**Project Reference: 640064 Landsdale Central**

**RFNSA Reference: 6065026**

**October 2023**



# Document Control

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# Executive Summary

<b>Site Information</b>	<p><b>Lot description:</b> Lot 991 on DP39373  <b>Physical address:</b> 127 The Broadview Landsdale WA 6065  <b>Coordinates:</b> -31.807302, 115.863424</p>
<b>Proposal</b>	<p>Indara Infrastructure Pty Ltd (Indara), part of the Indara Group, are seeking development consent for a new telecommunications facility at 127 The Broadview, Landsdale WA 6065 (Lot 991 on DP39373).</p> <p>The proposed facility will be owned by Indara and will host Vodafone and Optus telecommunication equipment, delivering improved 4G and 5G services in Landsdale.</p> <p>The proposal includes the following:</p> <ul style="list-style-type: none"> <li>• One (1) 25m Indara monopole.</li> <li>• One (1) new antenna headframe supporting fifteen (15) panel antennas.</li> <li>• One (1) six bay outdoor equipment cabinet on a new concrete slab behind the shopping centre.</li> <li>• Installation of a new 1.5m wide access gate on the existing Colourbond fence.</li> <li>• Ancillary equipment associated with operation and safety of the facility, including remote radio units, underground conduits, cabling and antenna mounts, group meter panel and other similar equipment.</li> </ul> <p>The monopole and associated equipment will be finished in non-reflective pale grey, while equipment cabinets will generally be a beige or pale green colour.</p>
<b>Purpose</b>	<p>Indara along with Vodafone and Optus, are proposing a new telecommunications facility within the Landsdale area. The new facility will provide improved mobile and data services to Vodafone and Optus customers in the surrounding area.</p> <p>The facility has been designed as a neutral host facility, capable of supporting co-location by other carriers, government entities and wireless service providers.</p>
<b>Planning Considerations</b>	<p><b>LGA:</b> City of Wanneroo  <b>Zoning:</b> Commercial Zone  <b>Overlays:</b> State Planning Policy 2.4 – Basic Raw Materials Policy  State Planning Policy 5.2 – Telecommunications Infrastructure</p>
<b>Applicant</b>	<p>Indara Infrastructure Pty Ltd  Level 1, 110 Pacific Highway  St Leonards NSW 2065</p> <p>Contact Person: <span style="background-color: black; color: black;">[REDACTED]</span>  Email: <span style="background-color: black; color: black;">[REDACTED]</span>  Our Reference: <span style="background-color: black; color: black;">[REDACTED]</span></p>

# 1. Introduction

Indara Infrastructure Pty Ltd (Indara), part of the Indara Group, are seeking development consent for a new telecommunications facility at 127 The Broadview, Landsdale WA 6065 (Lot 991 on DP39373) (The Subject Site).

The new facility will be comprised of a 25m monopole supporting Vodafone and Optus telecommunication antennas and equipment (The Proposed Facility). The purpose of the project is to significantly network coverage and capacity in the Landsdale area.

This Town Planning Report provides an assessment of the project against relevant planning controls.

## 2. Background

### 2.1 Indara, Vodafone and Optus

This development application has been prepared and submitted by Indara.

Indara are Australia's leading independent owner and provider of shared wireless telecommunications infrastructure, with a portfolio of over 4300 telecommunications sites across Australia.

Indara are Australia's leading independent owner and operator of digital infrastructure. We provide critical communications and data solutions that help support the digital transformation of our society. We're passionate about investing long term in our nation, building and designing digital infrastructure that creates long term value for our customers and the broader Australian community.

Indara owns and manages over 4300 mobile telecommunications facilities across Australia. Indara operate as a neutral host – our facilities are specifically designed to accommodate co-location by Australia's mobile carriers, government agencies and other wireless services providers.

Indara has partnered with Vodafone to expand their mobile network across Australia. This proposal is part of Vodafone and Optus' Extended Joint Venture program, meaning that Optus telecommunications equipment will also be installed. The proposed facility will improve Vodafone and Optus mobile services in Landsdale.

The proposed facility is comprised of a new a new 25m monopole and associated passive infrastructure, which will be owned and managed by Indara, and active infrastructure (antennas and telecommunications equipment) which will be owned and managed by each carrier.

Note for legal purposes, the applicant for this development application is Indara Infrastructure Pty Ltd.

## 2.2 Demand for Network Services

Access to high quality telecommunications services is vitally important to the community. Mobile usage continues to trend upward.

- 99% of Australians use a mobile phone; 76% of Australians do not have a landline phone and rely exclusively on a mobile phone<sup>1</sup>.
- Mobile data usage continues to significantly increase as the network is used in different ways. Between 2020 and 2021, the amount of data downloaded by phone increased by over 29%<sup>2</sup>. In the first quarter of 2022, global mobile data usage grew by 40%<sup>3</sup>. Streaming and video calling are major drivers of this increased demand.
- Covid-19 significantly changed the way that Australians live and work – 61% of employed Australians worked online from home in 2021<sup>4</sup>. With many Australians continuing to adopt flexible or hybrid work arrangements, additional demand has been placed on the mobile network.
- Public safety is a significant driver behind improvements to mobile coverage. In 2021, around 78% of emergency calls were made from a mobile handset<sup>5</sup>.

More than ever, mobile telecommunications are an essential service. By extension, mobile base stations are essential infrastructure – it is important that mobile infrastructure keeps pace with this increasing demand.

## 2.3 Coverage Objectives

There is a high demand for network coverage in this area, for several reasons:

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<sup>1</sup> <https://www.acma.gov.au/publications/2021-12/report/communications-and-media-australia-how-we-communicate>

<sup>2</sup> <https://www.acma.gov.au/publications/2021-12/report/communications-and-media-australia-how-we-use-internet>

<sup>3</sup> <https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/mobile-traffic-update>

<sup>4</sup> <https://www.acma.gov.au/publications/2021-12/report/communications-and-media-australia-trends-and-developments-telecommunications-2020-21>

<sup>5</sup> <https://www.triplezero.gov.au/triple-zero/How-to-Call-000/advanced-mobile-location>

- As with many locations in WA, the Wanneroo LGA is seeing unprecedented residential growth and development. The population is expected to increase from 206,860 to 358,880 by 2041, a growth of approximately 69%. The increase in resident populations will also result in a corresponding increase in the number of dwellings, from 70,773 to 133,341 by 2041<sup>6</sup>.
- There is significant residential development occurring around the proposed site location, as noted in the following Structure Plans that have been prepared in the surrounding areas, these include:
  - Amendment 3 to East Wanneroo Cell 8 Local Structure Plan
  - East Wanneroo Cell 6 Local Structure Plan
  - East Wanneroo Cell 5 (Landsdale) Structure Plan.
  - East Wanneroo District Structure Plan

The proposed facility will improve network coverage and capacity for Vodafone and Optus Commercial and Residential customers to these structure plan areas, surrounding the subject site location.

- Following the Covid-19 pandemic, there has been strong demand for hybrid working arrangements. The influx of people working from home (WFH) has put additional strain on the existing network, due to the increased demand for downloading data (specifically from entertainment streaming services), as well as the notable increase in data uploads, due to the adoption of online learning and productivity platforms such as Zoom, Google Classroom, Microsoft Teams and Skype etc.

Whilst the area receives some service from the existing sites in the surrounding area, they are unable to service the area reliably all the time. The proposed facility will work in conjunction with the other base stations in the surrounding area to deliver the required network improvements.

## 3. Candidate Selection

### 3.1 Site Selection

Before proposing a new base station, mobile carriers will attempt to resolve service issues by reconfiguring or upgrading existing base stations. If upgrades do not resolve service issues, the carrier will consider any opportunities to co-locate on an existing mobile facility, building or other structure.

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<sup>6</sup> <https://forecast.id.com.au/wanneroo>



If there are no feasible co-location opportunities, the carrier will proceed to deploy a new 'greenfield' base station.

This facility is proposed in partnership with Vodafone and Optus, who have confirmed a new telecommunications facility will be needed in the Landsdale area and are working with Indara to deploy the new facility.

### 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 1** shows the location of existing facilities in the area around this proposed site, based on information from the Radio Frequency National Site Archive (RFNSA) database ([www.rfnsa.com.au](http://www.rfnsa.com.au)). None of the existing sites in the area are suitable for co-location.

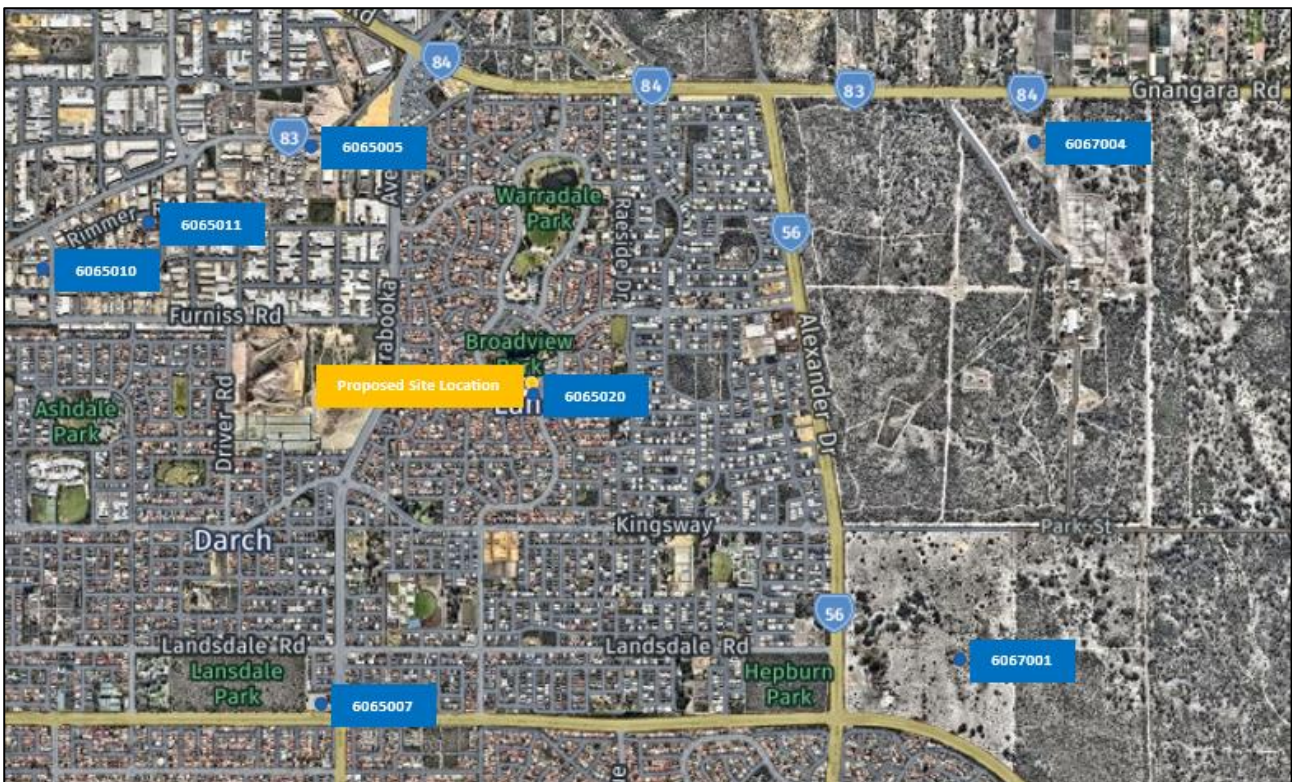


Figure 1: Aerial view of the existing telecommunication facilities in the surrounding locality (Nearmap 2023 and RFNSA 2023).

Table 1: Existing and Proposed Communications Facilities		
RFNSA Details	Site Address	Comments
<b>6065020</b> Telstra	131 The Broadview Landsdale WA 6065	Existing Telstra small cell facility, located on the rooftop of a Western Power Building.  This facility did not have the elevation or structural capacity to accommodate the Vodafone and Optus equipment. As such, this candidate was discounted.
<b>6067001</b> Vodafone Optus Telstra	374 Alexander Drive Cullacabardee WA 6067	Existing 32m Amplitel facility located 2.3km to the southeast of the coverage area.  The Vodafone and Optus equipment was upgraded in 2022, as part of planned network upgrades for the area. However, these upgrades did not deliver any improvements to the intended coverage area. As such, this candidate was discounted.
<b>6065007</b> Vodafone Optus Telstra	150L Landsdale Road Darch WA 6065	Existing 30m Western Power facility located 1.75km to the southwest of the coverage area.  Due to the geographical separation, this facility is unable to service the intended coverage area. As such, this candidate was discounted.
<b>6065010</b> Telstra	21 Mosey Street Landsdale WA 6065	Existing 53m Amplitel facility located 2.17km to the northwest of the coverage area.  Due to the geographical separation, this facility is unable to service the intended coverage area. As such, this candidate was discounted.
<b>6065011</b> Vodafone Optus	39 Rimmer Road Landsdale WA 6065	Existing 65m Guyed Mast facility located 1.8km to the northwest of the coverage area.  Due to the geographical separation, this facility is unable to service the intended coverage area. As such, this candidate was discounted.
<b>6065005</b> Vodafone Optus	326 Gnangara Rd Landsdale WA 6065	Existing lattice tower facility located 1.5km to the northwest of the coverage area.  Due to the geographical separation, this facility is unable to service the intended coverage area. As such, this candidate was discounted.

### 3.3 Alternate Candidates

Per section 3.2, there are no suitable options for co-location. A new base station is required. A robust investigation of potential candidates has been undertaken.

In identifying a candidate, we 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.

A precautionary approach has been taken to site selection in accordance with sections 4.1 and 4.2 of the *C564:2020 Mobile Base Station Deployment Code*.



Figure 2: Aerial view of the investigated candidates within the Landsdale area (Nearmap 2023).

Table 2: Prospective Candidates		
Candidate	Site Address	Comments
A	New 25m Monopole Warradale Park 31 Warradale Terrace Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
B	New 25m Monopole 15 The Broadview Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
C	New 25m Monopole 460 Kingsway Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
D	New 25m Monopole 4 Nymans Close Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
E	New 25m Monopole 77 Queensway Road Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
F	New 25m Monopole 19 Warradale Terrace Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
G	New 25m Monopole 12 Langar Way Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
H	New 25m Monopole 484 Kingsway Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
I	New 25m Monopole 15 Queensway Road Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
J	New 25m Monopole 140 Furniss Road Landsdale WA 6065	A candidate in this location was unable to meet the coverage objectives for Vodafone and Optus. This candidate was therefore discounted.

Table 2: Prospective Candidates Cont.		
Candidate	Site Address	Comments
K	New 25m Monopole 146 Furniss Road Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
L	New 25m Monopole 620 Gnangara Road Landsdale WA 6065	A candidate in this location was unable to meet the coverage objectives for Vodafone and Optus. This candidate was therefore discounted.
M	New 25m Monopole 470 Kingsway Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
N	New 25m Monopole 474 Kingsway Landsdale WA 6065	Contact with the landowner could not be established to enter into a lease agreement for the proposal. This candidate was therefore discounted.
O	New 25m Monopole 26 Driver Road Darch WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
P	New 25m Monopole 76 Strybing Street Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
Q	New 25m Monopole 46 Leach Way Gnangara WA 6077	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
R	New 25m Monopole 42 Leach Way Gnangara WA 6077	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
S	New 25m Monopole 415 Gnangara Road Gnangara WA 6077	Contact with the landowner could not be established to enter into a lease agreement for the proposal. This candidate was therefore discounted.
T	New 25m Monopole Hepburn Park 357 Alexander Drive Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
U	New 25m Monopole 365 Landsdale Road Landsdale WA 6065	Contact with the landowner could not be established to enter into a lease agreement for the proposal. This candidate was therefore discounted.

Table 2: Prospective Candidates Cont.		
Candidate	Site Address	Comments
V	New 25m Monopole 390 Kingsway Landsdale WA 6065	Contact with the landowner could not be established to enter into a lease agreement for the proposal. This candidate was therefore discounted.
W	New 25m Monopole 22 Langar Way Landsdale WA 6065	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
X	New 25m Monopole 385 Alexander Drive Landsdale WA 6065	Contact with the landowner could not be established to enter into a lease agreement for the proposal. This candidate was therefore discounted.
Y	New 25m Monopole 11 Langar Way Landsdale WA 6065	Contact with the landowner could not be established to enter into a lease agreement for the proposal. This candidate was therefore discounted.
Z	New 25m Monopole 68 Leach Way Gnangara WA 6077	After initial discussions, the proposal was not compatible with the landowner's plans for the property. This candidate was therefore discounted.
Proposed Candidate	New 25m Monopole Landsdale Forum 127 The Broadview Landsdale WA 6065	A facility in this location was able to achieve the coverage objectives for Vodafone and Optus.  The land has been previously cleared of all native vegetation to establish the existing Landsdale Forum Shopping Centre. As such, the proposed facility does not require any vegetation removal and is considered to have a negligible environmental impact.  Additionally, the amenity impacts of the proposal are considered to be appropriate in context, noting this is a well-established residential area, with few opportunities to site a facility further away from residences. The shopping centre grounds provide a buffer between the proposed facility and the nearest residences.  The landowner was amenable to entering into a lease agreement for the proposal.  As such, this was considered to be the most appropriate location for a facility in the area and is the subject of this development application.

## 4. Site Context

The proposal involves the establishment of a new 25m telecommunications facility at 127 The Broadview, Landsdale WA 6065 (Lot 991 on DP39373), to deliver improved network coverage and capacity to Vodafone and Optus customers in Landsdale. A copy of the title certificate is provided in **Appendix 1**. The subject lot is freehold land with private ownership signed owners' consent for lodgement of the development application is provided in **Appendix 2**.

The subject lot has a total land area of 1.5ha and is zoned Commercial, under the District Planning Scheme No. 2.

The subject site is located on a lot, which has been developed as the Landsdale Forum Shopping Centre. As part of Indara's preliminary investigations for a proposed facility, a number of locations were investigated on the subject site, as documented in **Figure 3** and **Table 3**.

The Landsdale Forum Shopping Centre is a small commercial precinct that is surrounded by low density residential development in all directions. The greater surroundings consist of a broad range of uses, with Broadview Park and Warradale Park located to the north, the land to the east of Alexander Drive is recognised as a Bush Forever land, while land to the west is identified as the Landsdale Industrial Park.



Figure 3: Candidate locations that were investigated on the Landsdale Forum Shopping Mall (Nearmap 2023).

Table 3: Investigated Locations	
Location	Comments
A	<p>This location was considered to have an unacceptable amenity impact on the frontage of the shopping centre and surrounding residences. Additionally, this location was subject to access and design constraints, due to the proximity to the roundabout and the steep topography of the land behind the 'Landsdale Forum' signage and fence.</p> <p>This location was therefore discounted.</p>
B	<p>This location was considered to have an unacceptable amenity impact on the frontage of the shopping centre and surrounding residences. Additionally, this location was subject to access and design constraints due to the steep topography of the land behind the fence.</p> <p>This location was therefore discounted.</p>
C	<p>This location had an unacceptable impact on the operation of the Landsdale Forum Shopping Centre, as it would have resulted in the reduction of several staff parking spaces.</p> <p>This location was therefore discounted.</p>
D	<p>This location had an unacceptable impact on the operation of the Landsdale Forum Shopping Centre, as it would have resulted in the removal of the garbage bay.</p> <p>This location was therefore discounted.</p>
E	<p>This location had an unacceptable impact on the operation of the Landsdale Forum Shopping Centre, as it would have resulted in impacts to the operation of the loading bay.</p> <p>This location was therefore discounted.</p>
F	<p>Due to the low elevation of the Landsdale Forum Shopping Centre, a rooftop facility was unable to achieve the coverage objectives of Vodafone and Optus.</p> <p>This location was therefore discounted.</p>



Table 3: Investigated Locations Cont.	
Location	Comments
G	<p>This location was originally identified as being a suitable location for the proposed monopole, as it was considered to have suitable separation from surrounding residential land uses.</p> <p>However, during a meeting between Indara and the City of Wanneroo, on the 6 September 2023, concerns were raised about the potential amenity impacts of a monopole in this location, on the Dordaak Kepap - Library and Youth Innovation Hub (Youth Hub), which is proposed on the adjoining lot.</p> <p>Following the meeting, Indara, in consultation with the landowner, reinvestigated an alternative location in the carpark, which was further away from the interface between the Landsdale Forum Shopping Centre and Youth Hub at Location J, which was supported by the City of Wanneroo.</p>
H	<p>This location had an unacceptable impact on the operation of the Landsdale Forum Shopping Centre, as it would have resulted in the reduction of several parking spaces.</p> <p>This location was therefore discounted.</p>
I	<p>This location was considered to have an unacceptable amenity impact on the residences directly to the west.</p> <p>This location was therefore discounted.</p>
J	<p>This location was originally as being a suitable location for the proposed monopole, due to its separation from the interface between the interface between the Landsdale Forum Shopping Centre and Youth Hub, which was supported by the City of Wanneroo.</p> <p>A monopole at this location was considered to have an acceptable amenity impact, in context, as the grounds of the Landsdale Forum Shopping Centre afford a level of separation from the surrounding residential land uses, the Youth Hub and Childcare Centre.</p> <p>Additionally, to minimise impacts on the operation of the Landsdale Forum Shopping Centre, the proposed equipment cabinets would be installed on the vacant land behind the building, to avoid the removal of any parking spaces.</p> <p>In summary, this location was considered to be the most appropriate location for a facility in light of the constraints.</p>



Figure 4: Aerial view of the subject site at 127 The Broadview, Landsdale, in context of the surrounding area (Nearmap 2023).



Figure 5: Aerial view of the indicative monopole and equipment cabinet locations, as shown in orange, in context of the proposed Youth Hub location (Nearmap 2023).



Figure 6: View of the existing access point off The Broadview (Google Street View 2023).



Figure 7: View of the indicative monopole location in the carpark, as outlined in red (Google Street View 2023).

## 5. Proposed Works

### 5.1 Equipment to be Installed

The proposed works involve installation of:

- One (1) 25m Indara monopole.
- One (1) new antenna headframe supporting fifteen (15) panel antennas.
- One (1) six bay outdoor equipment cabinet on a new concrete slab behind the shopping centre.
- Installation of a new 1.5m wide access gate on the existing Colourbond fence.
- Ancillary equipment associated with operation and safety of the facility, including remote radio units, underground conduits, cabling and antenna mounts, group meter panel and other similar equipment.

The proposed outdoor equipment cabinets will be established within a 6m x 6.5m compound at the rear of the shopping centre, while the proposed monopole will be located near the shopping trolley return bay, within the carpark.

The monopole and associated equipment will be finished in a pale grey, while the equipment cabinet will be a pale eucalypt or beige colour. However, Indara is willing to consider an alternative colour scheme at Council's request.

The attached drawings are included in **Appendix 3**.

## **5.2 Site Access and Parking**

The proposed facility will be accessible from the existing shopping centre entrance off The Broadview, this access point is suitable for both construction and ongoing maintenance of the facility and no upgrades or alterations are proposed.

During construction, there will be short-term traffic impacts to patrons of the shopping centre, lasting approximately 6 weeks. However, the construction activities will be scheduled in consultation with the landowner to minimise impacts as far as practical.

Once the proposed facility is operational, it will require access approximately 2-4 times annually for routine maintenance, during which a four-wheel drive vehicle is normally used. Heavy vehicle usage is low and anticipated to occur approximately once annually. The facility will otherwise operate on an unmanned basis and will not generate significant vehicle traffic.

## **5.3 Power and Utilities**

The proposal will include installation of underground power and fibre infrastructure, via trench. Indara will propose to connect the facility to mains power from the existing switchboard at the rear of the shopping centre.

No works associated with stormwater drainage, or connections to reticulated water and sewerage, are proposed or required.

## **5.4 Noise**

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.

Cooling equipment will only operate when required and will not operate continuously. Cooling equipment will operate at levels generally comparable to those of a domestic air conditioner.

## **5.5 Emissions**

Operation of the facility will not result in emission of 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. Refer Section 8 of this report.

## **5.6 Heritage**

The subject site is not heritage listed and searches indicate no record of European artefacts or sensitivity.

Regardless, should any artefacts be identified during the construction work, all works will cease, and the appropriate approvals will be attained from the relevant authorities.

## **5.7 Environmental Considerations**

Overall, the subject site is identified to have very minimal significant environmental value given the overall condition and historic disturbance of the site. The minimal environmental value is present in the current setting and use of the subject site as a shopping centre.

## **5.8 Aviation**

The proposed facility is not expected to have any impact on aviation safety. The facility is not within 15km of an airport or aerodrome and does not penetrate any Obstacle Limitation Surfaces. No specific aviation safety measures, such as lighting or obstacle paintwork, are currently proposed.

Council is to advise if any mitigation measures are required.

## 6. Legislative Context

### 6.1 Commonwealth Legislation

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

The *Telecommunications Act 1997* allows mobile carriers to perform certain maintenance and installation works without needing development consent. The *Telecommunications (Low-Impact Facilities) Determination 2018* also allows for certain kinds of 'Low Impact' equipment to be installed without development consent.

New towers do not fall within these federal planning exemptions. Accordingly, this proposal will require Council approval.

#### 6.1.2 Telecommunications Code of Practice 2021

The *Telecommunications Code of Practice 2021* emphasizes "best practice" for the installation of facilities, compliance with industry standards and minimisation of adverse impacts on the environment.

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

Sections 4.1 and 4.2 of the Code are relevant to this proposal, and require a precautionary approach to site selection, infrastructure design and site operation. The proposed facility has been sited and designed in accordance with Sections 4.1 and 4.2. Checklists demonstrating compliance can be provided on request.



The Code also requires an ARPANSA EME report be prepared for all new mobile base stations, to demonstrate compliance with relevant safety standards. The issued EME Report is provided in **Appendix 4**.

## **6.2 State Legislation**

### **6.2.1 Planning and Development Act 2005**

The *Planning and Development Act 2005* establishes the planning and development system framework in Western Australia.

The project is considered to be 'Development' as defined by Section 4 of the Act:

- a) *Any demolition, erection, construction, alteration of or addition to any building or structure on the land.*
- b) *The carrying out on the land of any excavation or other works.*
- c) *In the case of a place to which a protection order made under the Heritage Act 2018 Part 4 Division 1 applies, any act or thing that –*
  - (i) *Is likely to change the character of that place or the external appearance of any building; or*
  - (ii) *Would constitute an irreversible alteration of the fabric of any building.*

### **6.2.2 Metropolitan Region Scheme**

As noted in Clause 5 of the Metropolitan Region Scheme (MRS), the Western Australian Planning Commission (WAPC) is the responsible authority for the carrying out of the scheme, except where it has been delegated to another authority in accordance with Section 16 of the *Planning and Development Act 2005*. In this instance, authority was delegated to the City of Wanneroo upon the gazetting of the City of Wanneroo District Planning Scheme Number 2 (DPS) No. 2 on 6<sup>th</sup> of July 2001. Refer to Section 6.3 for further information.

### **6.2.3 State Planning Policy 2.4 Planning for Basic Raw Materials**

The proposed telecommunication facility is not identified to an extractive industry enterprise. As such, the proposed facility will not be assessed against the objectives of SPP2.4 - Planning for Basic Raw Materials as part of this town planning report.

### **6.2.4 State Planning Policy 5.2 Telecommunication Infrastructure**

The proposed telecommunications facility has is considered to be compliant with the objectives of the State Planning Policy 5.2 – Telecommunications Infrastructure. An assessment of the proposed facility is provided in **Table 4**.

Table 4: State Planning Policy 5.2 Telecommunication Infrastructure	
Clause 4 – Policy Objectives	
Objective	Comment
a) Facilitate the provision of telecommunications infrastructure in an efficient and environmentally responsible manner to meet community needs.	<p>Complies. The proposed facility is being deployed in a well-established area, that is currently experiencing coverage capacity issues. The location of the proposed facility has been chosen with consideration of the coverage objectives, proximity to sensitive land uses, visual impact, environmental outcomes, and a willing landowner.</p> <p>In this instance, there were very limited opportunities to site a facility away from residences. The Landsdale Forum Shopping Centre was the only candidate that was able to host a telecommunications facility, whilst also affording a level of separation from the surrounding residential development, due to the size of the lot. Due to the proximity to the existing sites to the north, as shown in Section 3, a feasible location for a new facility was unable to be found within the Landsdale Industrial Estate to the northwest.</p> <p>The site location was also chosen in consultation with the City of Wanneroo and the landowner, in order to minimise impacts to the Youth Hub, which has been proposed on the adjoining lot to the north.</p>
b) Manage the environmental, cultural heritage, visual and social impacts of telecommunications infrastructure.	<p>Complies. The proposed facility has been positioned in an existing commercial centre, which has been subjected to significant disturbance historically, no record of Aboriginal or European sensitivity was identified on the lot. Additionally, the proposed facility is considered to have a negligible environmental impact, as it does not require any vegetation removal or trimming.</p> <p>Regarding the amenity impacts, the monopole has been positioned within the carpark, which, in context, affords a level of separation from the surrounding residential development, Youth Hub and the Childcare Centre. Indara note that this is a well-established area, there were extremely limited opportunities to site a facility away from sensitive land uses, whilst still being able to achieve the coverage objectives for Vodafone and Optus.</p> <p>Regarding the social impact of telecommunications infrastructure, now more than ever, mobile telecommunications are an essential service. By extension, mobile base stations are essential infrastructure – it is important that mobile infrastructure keeps pace with this increasing demand.</p>

<p>c) Ensure that telecommunications infrastructure is included in relevant planning processes as essential infrastructure for business, personal and emergency reasons.</p>	<p>Not applicable. This purpose relates more to council strategic decision making, rather than the Indara proposal.</p>
<p>d) Promote a consistent approach in the preparation, assessment and determination of planning decisions for telecommunications infrastructure.</p>	
<p><b>Clause 5 – Policy Measures</b></p>	
<p><b>5.1 Visual Impacts</b></p>	
<p><b>5.1.1 The benefit of improved telecommunications services should be balanced with the visual impact on the surrounding area.</b></p>	
<p><b>Measure</b></p>	<p><b>Comment</b></p>
<p>i) Assessment of the visual impact of development proposals for telecommunications infrastructure should be made on a case-by-case basis.</p>	<p>Not applicable. This purpose relates more to council strategic decision making, rather than the Indara proposal.</p>
<p>ii) Telecommunications infrastructure should be sited and designed to minimise visual impact and whenever possible:</p> <ul style="list-style-type: none"> <li>a) Be located where it will not be prominently visible from significant viewing locations such as scenic routes, lookouts and recreation sites.</li> <li>b) Be located to avoid detracting from a significant view of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land.</li> <li>c) Not be located on sites where environmental, cultural heritage, social and visual landscape values may be compromised.</li> <li>d) Display design features, including scale, materials, external colours and finishes that are sympathetic to the surrounding landscape.</li> </ul>	<ul style="list-style-type: none"> <li>a) Complies. The proposed facility is not in the vicinity of any significant viewing locations, such as a scenic route, lookout or recreation site.</li> <li>b) Complies. The proposed facility has been sighted in in an existing commercial precinct carpark, which is positioned away from nearby local landmarks, heritage items or significant vistas, such as the Broadview Park. Additionally, the monopole has been positioned within the carpark, which, in context, affords a level of separation from the surrounding residential development, Youth Hub and the Childcare Centre. Indara note that this is a well-established area, there were extremely limited opportunities to site a facility away from sensitive land uses, whilst still being able to achieve the coverage objectives for Vodafone and Optus.</li> <li>c) Complies. The subject site is not identified as having any environmental or cultural heritage significance. Whilst there will be some amenity impacts on the surrounding locality, we note this is a technical requirement that cannot be avoided, as telecommunications facilities by their nature must protrude above the environment in order to function.</li> <li>d) Complies. The proposed facility will be finished in a pale grey, which is considered to be the most sympathetic finish with regards to blending into the urban landscape in all weathers. It will also match other existing vertical elements in the area, such as light poles and power poles. However, Indara are willing to consider an</li> </ul>

	alternative colour scheme, if required by the City of Wanneroo.
<p>iii) In addition to the existing exemptions under the Telecommunication Act, local governments should consider exempting telecommunications infrastructure from the requirement for development approval where:</p> <p>a) The infrastructure has a maximum height of 30 metres from finished ground level.</p> <p>b) The proposal complies with the policy measures outlined in this policy.</p> <p>c) The proponent has undertaken notification of the proposal in a similar manner to 'low impact facilities' as defined and set out in the Mobile Phone Base Station Deployment Industry Code (C564:2011).</p>	Not applicable. Written planning advice was received from the City of Wanneroo on 26 May 2023, noting that 'Telecommunications Infrastructure' is a discretionary use within the Commercial zone and development approval was required for the use to commence.
<p>iv) Telecommunications infrastructure should be located where it will facilitate continuous network coverage and/or improved telecommunications services to the community.</p>	Complies. The facility has been located in a position to provide continuous network coverage and/or improved telecommunications services to the surrounding community.
<p>v) Telecommunications infrastructure should be co-located and whenever possible:</p> <p>a) Cables and lines should be located within an existing underground conduit or duct.</p> <p>b) Overhead lines and towers should be co-located with existing infrastructure and/or within existing infrastructure corridors and/or mounted on existing or proposed buildings.</p>	<p>Complies. Despite there being no existing structures for co-location, the proposed facility will host two carriers initially. Additionally, the facility has been designed as a neutral host facility, capable of supporting co-location by other carriers, government entities and wireless service providers.</p> <p>a) Complies. Cables and lines will be located within underground conduits or ducts, to minimise amenity impacts.</p> <p>b) Complies as far as practical. As noted in Section 3, there were no suitable towers or structures on which to co-locate, as such as new monopole has been proposed.</p>
<b>Sub-Clause – 6.3.1 Information to be submitted when lodging a development application</b>	
<b>Item</b>	<b>Comment</b>
<p>a) A report demonstrating compliance with the Mobile Phone Base Station Deployment Industry Code (C564:2011), excluding Sections 6 and 7 (which only apply to developments that do not require development approval).</p>	Complies. The current code is the C564:2020 Mobile Phone Base Station Deployment Code. Sections 4.1 and 4.2 of the Code, relating to site selection and design, are applicable to the proposal and can be provided at request.
<p>b) A statement and/or a map indicating the extent to which the proposed</p>	Complies as far as practical. Specific carrier information such as coverage maps have not been included in this town

<p>facility addresses the network capacity for future demand and/or current gaps in service.</p>	<p>planning report given this information is defined as commercially sensitive information. This Town Planning Report identifies the coverage objectives to be achieved by the proposal.</p>
<p>c) A statement about the extent to which the proposed facility complies with any relevant local planning scheme or planning policy adopted under a scheme and (if applicable) justification for any variation from the relevant scheme or policy provisions.</p>	<p>Complies. Section 6 of this Town Planning Report addresses relevant legislative requirements.</p>
<p>d) Plans and coloured graphic illustrations, including photo simulations, showing the type of facility and its relationship with adjacent development, including the proposal's elevations showing the extent, height and appearance, proposed materials and colour, any screening or fencing, and any external lighting.</p>	<p>Complies. Refer to Appendix 3, Section 7 and Appendix 5 for further information on the design and visual impact.</p>
<p>e) Details of any significant environmental constraints, including those associated with the species, condition and significance of any vegetation to be removed.</p>	<p>Complies. Not Applicable. No vegetation trimming or removal is proposed.</p>
<p>f) Map and a statement about where the proposed facility is to be located. If the facility is proposed within an infrastructure easement or corridor, consultation with other users is to be demonstrated.</p>	<p>Complies. Refer Sections 3 and 4 of this Town Planning Report.</p>
<p>g) A statement explaining how the proposed facility addresses the policy measures for the location, siting and design of telecommunications infrastructure set out in Section 5.1.1 of this Policy.</p>	<p>Complies. Refer Sections 3, 4 and 5 of this Town Planning Report.</p>

## 6.3 Local Legislation – City of Wanneroo District Planning Scheme No. 2 (DPS2)

### 6.3.1 Commercial Zone

The site is subject is zoned as ‘Commercial’ under the DPS2. The Schedule 1 – Zoning Table identifies telecommunication facilities as being a use not permitted unless the local government has exercised its discretion by granting development approval. In this instance, the proposal is considered to be generally compliant.

<b>Table 5: Commercial Zone Objectives</b>	
<b>DPS2 – Table 2 – Zone Objective</b>	
<b>Zone Name – Commercial</b>	<b>Objective</b>
To provide for a range of shops, offices, restaurants, and other commercial outlets in defined townsites or activity centres.	Complies. The proposal will provide essential supporting mobile and data services to support commercial businesses operating in the surrounding area.
To maintain the compatibility with the general streetscape, for all new buildings in terms of scale, height, style, materials, street boundary and design of facades.	Complies. The proposed facility is being deployed in a well-established area, that is currently experiencing coverage capacity issues. The location of the proposed facility has been chosen with consideration of the coverage objectives, proximity to sensitive land uses, visual impact, environmental outcomes, and a willing landowner.
To ensure that development is not detrimental to the amenity of adjoining owners or residential properties in the locality.	<p>In this instance, there were very limited opportunities to site a facility away from residences. The Landsdale Forum Shopping Centre was the only candidate that was able to host a telecommunications facility, whilst also affording a level of separation from the surrounding residential development, due to the size of the lot. Due to the proximity to the existing sites to the north, as shown in Section 3, a feasible location for a new facility was unable to be found within the Landsdale Industrial Estate to the northwest.</p> <p>The monopole has been positioned within the carpark, which, in context, affords a level of separation from the surrounding residential development, Youth Hub and the Childcare Centre. Indara note that this is a well-established area, there were extremely limited opportunities to site a facility away from sensitive land uses, whilst still being able to achieve the coverage objectives for Vodafone and Optus.</p>

	The site location was also chosen in consultation with the City of Wanneroo and the landowner, in order to minimise impacts to the Youth Hub, which has been proposed on the adjoining lot to the north.
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## 7. Visual Impact

### 7.1 Visual Impact Assessment

Telecommunications facilities, by their nature, must be tall enough to protrude above the surrounding environment to function. At this location, a 25m monopole is required to meet the targeted coverage objectives for Vodafone and Optus; it is the smallest structure capable of achieving a feasible level of service.

Indara acknowledge the facility will be visible from a number of perspectives within the locality. However, the visual impact of this proposal is considered appropriate in context – the site is located in a well-established residential area, with extremely limited opportunities to site a facility away from sensitive land uses. As far as practical, Indara has sought to minimise amenity impacts on the surrounding locality.

Urban environments, such as this, are often interspersed with tall vertical elements, such as power poles, light poles and signage, which are established features across these landscapes. Accordingly, the proposed facility is not considered to be out of scale, context or character for the area.

Additionally, certain measures have been taken to ensure that visual impact is mitigated as much as practicable, these include:

- Use of a monopole is proposed. Monopoles are considered to be a sympathetic inclusion to the environment when compared to other structure types, such as lattice towers, because of their slimmer profile.
- To minimize visual bulk, Vodafone and Optus antennas will be mounted on a single headframe, reducing visual impact compared with separate headframes at different heights.
- Indara has sought to minimise amenity impacts as far as possible by locating the proposed facility within the carpark, close to the centre of the lot, which affords a level of separation from the surrounding land uses.
- The facility will be finished in unpainted grey, which will be of a similar appearance to other lighting and electrical infrastructure. Grey facilities also tend to blend well into the skyline in

all weathers and are considered to be the most sympathetic finish with regards to blending a facility into an urban landscape. However, Indara will consider an alternate colour scheme if requested by the City of Wanneroo.

## 7.2 Technical Requirements

The visual impact of the proposed facility should also be considered in light of technical requirements; there are numerous technical requirements that need to be considered by mobile carriers with regards to site selection:

- Base stations must be close to the area they are servicing. Relocating the facility, even by a small distance, could impact the site's ability to service the area effectively, particularly when an area is subject to significant constraints.
- Individual base stations are cells within a wider network, meaning they must also work in conjunction with surrounding base stations in the area. If sites are too close to each other, they may cause interference, while sites that are too far from each other, may result in coverage interruptions. In this instance, the subject site works in conjunction with the existing facilities within the broader locality, by ensuring the continuity of service, previously provided by the decommissioned facility.
- The coverage from a base station is impacted by terrain and environmental obstructions, like buildings and vegetation. Even a small shift can result in impacts to coverage.

The proposed facility is in a favourable location to service the local area. Even if an alternate site were available, relocating the facility may result in a substantially worse service outcome.

The surrounding area has critical need for improved network coverage to meet both the existing demand, as well as future demand, as the population and employment centres grow. Not only must coverage be strong, but network capacity must be sufficient for both the existing, as well as planned population density growth.

Refer to **Appendix 5** for a copy of the photomontages, which have been prepared to supplement the visual impact assessment.





*Figure 8: Existing view along The Broadview, facing southwest towards the proposed monopole location, at a distance of 80m (Google Street View 2023).*



Figure 9: Existing view, from the roundabout of The Broadview and Brendale Place, facing northwest towards the proposed monopole location at a distance of 130m (Google Street View 2023).



**Figure 10: Existing view, from the intersection of The Broadview and Ringrose Heights, facing northeast towards the proposed monopole location at a distance of 120m (Google Street View 2023).**



Figure 11: Existing view, from the intersection of The Broadview and Rayner Drive, facing northeast towards the proposed monopole location at a distance of 185m (Google Street View 2023).

## 8. Radiofrequency Emissions and Safety

It is the position of the Australian government, and peak health bodies like the World Health Organization (WHO), that mobile base stations are safe.

### **Statement from Australia's Chief Medical Officer**

*I'd like to reassure the community that 5G technology is safe. There is no evidence that telecommunication technologies, such as 5G, cause adverse health impacts. This position is supported by health authorities in Australia – such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) – and around the world, such as the World Health Organization.*

*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>**

### **Australian Government Advice**

*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.infrastructure.gov.au/media-centre/5g-and-electromagnetic-energy>**

*EME is one of the most heavily studied types of energy in the world. Decades of research shows there is no verifiable evidence that EME from telecommunications facilities pose a negative health risk, especially when emission levels are below the maximum exposure limits set out in the Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz (the Standard).*

**<https://www.infrastructure.gov.au/media-technology-communications/spectrum/5g-eme>**

All mobile base stations in Australia must comply with a strict safety standard called the *Standard for Limiting Exposure to Radiofrequency Fields – 100 KHz to 300 GHz (RPS S-1)*. The standard has been 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) regulates compliance with the standard. The safety standard applies to all mobile frequencies currently used in Australia, including 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 EME report has been prepared to demonstrate compliance with the Australian standard. This report demonstrates the maximum signal strength that a proposed telecommunications facility is capable of producing, assuming it is operating at maximum capacity.

This facility will operate at maximum EME levels representing **4.10%** of the Australian standard. Refer to **Appendix 4**.

Note that 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. Actual EME levels emitted by the facility will generally be much lower than those shown in the ARPANSA EME Report.

## 9. Conclusion

Indara is seeking development consent to install a new telecommunications facility at 127 The Broadview, Landsdale WA 6065 (Lot 991 on Parcel 39373). The new facility is proposed to improve Vodafone and Optus coverage to Landsdale and the surrounding area by improving network coverage and capacity.

The facility has been sited to minimise impact on surrounding land uses 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 3: Proposal Plans



DATE OF ISSUE	22.05.23	19.10.23																		
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DRAWING PACKAGE VERSION	1	2																		
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**GENERAL DRAWINGS**

G1	SITE AND LOCALITY PLANS	A	B																	
G2	SITE SETOUT PLAN	A	B																	
G3	SITE ELEVATION	A	B																	

**RADHAZ / EXCLUSION ZONE DRAWING**


**STRUCTURAL DRAWINGS**

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**ELECTRICAL DRAWINGS**


**FITOUT ROOM DRAWINGS**

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**LEASE DRAWINGS**

L1	LEASE PLAN	A	B																	
L1-A	LEASE PLAN (ENLARGED VIEW)	A	B																	

**REFERENCE DRAWINGS**


**DISTRIBUTION LIST**

INDARA	INDARA REGIONAL PM	1	1																	

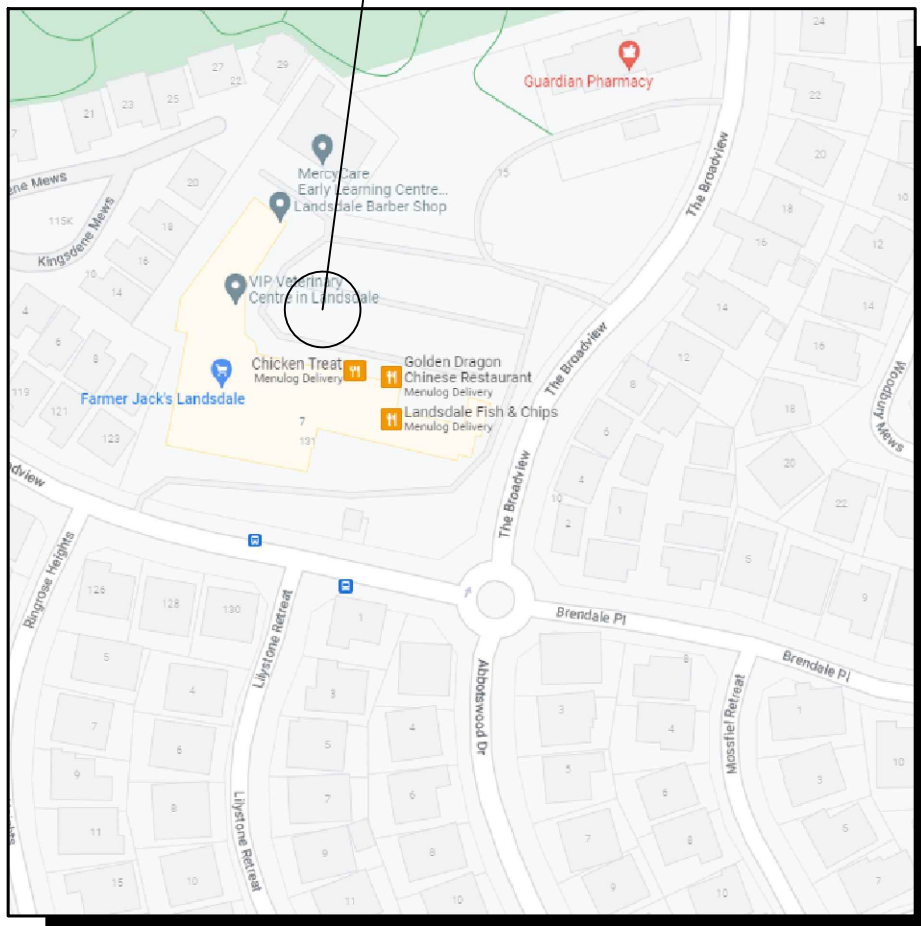


INDARA SITE NO: 3401197  
 SITE NUMBER 640064  
 LANDSDALE CENTRAL  
 127 THE BROADVIEW,  
 LANDSDALE WA 6065

GREENFIELD eJV - INDARA



INDARA SITE 3401197



COPYRIGHT © GOOGLE MAPS

**SITE LOCALITY PLAN**

NOT TO SCALE

PROPOSED INDARA 25m HIGH MONOPOLE

PROPOSED INDARA LEASE AREA-1 (6.0m X 6.0m)

PROPOSED U/G TRUNK CABLE ROUTE

PROPOSED INDARA LEASE AREA-2 (6m X 6.5m)

PROPOSED U/G SUB-MAIN SUB-MAIN ROUTE, APPROX. 70m (SHOWN INDICATIVE)

PROPOSED UNDERGROUND FIBRE ROUTE (SHOWN INDICATIVE)

EXISTING RESIDENTIAL BUILDINGS

EXISTING COLORBOND FENCE / PROPERTY BOUNDARY

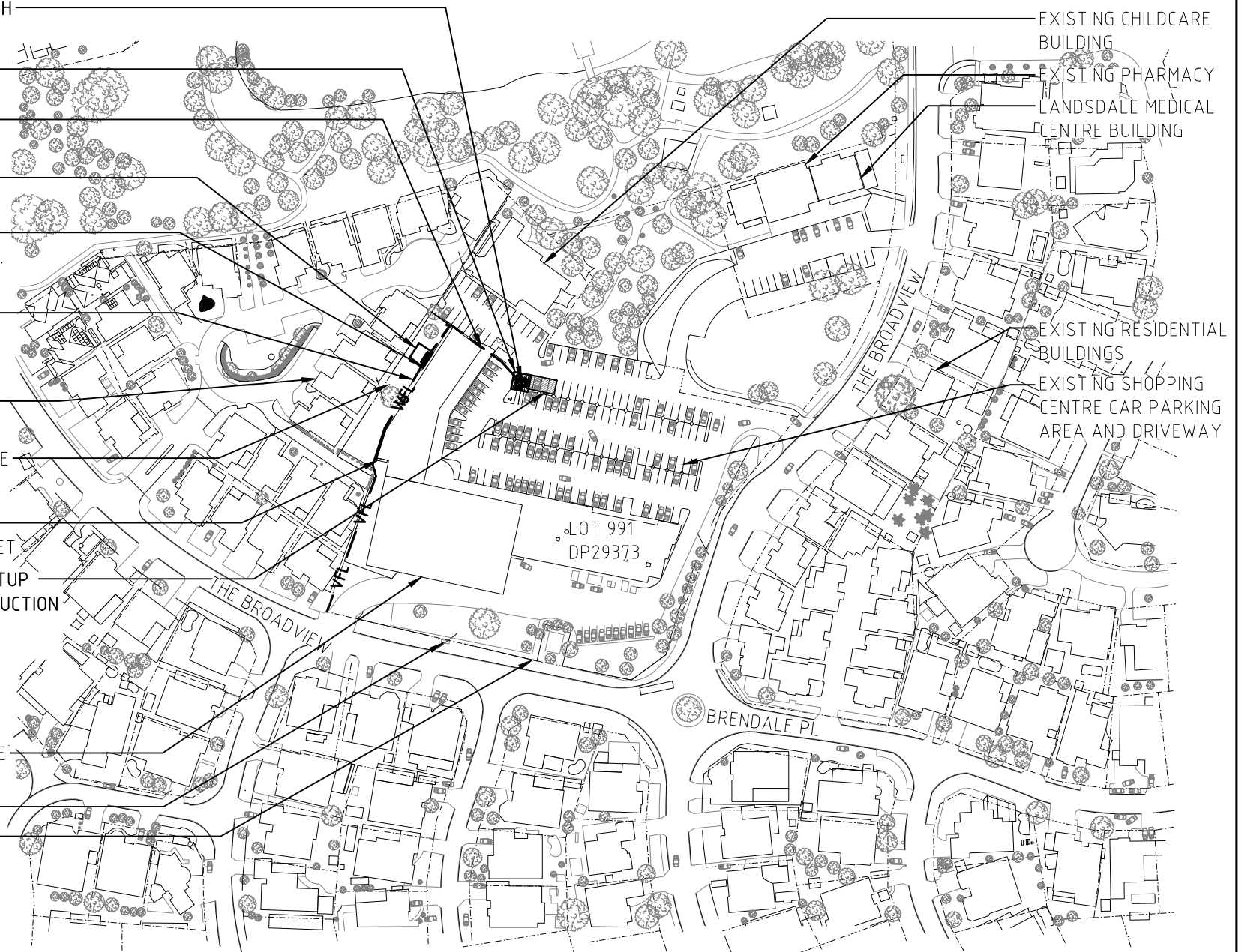
EXISTING METERBOARD / MAIN SWITCHBOARD CABINET

PROPOSED EWP/CRANE SETUP LOCATION (TBC BY CONSTRUCTION CONTRACTOR). TRAFFIC MANAGEMENT IS REQUIRED

EXISTING SHOPPING CENTRE BUILDING

EXISTING BUS STOP

EXISTING STEEL FENCE / PROPERTY BOUNDARY



**SITE ACCESS**

SCALE 1:2000

**LEGEND**

- PROPERTY BOUNDARY
- - - e - - - e - - - PROPOSED UNDERGROUND POWER
- Ve — Ve — PROPOSED SUBMAINS
- VFL — VFL — PROPOSED UNDERGROUND FIBRE LINK

RFNSA NUMBER: XXXXXX		
CARRIER	SITE NAME	SITE ID

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
B	19.10.23	PRELIMINARY - MONOPOLE LOCATION CHANGED	INDARA	SK	SH	PM
A	22.05.23	PRELIMINARY (GREENFIELD EJV - INDARA)	INDARA	SK	SH	PM



SITE NUMBER 640064  
LANDSDALE CENTRAL  
127 THE BROADVIEW,  
LANDSDALE WA 6065

GREENFIELD eJV - INDARA

TITLE SITE AND LOCALITY PLANS		
DRAWING STATUS PRELIMINARY	DRAWING No. 640064 - G1	REV B



**LEGEND**

- / — FENCE
- Ve — Ve — PROPOSED SUBMAINS
- VFL — VFL — PROPOSED UNDERGROUND FIBRE LINK
- - - - - PROPOSED INDARA LEASE

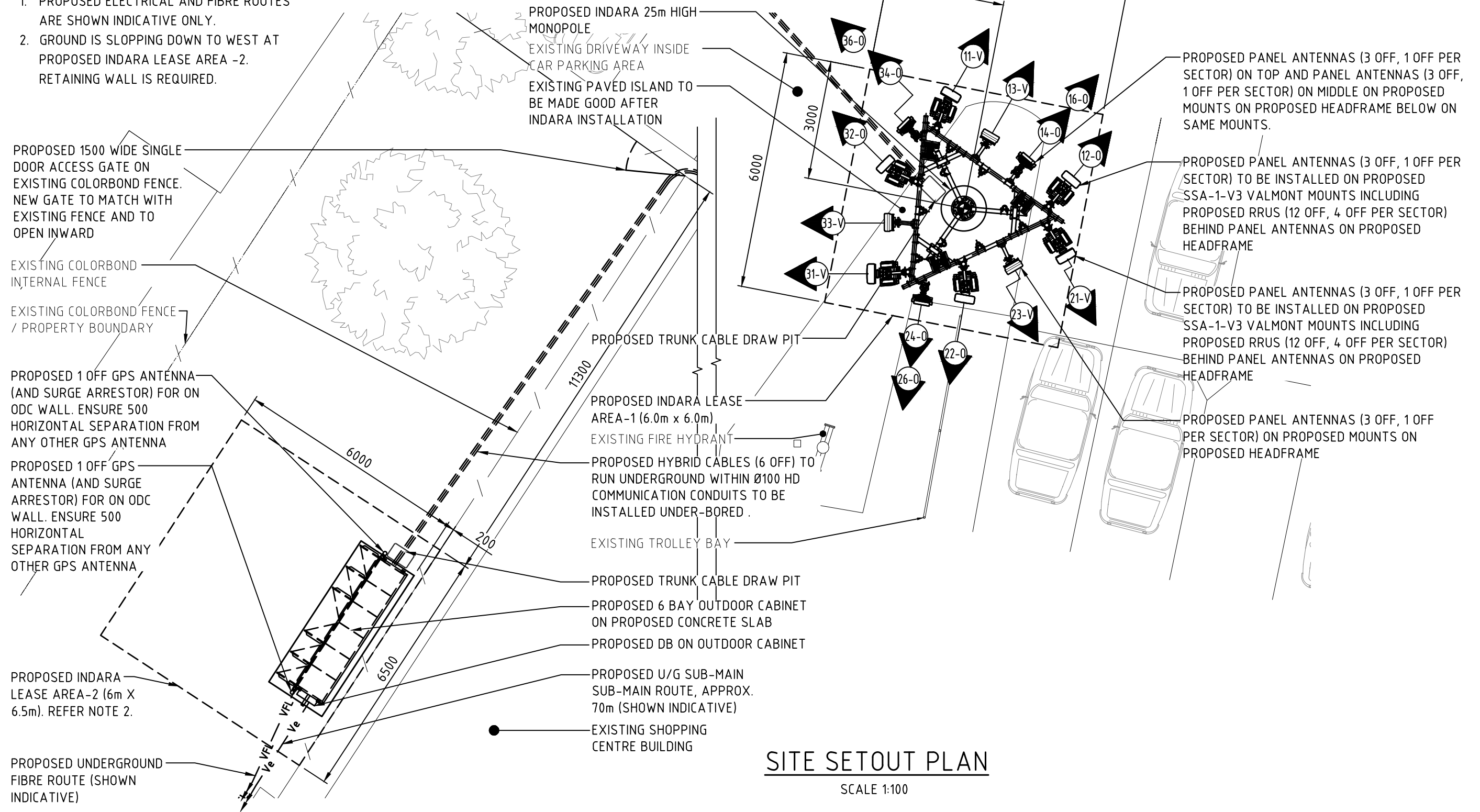
**LEGEND:**

- ⬆ ID PROPOSED, REPLACE, ETC

DATUM POINT	GDA94 CO-ORDINATES		ZONE	GROUND LEVEL
●	EASTING	392 364	50	A.H.D RL. 48.00m EL 0.0m
	NORTHING	6 480 366		
	LATITUDE	-31.80725°		
	LONGITUDE	115.862861°		

**NOTES:**

1. PROPOSED ELECTRICAL AND FIBRE ROUTES ARE SHOWN INDICATIVE ONLY.
2. GROUND IS SLOPPING DOWN TO WEST AT PROPOSED INDARA LEASE AREA -2. RETAINING WALL IS REQUIRED.



**SITE SETOUT PLAN**

SCALE 1:100

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
B	19.10.23	PRELIMINARY - MONOPOLE LOCATION CHANGED	INDARA	SK	SH	PM
A	22.05.23	PRELIMINARY (GREENFIELD EJ.V - INDARA)	INDARA	SK	-	PM



SITE NUMBER 640064  
LANDSDALE CENTRAL  
127 THE BROADVIEW,  
LANDSDALE WA 6065

GREENFIELD eJV - INDARA

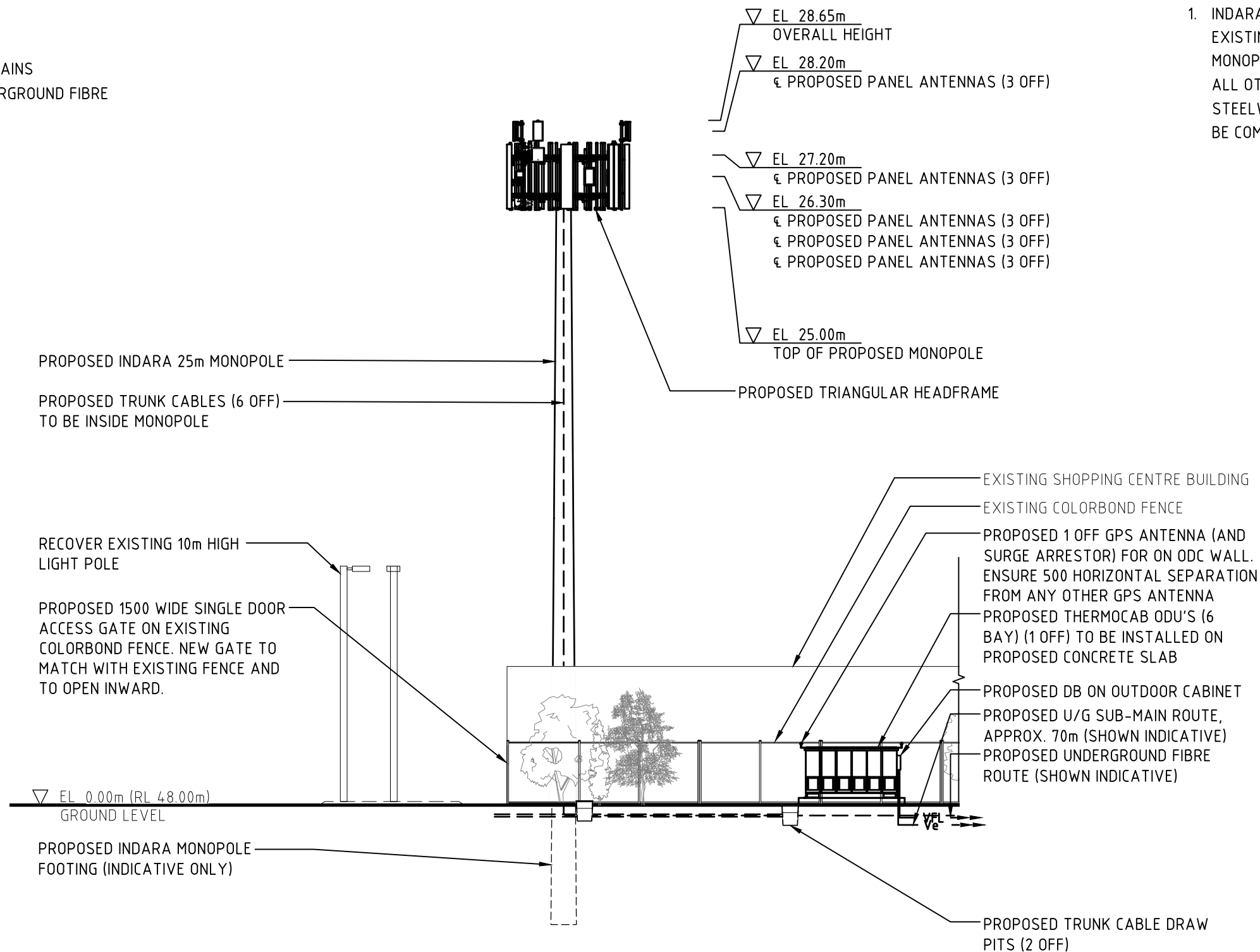
TITLE		
SITE SETOUT PLAN		
DRAWING STATUS	DRAWING No.	REV
PRELIMINARY	640064 - G2	B

**LEGEND**

- Ve — Ve — PROPOSED SUBMAINS
- VFL — VFL — PROPOSED UNDERGROUND FIBRE LINK

**NOTES:**

1. INDARA CONTRACTOR TO RELOCATE EXISTING PARKING LIGHT TO EXISTING MONOPOLE TO MATCH EXISTING HEIGHT. ALL OTHER ASSOCIATED WORK (MOUNTING STEELWORK AND ELECTRICAL CABLING) TO BE COMPLETED BY INDARA.



**NORTH-WEST ELEVATION**

SCALE 1:200

								SITE NUMBER 640064 LANDSDALE CENTRAL 127 THE BROADVIEW, LANDSDALE WA 6065		GREENFIELD eJV - INDARA		TITLE SITE ELEVATION				
B	19.10.23	PRELIMINARY - MONOPOLE LOCATION CHANGED				INDARA	SK	SH	PM			DRAWING STATUS		DRAWING No.		REV
A	22.05.23	PRELIMINARY (GREENFIELD EJV - INDARA)				INDARA	SK	-	PM			PRELIMINARY		640064 - G3		B
REV	DATE	REVISION DESCRIPTION				VENDOR	DRAWN	DESIGNED	APPRD							

PROPOSED INDARA LEASE  
AREA-1 (6.0m X 6.0m)

PROPOSED INDARA 25m HIGH  
MONOPOLE

PROPOSED UNDERGROUND HYBRID  
CABLES (6 OFF) ROUTE.

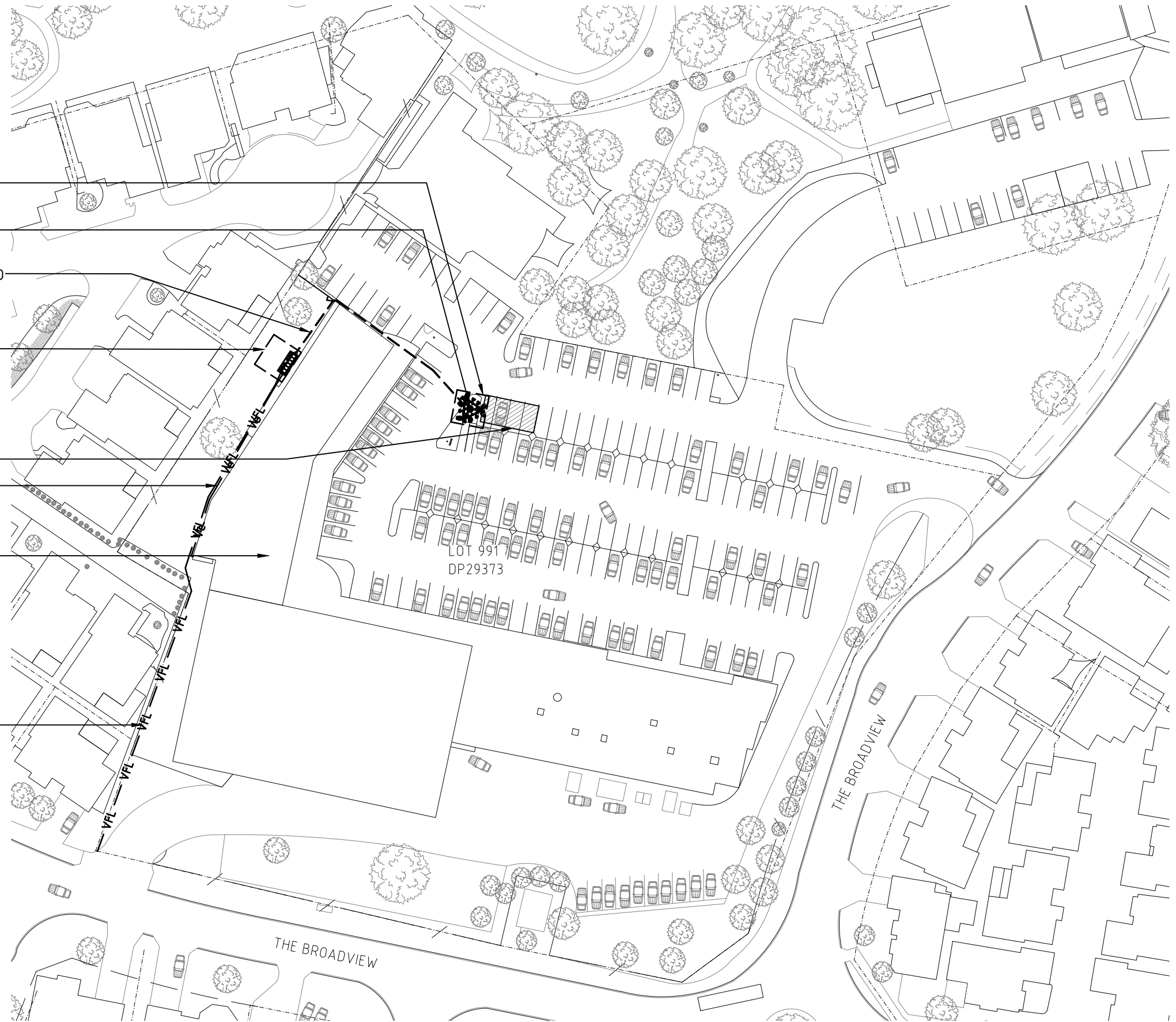
PROPOSED INDARA LEASE  
AREA-2 (6m X 6.5m)

PROPOSED EWP LOCATION

PROPOSED UNDERGROUND  
ELECTRICAL CABLE ROUTE  
(SHOWN INDICATIVE)

EXISTING SHOPPING  
CENTRE BUILDING

PROPOSED UNDERGROUND  
FIBRE ROUTE (SHOWN  
INDICATIVE)



**LEASE PLAN**

SCALE 1:800

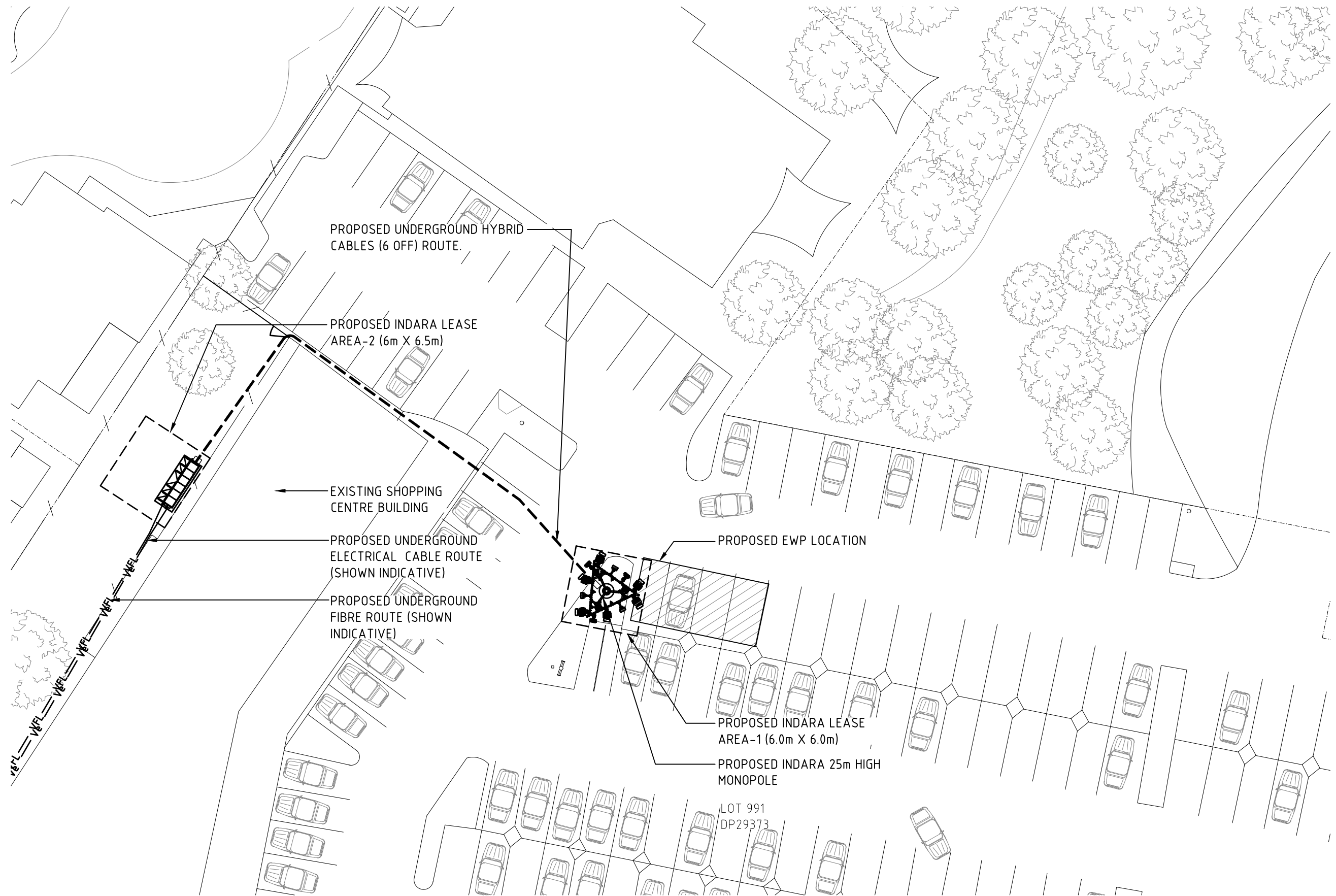
REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
B	19.10.23	PRELIMINARY - MONOPOLE LOCATION CHANGED	INDARA	SK	SH	PM
A	22.05.23	PRELIMINARY (GREENFIELD EJV - INDARA)	INDARA	SK	-	PM



SITE NUMBER 640064  
LANDSDALE CENTRAL  
127 THE BROADVIEW,  
LANDSDALE WA 6065

GREENFIELD eJV - INDARA

TITLE		
LEASE PLAN		
DRAWING STATUS	DRAWING No.	REV
PRELIMINARY	640064 - L1	B



**LEASE PLAN**

SCALE 1:300

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
B	19.10.23	PRELIMINARY - MONOPOLE LOCATION CHANGED	INDARA	SK	SH	PM
A	22.05.23	PRELIMINARY (GREENFIELD EJV - INDARA)	INDARA	SK	-	PM



SITE NUMBER 640064  
 LANDSDALE CENTRAL  
 127 THE BROADVIEW,  
 LANDSDALE WA 6065

GREENFIELD eJV - INDARA

TITLE  
**LEASE PLAN (ENLARGED VIEW)**

DRAWING STATUS	DRAWING No.	REV
PRELIMINARY	640064 - L1-A	B

# Appendix 4: ARPANSA EME Report

# Environmental EME Report

<b>Location</b>	127 The Broadview, LANDSDALE WA 6065		
<b>Date</b>	19/10/2023	<b>RFNSA No.</b>	6065026

## How does this report work?

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at 127 The Broadview, LANDSDALE WA 6065. These levels have been calculated by Indara using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

A document describing how to interpret this report is available at ARPANSA's website:

[A Guide to the Environmental Report.](#)

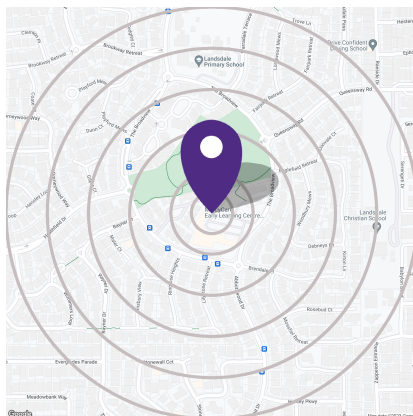
## A snapshot of calculated EME levels at this site

There are currently no existing radio systems for this site.

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

# 4.10%

out of 100% of the public exposure limit, 157 m from the location.



### EME levels with the proposed changes

Distance from the site	Percentage of the public exposure limit
0-50 m	1.46%
50-100 m	2.77%
100-200 m	4.10%
200-300 m	3.36%
300-400 m	1.52%
400-500 m	0.82%

For additional information please refer to the EME ARPANSA Report annexure for this site which can be found at <http://www.rfnsa.com.au/6065026>.



## Radio systems at the site

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

Carrier	Existing		Proposed	
	Systems	Configuration	Systems	Configuration
Vodafone			5G	NR/LTE1800 (proposed), NR/LTE2100 (proposed), NR700 (proposed), NR/LTE850 (proposed), NR3500 (proposed)
Optus			4G, 5G	NR/LTE700 (proposed), NR/LTE900 (proposed), LTE1800 (proposed), NR/LTE2100 (proposed), LTE2600 (proposed), NR3500 (proposed), NR2300 (proposed)

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

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

Distance from the site	Existing configuration			Proposed configuration		
	Electric field (V/m)	Power density (mW/m <sup>2</sup> )	Percentage of the public exposure limit	Electric field (V/m)	Power density (mW/m <sup>2</sup> )	Percentage of the public exposure limit
0-50m				6.68	118.42	1.46%
50-100m				9.72	250.85	2.77%
100-200m				10.41	287.20	4.10%
200-300m				9.45	237.12	3.36%
300-400m				6.39	108.21	1.52%
400-500m				4.75	59.87	0.82%

## Calculated EME levels at other areas of interest

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

### Maximum cumulative EME level for the proposed configuration

Location	Height range	Electric field (V/m)	Power density (mW/m <sup>2</sup> )	Percentage of the public exposure limit
MercyCare Early Learning Centre Landsdale	0-3 m	5.15	70.43	0.87%
Landsdale Primary School	0-6 m	4.83	61.98	0.82%
Landsdale Christian School	0-6 m	2.78	20.50	0.28%

## Appendix 5: Photomontages



**NOTES**

- PHOTOGRAPH TAKEN APPROXIMATELY 155M NORTHWEST OF SITE, FROM THE BROADVIEW
- MONTAGE SHOWS FACILITY WITH SINGLE HEADFRAME IN AN UNFINISHED GREY COLOUR
- MONTAGE SHOWS THE REDEVELOPED PRECINCT WITH THE DORDAK KEPAP - LIBRARY AND YOUTH INNOVATION HUB
- MONTAGES HAVE BEEN PREPARED AS ACCURATELY AS POSSIBLE, BUT ARE NOT TO SCALE AND ARE INDICATIVE ONLY

**PHOTOMONTAGE – VIEW OF FACILITY FROM THE BROADVIEW**

**FOR REFERENCE**



**NOTES**

- PHOTOGRAPH TAKEN APPROXIMATELY 120M SOUTHEAST OF SITE, FROM THE ROUNDABOUT INTERSECTION OF THE BROADVIEW AND BRENDALE PLACE
- MONTAGE SHOWS FACILITY WITH SINGLE HEADFRAME IN AN UNFINISHED GREY COLOUR
- MONTAGES HAVE BEEN PREPARED AS ACCURATELY AS POSSIBLE, BUT ARE NOT TO SCALE AND ARE INDICATIVE ONLY

**PHOTOMONTAGE – VIEW OF FACILITY FROM THE ROUNDABOUT INTERSECTION OF THE BROADVIEW AND BRENDALE PLACE**

**FOR REFERENCE**



**NOTES**

- PHOTOGRAPH TAKEN APPROXIMATELY 190M SOUTHWEST OF SITE, FROM THE INTERSECTION OF THE BROADVIEW AND RAYNER DRIVE
- MONTAGE SHOWS FACILITY WITH SINGLE HEADFRAME IN AN UNFINISHED GREY COLOUR
- MONTAGES HAVE BEEN PREPARED AS ACCURATELY AS POSSIBLE, BUT ARE NOT TO SCALE AND ARE INDICATIVE ONLY

**PHOTOMONTAGE – VIEW OF FACILITY FROM THE INTERSECTION OF THE BROADVIEW AND RAYNER DRIVE**

**FOR REFERENCE**