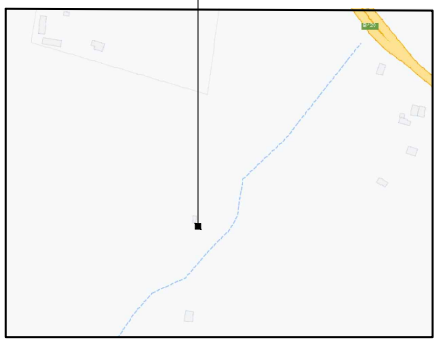
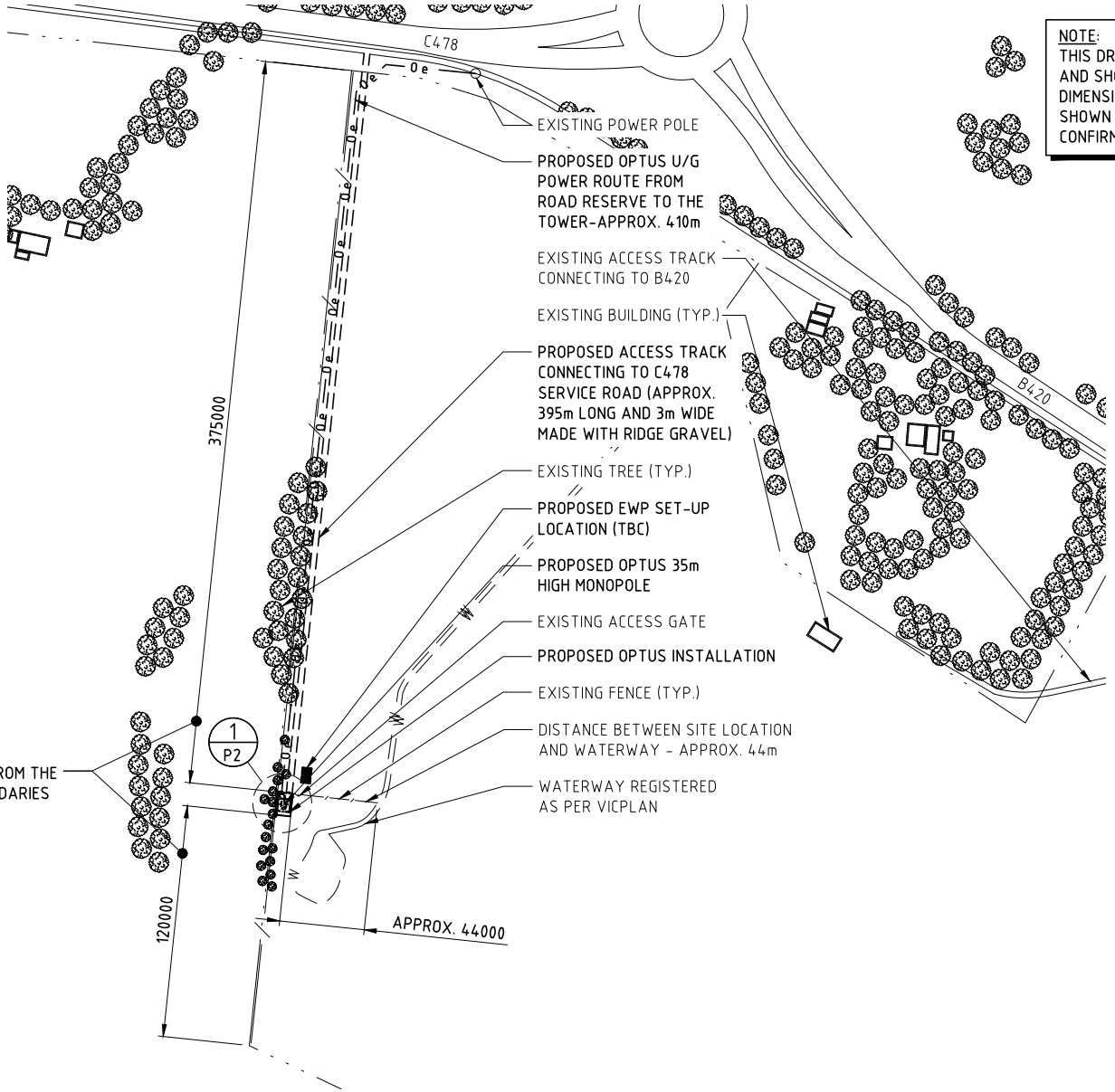


LOCALITY MAP

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LEGEND

- BOUNDARY LINE
- W — WATERWAY
- EXISTING FENCE
- 0e 0e — PROPOSED U/G POWER ROUTE

OVERALL SITE PLAN

SCALE 1:2500

Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver
01	09.10.23	ISSUED FOR APPROVAL	INDARA	JM	JMB	GH	PM

indara DIGITAL INFRASTRUCTURE

Project:
MOBILE NETWORK AUSTRALIA
SITE No:- M3952
SUNDERLAND BAY
LOT 1, PHILLIP ISLAND ROAD

Drawing Title:
OVERALL SITE PLAN

Drawing Status: FOR APPROVAL

Drawing No. M3952-P1

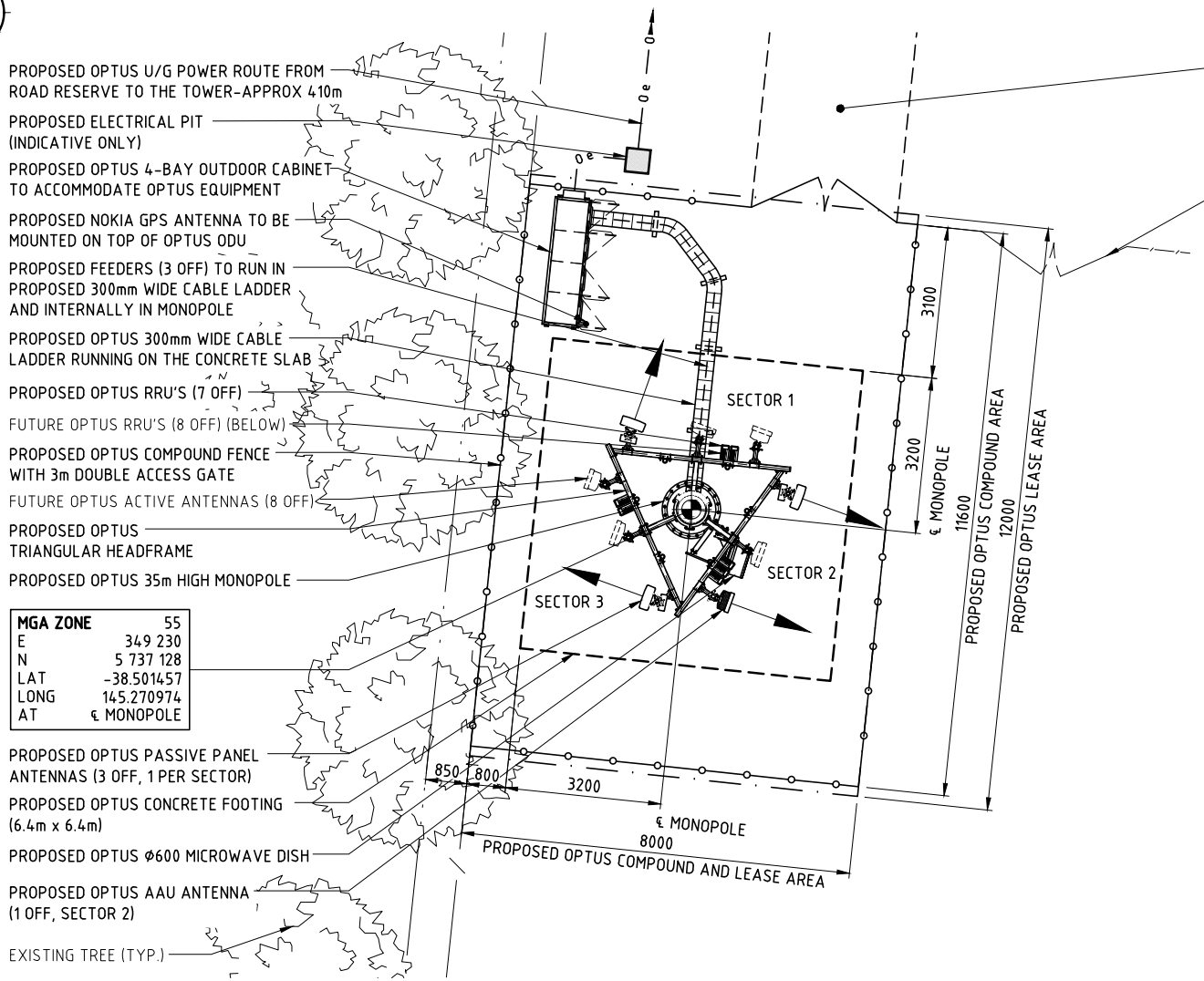
Revision 01

CAD File: C:\Users\Samson.Thoffekai\Desktop\M3952-DSL.dwg Date: 10.10.2023 2:02 PM

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20 10 0 10 20 30 40 50mm

A3



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SITE ADDRESS:
LOT 1, PHILLIP ISLAND ROAD,
SUNDERLAND BAY,
VIC 3922

NOTES:

1. BASIS OF DESIGN
> SITE INSPECTION 24/03/23

2. PANEL ANTENNAS
> PROPOSED SERVICE BEAM 28 PORT ANTENNAS (2 OFF, SECTORS 1 & 3) AT EL 35.0m
> PROPOSED 12 PORT ANTENNA (1 OFF, SECTOR 2) AT EL 35.0m
> PROPOSED OPTUS AAU ANTENNA NR3500 (1 OFF, SECTOR 2) AT EL 36.0m
> FUTURE OPTUS AAU ANTENNA NR3500 (2 OFF, SECTOR 1 & 3) AT EL 36.0m & (3 OFF) AT EL 33.5m
> FUTURE OPTUS AAU ANTENNA NR2300 (3 OFF, 1 PER SECTOR) AT EL 35.0m
> PROPOSED NOKIA GPS ANTENNA TO BE MOUNTED ON TOP OF OPTUS ODU
> SECTOR 1 - 20°, SECTOR 2 - 110°, SECTOR 3 - 290°

3. RRU'S ANCILLARIES EQUIPMENT
> PROPOSED OPTUS RRU'S (7 OFF) AT EL. 35.5m
> FUTURE OPTUS RRU'S (8 OFF) AT EL. 34.5m

4. TRANSMISSION
> PROPOSED OPTUS Ø600mm MICROWAVE DISH ANTENNA AT EL 15.0m

5. EQUIPMENT OUTDOOR CABINET
> PROPOSED 4-BAY OUTDOOR CABINET
> SUPPORTED ON PROPOSED CONCRETE SLAB FOOTING (TBC)

6. MONOPOLE
> PROPOSED 35m HIGH MONOPOLE WITH TRIANGULAR HEADFRAME

7. FEEDER CABLES/HYBRID CABLES
> 9/18 TRUNK CABLES (3 OFF) ALL SECTORS
> LENGTH: 40m ALL SECTORS
> 300mm WIDE HORIZONTAL CABLE LADDER

8. SITE ACCESS
> VIA PROPOSED ACCESS TRACK CONNECTION TO C478 BACK BEACH ROAD VIA GRAVEL ROAD

9. ANTENNA ACCESS
> VIA EWP BY QUALIFIED RIGGER PERSONNEL ONLY

10. POWER SUPPLY
> PROPOSED OPTUS POWER TO BE SOURCED FROM EXISTING POWER SUPPLY AT 55m FROM SITE LOCATION. FINAL DESIGN AND ROUTE TBC
> DETAILS TO BE CONFIRMED/ADVISED

LEGEND

PROPOSED LEASE AREA
PROPOSED OPTUS FENCE
PROPOSED U/G POWER ROUTE
EXISTING FENCE

DETAIL 1 / P1
SCALE 1:100

Rev	Date	Revision Details					
01	09.10.23	ISSUED FOR APPROVAL	INDARA Consultant	JM CAD	JMB Designer	GH Verifier	PM Approver

indara DIGITAL INFRASTRUCTURE

Project:
MOBILE NETWORK AUSTRALIA
SITE No:- M3952
SUNDERLAND BAY
LOT 1, PHILLIP ISLAND ROAD

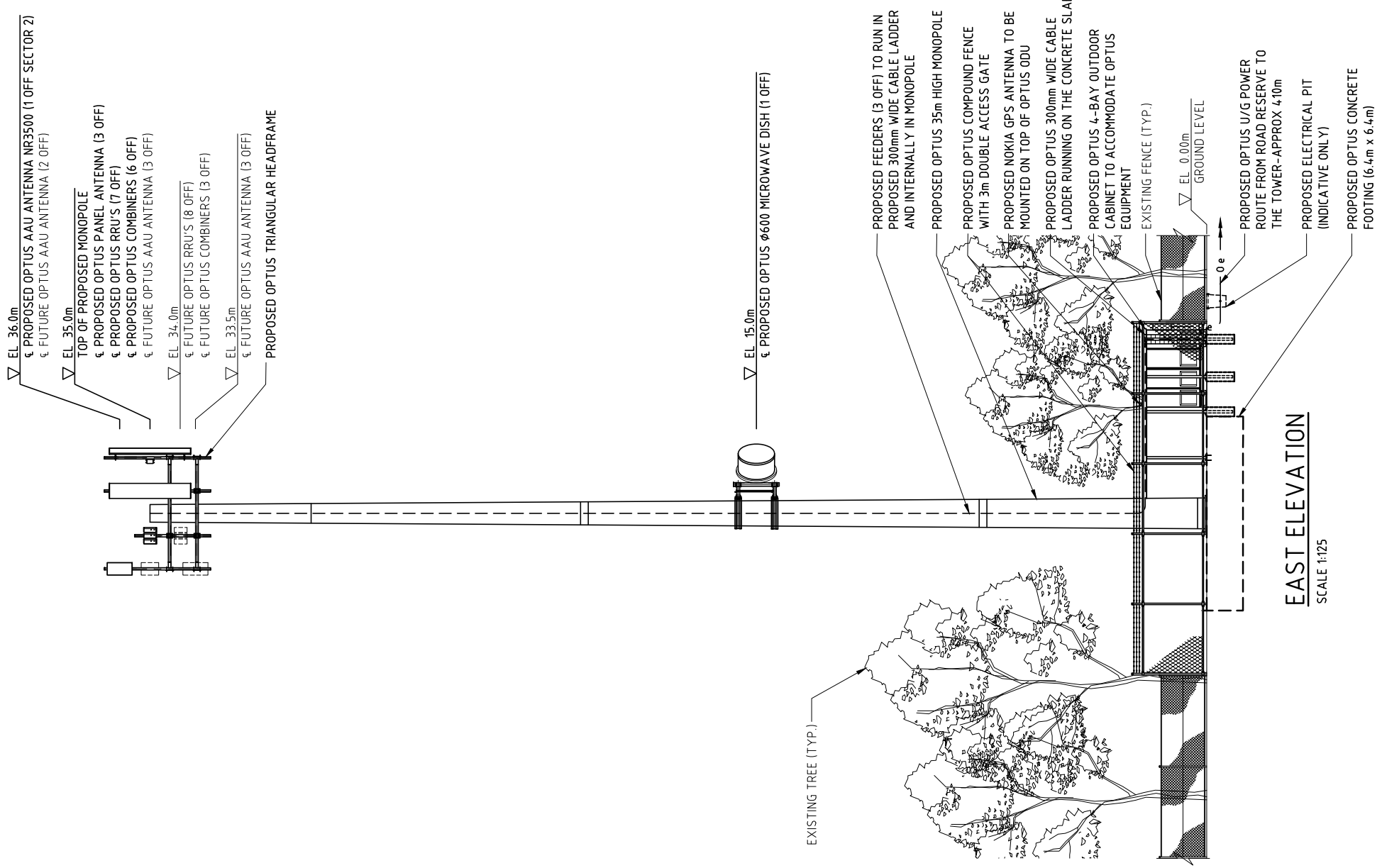
Drawing Title:
DRAFT SITE LAYOUT

Drawing Status: FOR APPROVAL
Drawing No. M3952-P2
Revision 01

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EAST ELEVATION

SCALE 1:125

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01	09.10.23	ISSUED FOR APPROVAL	INDARA Consultant	JM CAD	JMB Designer	GH Verifier	PM Approver

indara DIGITAL INFRASTRUCTURE

Project:
MOBILE NETWORK AUSTRALIA
SITE No:- M3952
SUNDERLAND BAY
LOT 1, PHILLIP ISLAND ROAD

Drawing Title:
DRAFT SITE ELEVATION

Drawing Status: FOR APPROVAL

Drawing No. M3952-P3

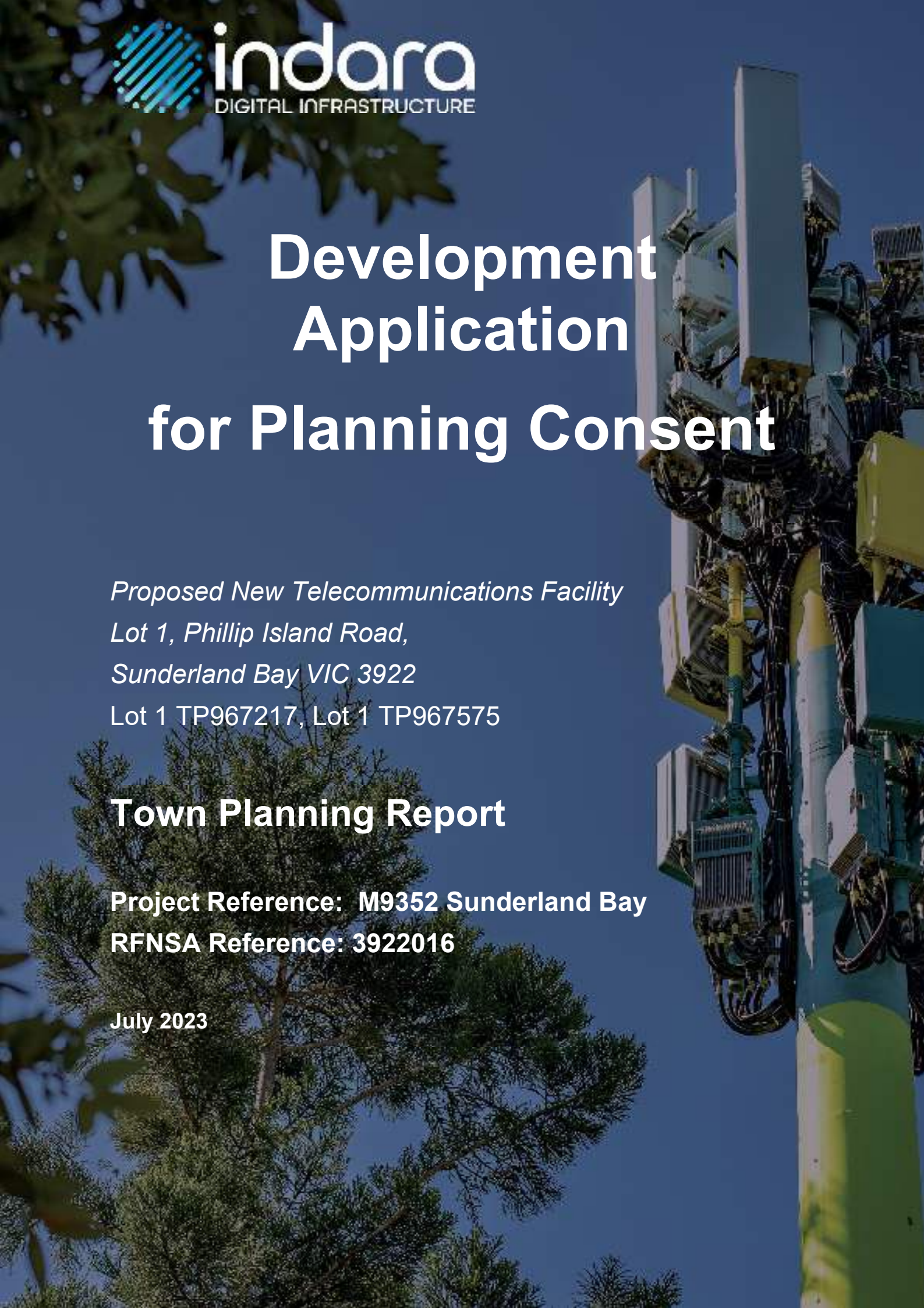
Revision 01

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A3



indara
DIGITAL INFRASTRUCTURE

Development Application for Planning Consent

Proposed New Telecommunications Facility
Lot 1, Phillip Island Road,
Sunderland Bay VIC 3922
Lot 1 TP967217, Lot 1 TP967575

Town Planning Report

Project Reference: M9352 Sunderland Bay
RFNSA Reference: 3922016

July 2023

Document Control

Site Reference: M9352 – Sunderland Bay				
Document Revision	**Date**	**Revision Details**	**Document Author**	**Document Reviewer**
1.0	28/07/2023	M9352 Sunderland Bay	Kaitlen Perkins	Andrew McLane

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Executive Summary

Site Information	**Lot description:** Lot 1 TP967217, Lot 1 TP967575 **Physical address:** Lot 1, Phillip Island Road, Sunderland Bay VIC 3922 **Coordinates:** -38.501555, 145.270976
Proposal	Indara are seeking a development permit for Development of a new Telecommunications Facility at Lot 1, Phillip Island Road, Sunderland Bay VIC 3922 The proposed facility will be owned by the Indara Group and host Optus telecommunications equipment. The facility will provide Optus 4G and 5G services to Sunderland Bay. The proposal involves: • One (1) 35m Indara monopole • One (1) new antenna triangular headframe supporting the following equipment: ○ Three (3) panel antennas, each 2.688m in length, at a height of 35m. • One (1) outdoor equipment cabinet, 3.2m x 1.5m floor area, at ground level and contained within the proposed 12m (w) x 10m (l) compound fenced area. • Ancillary equipment associated with the operation and safety of the facility, including nine (9) remote radio units, six (6) dual filters, cabling (internal), and antenna support mounts. The facility will be located within a fenced compound. The monopole and associated equipment will be finished in non-reflective pale grey.
Purpose	Indara Corporation Pty Ltd (part of the Indara group), with Optus, are proposing a new telecommunications facility at Sunderland Bay. The facility will also provide new improved coverage and connectivity to the Sunderland Bay area providing much needed voice and data services to the area and will form a vital component of the Bass Coast Shire Council's infrastructure. The facility has been designed as a neutral host facility, capable of supporting co-location by other carriers, government entities and wireless service providers.
Planning Considerations	**LGA:** Bass Coast Shire Council **Zoning:** FZ – Farming Zone **Overlays:** Design and Development Overlay (DDO), Significant Landscape Overlay (SLO) & Vegetation Protection Overlay (VPO)
Applicant	Downer on behalf of Indara Corporation Pty Ltd Level 10 567 Collins Street Melbourne VIC 3000 Contact Person: Kaitlen Perkins Email: Kaitlen.perkins@downergroup.com Our Reference: M9352 / Sunderland Bay

1. Introduction

Downer, on behalf of Indara Corporation Pty Ltd (part of the Indara Group), are seeking development consent for a new telecommunications facility at Lot 1, Phillip Island Road, Sunderland Bay VIC 3922.

The new facility will be comprised of a 35m monopole with an overall height of 36.4m with antenna protrusions supporting Optus telecommunications antennas and equipment. The purpose of the project is to significantly improve Optus mobile telecommunications services, including coverage and network capacity, in the Sunderland Bay area.

The new facility will also provide new improved coverage and connectivity to the Sunderland Bay area providing much needed voice and data services to the area and will form a vital component of Bass Coast Shire Council's essential infrastructure.

The proposal involves:

- One (1) 35m Indara monopole
- One (1) new antenna triangular headframe supporting the following equipment:
    - Three (3) panel antennas, each 2.688m in length, at a height of 35m.
- One (1) outdoor equipment cabinet, 3.2m x 1.5m floor area, at ground level and contained within the proposed 12m (w) x 10m (l) compound fenced area.
- Ancillary equipment associated with the operation and safety of the facility, including nine (9) remote radio units, six (6) dual filters, cabling (internal), and antenna support mounts.

This Town Planning Report provides an assessment of the project against the relevant planning controls and has been developed in accordance with the Bass Coast Planning Scheme.

2. Background

2.1 Indara and Optus

This development application has been prepared and submitted by Downer on behalf of the Indara Group. 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 Optus Mobile Pty Ltd (Optus) to expand the Optus mobile network across Australia. This facility is being proposed to improve Optus mobile services in the Sunderland Bay area.

The proposed facility is comprised of a new 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 Optus.

Note for legal purposes, the applicant for this development application is Indara Corporation 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[1].

- 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%[2]. In the first quarter of 2022, global mobile data usage grew by 40%[3]. 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[4]. With many Australian's 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[5].

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

[1] https://www.acma.gov.au/publications/2022-12/report/communications-and-media-australia-how-we-communicate

[2] https://www.acma.gov.au/publications/2022-12/report/communications-and-media-australia-how-we-use-internet

[3] https://www.ericsson.com/en/reports-and-papers/mobility-report/dataforecasts/mobile-traffic-update

[4] https://www.triplezero.gov.au/triple-zero/How-to-Call-000/advanced-mobile-location

2.3 Coverage Objectives

The facility will provide new improved coverage and connectivity to the Sunderland Bay area providing much needed voice and data services to the area and will form a vital component of the Bass Coast Shire Council's infrastructure.

Optus regularly undertakes detailed assessments of the performance and coverage of its digital mobile telephone and broadband internet networks to ensure its systems are reliable and achieving the required objectives. Reference to customer demand also provides an indication of areas where coverage and capacity constraints exist. Investigations have found that mobile traffic in Sunderland Bay is greater than the service capacity; as a consequence, the existing base stations in the surrounding area are not able to meet the customer demand.

Sunderland Bay is a quiet, vibrant community, experiencing significant residential growth and development in recent years. The proximity to community amenities, beaches and Melbourne city makes for a desirable family holiday destination, bringing in a high demand for mobile service coverage throughout the year. Optus are attempting to resolve a coverage gap to the south eastern side of Phillip island, Sunderland Bay. The proposal is specifically intended to improve network capacity and broaden the range for mobile service coverage within this area.

Operators of telecommunications networks must constantly respond to changes in technology or increased demand on their existing infrastructure assets due to urban growth. Recently, 5G has become the latest industry standard for mobile phone network operators within the Australian marketplace. With consumer demands reflecting an increase in demand for speed and data bandwidth, Optus requires an upgraded site at the subject location to ensure that this level of service provision can be maintained within the defined coverage improvement objectives.

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.

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 Optus, who have confirmed a new telecommunications facility will be needed in the Sunderland Bay 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 database (www.rfnsa.com.au). None of the existing sites in the area are suitable for co-location.



Figure 1: Radio Frequency National Site Archive (RFNSA) search of the existing facilties in the immediate area of Sunderland Bay. (Source: Google Earth, 2023)

Existing and Proposed Communications Facilities		
RFNSA Details	**Site Address**	**Comments**
3922006 Optus Telstra Vodafone	Phillip Island Race Track 381 Back Beach Road, VENTNOR VIC 3922	The existing facility at this location provides a range of coverage to the Phillip Island Race Track. Adding additional equipment at this site is not an option as it is already an Optus will not provide the desired coverage to the western side of Sunderland Bay.
3922008 Optus Telstra	Phillip Island Racetrack 329-381 Back Beach Road, VENTNOR VIC 3922	The existing facility at this location provides Telstra and Optus coverage to the Phillip Island Race Track. Adding additional equipment is not an option as it is already an Optus site and will not provide the desired coverage to the western parts of Sunderland Bay.

3.3 Alternate Candidates

A robust investigation of potential candidates has been undertaken.

A range of criteria are considered when selecting prospective sites, including technical requirements (the ability of a site to achieve Optus' service requirements), town planning and regulatory considerations (such as zoning, surrounding land uses and planning scheme requirements), visual impact, environmental impacts, and ability to secure an agreement with the landowner. A preferred site candidate is selected for the following reasons:

- Town planning considerations (such as zoning, surrounding land uses, environmental significance, compliance with the planning scheme and visual impact);
- The location will offer a cost-effective site solution whilst maximising coverage and mobile phone service provisions within the identified locality;
- The proposed monopole will result in minimal adverse impacts as a result of construction. Construction will be undertaken during low traffic periods and be coordinated appropriately with road authorities, and council;
- The availability of viable connections to the power and transmission networks in the area;
- Visual impact – it is believed that the proposed site location will not significantly result in the loss of amenity or the obstruction of viewing corridors to and from the proposed site; and
- Tenure – obtaining an agreement with the landowner of the subject site provides surety in determining the location of a mobile phone base station.

In identifying potential candidates, 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. We note that this area has significant scenic value, and in particular there are vistas looking south from Back Beach Road. Our site selection process has sought to avoid significant vistas or viewsheds from established residences. A number of potential locations were ruled out on this basis.

Two specific locations were considered in detail as prospective options. Of these, the current site (the subject of this application) was considered the most favourable option.

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*.

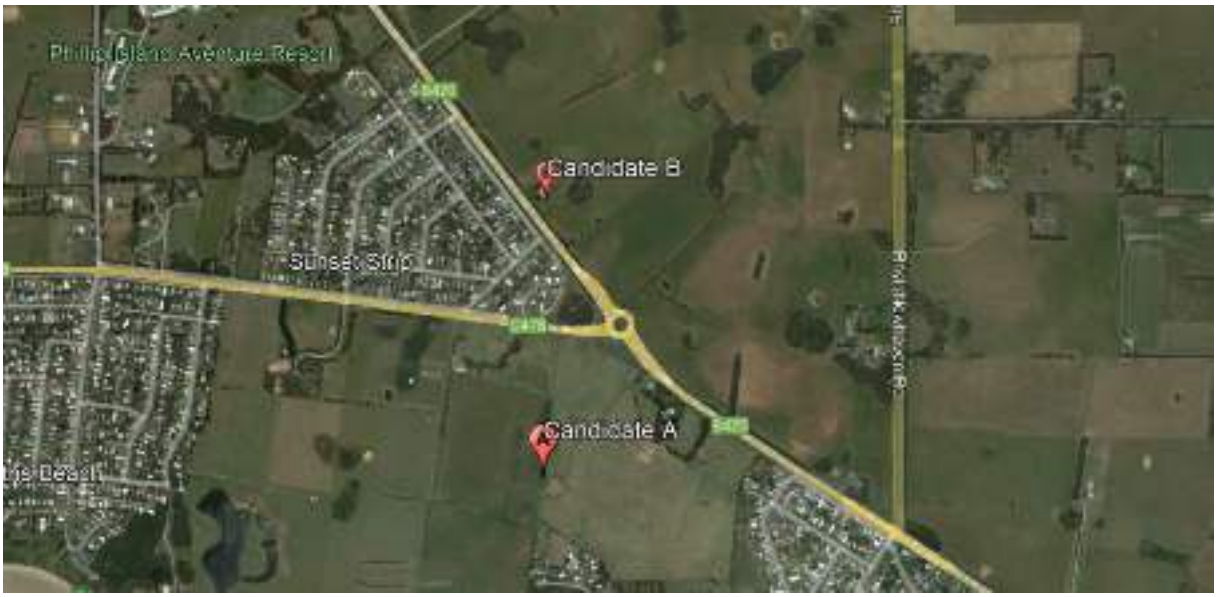


Figure 2: Potential candidates within Sunderland Bay. (Source: Google Earth, 2023)

Prospective Candidates		
Candidate	**Site Address**	**Comments**
A (Prime)	Lot 1, Phillip Island Road, Sunderland Bay VIC 3922.	New site on vacant rural land south of Back Beach Road. The site was considered favourable from a technical and town planning perspective, and the landowner was supportive of hosting a facility. This development application seeks consent for a telecommunications facility at this location.
B (Backup)	1700 Phillip Island Road, Sunderland Bay VIC 3922	New site on vacant rural land to northeast of Phillip Island Road. Whilst favourable from a technical and town planning perspective, an agreement was unable to be reached with the landowner and a site in this location did not proceed.

4. Site Context

The proposal involves establishment of a new telecommunications facility at Lot 1, Phillip Island Road, Sunderland Bay VIC 3922.

Overall, the Sunderland Bay region is recognised as an attractive place to live, work and visit, having experienced population growth and increased traffic movement in the area over recent decades. An increase in subdivision of larger properties and the introduction of more housing has increased the density of Sunderland Bay in the past few years. Such growth requires increased infrastructure capacity, especially so for telecommunications, as there is an exponential growth in the mobile data use on smartphones, requiring additional infrastructure to provide adequate service provision to the expanding area.

The surrounding landscape comprises of mainly open farmland, set on relatively flat land. The subject site is set to the left of the property. To the north and west, boarding the subject site, is open grazing land. Abutting the eastern boundary is a cluster of residential dwellings small residential property, approximately 550m away. To the south is a small section of residential dwellings, approximately 200m away. The surrounding landscape of tall existing vegetation and power poles provides great visual coverage from users of the area and the main motorway.

Figures 3 – 5 show the proposed site.



Figure 3: Immediate site context. (Source: Google Earth, 2023)



Figure 4: Wider site context. (Source: Google Earth, 2023)



Figure 5: View of proposed compound location, within subject lot. (Source: Downer, 2022)

5. Proposed Works

5.1 Equipment to be Installed

The proposed works involve installation of:

- One (1) 35m Indara monopole
- One (1) new antenna triangular headframe supporting the following equipment:
  - Three (3) panel antennas, each 2.688m in length, at a height of 35m.
- One (1) outdoor equipment cabinet, 3.2m x 1.5m floor area, at ground level and contained within the proposed 12m (w) x 10m (l) compound fenced area.
- Ancillary equipment associated with the operation and safety of the facility, including nine (9) remote radio units, six (6) dual filters, cabling (internal), and antenna support mounts.

Refer to ***Appendix 2*** for proposal plans.

5.2 Site Access and Parking

The existing road network provides an access route to the proposed facility, with the main access point being an existing gate off Back Beach Road. A new crossover will be required to connect the road way to access the land. Existing infrastructure present alongside the road way will need to be removed during construction of the upgraded access, however, the infrastructure removed will be reinstated upon completion of construction. This will include the

removal of the existing footpath adjacent to the access point, so as the new crossover and associated footpath can withstand construction vehicle weight.

Once constructed, the facility will operate on an unmanned basis aside from periodic routine maintenance visits (generally 2-4 times annually). The facility will not generate significant vehicle traffic through its ongoing operation.

Indara acknowledges that construction of the new access track will act in accordance and abide by council guidelines. Should council have any requirements they are to be determined in the planning stage.



Figure 6: Existing access to site is from Back Beach Road. (Source: Google Maps)

5.3 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. The project is not expected to represent a noise nuisance. We note that the facility will be separated from existing residential dwellings.

5.4 Power and Utilities

The final power design including the capacity of the supply will be confirmed in the detailed design phase, however, a major upgrade is not anticipated. A standard power application will

be submitted for approval and all new low voltage cable on the site will be installed underground.

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

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 Environmental Considerations

Comprehensive preliminary assessment of the nearby natural environment was undertaken within the planning, design, and procurement stages of the telecommunications proposal to ensure that there are no disturbances to the natural surrounds given that no ground clearance would be required.

There will be no vegetation disturbance, given existing vegetation onsite is limited to grassland, with an appropriate setback from the already existing trees onsite.

Vegetation disturbance will be minimal. The subject site sits within a highly modified environment.

During the construction phase, the subject site area will be rigorously concealed by imposing barriers and fencing to repeal any impacts to the surrounding environment. This proposal will employ effective measures to mitigate any impacts to surrounding flora, fauna, and natural environment inhabitants. Additionally, once constructed the operation of the telecommunications facility will not result in any negative impacts on the natural environment or the ecology of the locality.

5.6.1 Environment Protection & Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act commenced on 16th July 2000. It introduces a new role for the Commonwealth Government in the assessment and approval of development proposals where those proposals involve actions that have a

significant impact on matters of National Environmental Significance, the environment of Commonwealth owned land and actions carried out by the Commonwealth Government.

A search of the EPBC protected Matters Report (conducted on 16/06/2023) indicated that the following may be present within a 1km radius of the proposed site;

- 61 x Listed Threatened Species
- 45 x Listed Migratory Species

Given the proposed site is located within rural open land, there is minimal risk of impacting on potential threatened species or ecological communities that may occur within the broader area. It is expected that any future upgrades or maintenance will not impact endangered wildlife within the vicinity.

Therefore, the proposal is not of National Environmental Significance, as it will not impact on:

(a) World Heritage Areas;

(b) Wetlands protected by International Treaty (The RAMSAR Convention);

(c) Nationally listed threatened species and communities;

(d) Nationally listed migratory species;

(e) All nuclear actions: or

(f) The environment of Commonwealth Marine area.

Refer to EPBC Act Protected Matters Report at ***Appendix 4*****.**

5.7 Aviation

Indara are aware that structures over 30m in height are required to be reported in accordance with the CASA publication AC139.08 “Reporting Tall Structures”, and accordingly will report on the proposed site in accordance with this policy.

In the case of the new telecommunications facility at Sunderland Bay, Indara have reviewed the CASA standards and also the particular characteristics of the site, and have assessed that no further measures, including aircraft warning lighting is warranted due to the following:

- The proposed site at Sunderland Bay is located approximately 6kms from the nearest airport, Phillip Island Airport.

- The Obstacle limitation surface (OLS) protects the air space around airports from the intrusion of built structures that would adversely affect aircraft operation or safety. The

site is not within an OLS boundary, and therefore not subject to the conditions of CASA standards; Manual of Standards (MOS) part 139 - Aerodromes.

Indara has also considered other possibly relevant factors such as height and geographic features. The structure is a moderate height of 36.4m on mostly flat land.

Indara's assessment is that the proposed facility is not affected by the CASA standard; MOS Part 139 - Aerodromes. Indara also concludes that aircraft warning lights are not warranted in this location.

5.8 Heritage

Indara takes its obligations under the Victorian Aboriginal Heritage Act 2006 seriously and assesses each site against the Cultural Heritage Sensitivity Maps provided by Aboriginal Affairs Victoria (AAV). In the case of this proposal at Sunderland Bay, the site is not located in an Area of Aboriginal Cultural Heritage Sensitivity as defined by the Act. Therefore, the application has been checked against the requirements of the Aboriginal Heritage Act 2006 as to the need for the requirement of a Cultural Heritage Management Plan (CHMP). It has been assessed that a CHMP is not required. The construction contractors are required to meet any obligations under the Act should any aboriginal heritage be discovered.

Built Heritage searches were undertaken per the relevant heritage registers and database including the State Heritage Databases and local heritage schedules as per the Bass Coast Planning Scheme. There are no items of heritage significance within close proximity of the site.

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 2018

The *Telecommunications Code of Practice 2018* 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 report is enclosed in ***Appendix 2.***

6.2 Bass Coast Planning Scheme

6.2.1 Clause 19.03 Development Infrastructure

The Victoria Planning Provisions (VPPs) are a comprehensive set of planning provisions that apply across the state of Victoria and are incorporated into all planning schemes. The VPPs recognise the importance of telecommunications networks to Victoria, while also identifying that deployment of telecommunications infrastructure must be balanced against adverse environmental impacts.

Clause 19.03-4S provides guidelines for Councils to consider in relation to deployment of telecommunications facilities. The proposal is generally compliant.

Compliance with 19.03-4S Telecommunications	
Objective	**Comments**
To facilitate the orderly development, extension, and maintenance of telecommunications infrastructure.	The proposal facilitates the orderly development, extension, and maintenance of telecommunications infrastructure.
Strategies	**Comments**
Facilitate the upgrading and maintenance of telecommunications facilities.	The proposal will provide co-location opportunities for future upgrades.
Ensure that modern telecommunications facilities are widely accessible and that the telecommunications needs of business, domestic, entertainment and community services are met.	The proposal will provide telecommunications access for local businesses and residents alike.

6.2.2 Zone Provisions

The site is zoned FZ – Farming Zone.

The subject land is located in the Farming Zone (FZ) under the Bass Coast Planning Scheme. The purpose of the Farming Zone (FZ) is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for the use of land for agriculture.
- To encourage the retention of productive agricultural land.
- To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.
- To encourage the retention of employment and population to support rural communities.
- To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.
- To provide for the use and development of land for the specific purposes identified in a schedule to this zone.

The proposal is consistent with the purpose of the Zone as it does not take away from land being used for agricultural purposes. The facility is appropriate for the FZ as it is a benefit for

residential, commercial, and industrial land uses. Additionally, the facility will be well set within a context of built form that has established the site as a non-residential use, and therefore does not take away from the existing character. It will not affect the safety and amenity of adjacent, more sensitive land uses including residential premises. Improved connectivity in the area will aid the communication services of both surrounding residents and business alike.

As stated in the following section of this report, permit requirements for use and buildings and works contained within Clause 32.04 are displaced by Clause 62.01 and 62.02-1 of the Ballarat Planning Scheme. The permit trigger exists under Clause 52.19-1.

6.2.3 Clause 52.19 Telecommunications Facility

This application seeks approval for the Use and Development of a Telecommunications Facility. Clause 52.19 provides specific requirements for new telecommunications facilities, and also provides those certain kinds of telecommunications infrastructure do not require development consent.

Clause 52.19 Telecommunications Facility	
Objective	**Comments**
To ensure that telecommunications infrastructure is provided in an efficient and cost-effective manner to meet community needs.	The proposal will provide telecommunications services to the surrounding community in an efficient and cost-effective manner.
To facilitate an effective state-wide telecommunications network consistent with orderly and proper planning.	The proposal adds further capacity to the state-wide telecommunications network and is consistent with planning outcomes adhere to across the state.
To support the provision of telecommunications facilities with minimal impact on the amenity of the area.	The proposal is set in Farming Zoned land and is separated from residential dwellings and community sensitive uses. Therefore, its impact on the amenity of the area will be minimal.

Pursuant to Clause 52.19-1, and Clause 62.02, certain telecommunications activities do not require a permit. This proposal does not fall within the exemptions under Clause 52.19-1 and will require Council development consent.

Pursuant to 52.19-2, the subject land is not in public ownership.

Pursuant to 52.19-3, certain works are exempt from notice and review. This application is not exempt from notice and review.

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

52.19-5 Decision Guidelines	
Objective	**Comments**
The design, siting, construction, and operation of the telecommunications facility.	The proposal is set within established farming land, which will aid in visually screening the facility from the nearest residential dwellings. The design of the facility will comprise of a monopole which fits into the existing context of the surrounds, including the built form of the site. Once operational the facility will function with minimal disturbance to the surrounding area.
The effect of the telecommunications facility on adjacent land.	The proposals overall effect on the uses on adjacent land will be relatively minor, given that the facility is set amongst open land and partially screened from viewpoints points from adjacent land.

6.2.4 Overlays

Design and Development Overlay (DDO)

The subject land is located within Design and Development Overlay (DDO) under the Bass Coast Planning Scheme. The purpose of DDO is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To identify areas which are affected by specific requirements relating to the design and built form of new development*.

The objective as listed under 43.02-1 of the Bass Coast Planning Scheme are as follows:

A schedule to this overlay must contain:

- *A statement of the design objectives to be achieved for the area affected by the schedule.*

The proposed facility is located on the edge of this overlay. The proposed location is situated well within the land parcel, away from residential dwellings and the adjacent motorway. As a part of the proposal, the facility is designed to adhere to the visual qualities of the surrounding area. The monopole will be painted in a sky grey to blend well in all weathers, reducing visual impact. The proposal is not expected to overshadow the existing qualities of the area. Should council request a statement of the design objectives to be achieved for the area affected by the schedule, Indara will supply. Overall, the installation will not take away from the existing landscape qualities of the area, thus the proposal is consistent with the objective of the overlay.

Significant Landscape Overlay (SLO)

The subject land is located within Significant Landscape Overlay (SLO) under the Bass Coast Planning Scheme. The purpose of SLO is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To identify significant landscapes.*
- *To conserve and enhance the character of significant landscapes.*

The requirements as listed under 42.03-1 of the Bass Coast Planning Scheme are as follows:

A schedule to this overlay must contain:

- *A statement of the nature and key elements of the landscape.*
- *The landscape character objectives to be achieved.*

The proposed facility does not take away from the design of the landscape within the area. There is approximately a 200m distance to residential dwellings to the south and a 500m distance to the east. The proposed facility is not expected to significantly impact the views of the residential dwellings or alter the visual quality of the area. Indara acknowledges that Telecommunications towers cannot be hidden from sight, however, as discussed throughout this report, design measures are to be put in place to make the visual impact on the area minimal. Should council require a statement of the nature and key elements of the landscape, Indara will supply. Overall, the installation and use of the proposal will not take away from the existing landscape views of the area, thus, the proposal is consistent with the objective.

Vegetation Protection Overlay (VPO)

The subject land is located within Vegetation Protection Overlay (VPO) under the Bass Coast Planning Scheme. The purpose of VPO is:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To protect areas of significant vegetation.*
- *To ensure that development minimises loss of vegetation.*
- *To preserve existing trees and other vegetation.*
- *To recognise vegetation protection areas as locations of special significance, natural beauty, interest, and importance.*
- *To maintain and enhance habitat and habitat corridors for indigenous fauna.*
- *To encourage the regeneration of native vegetation*

The requirements as listed under 42.02-1 of the Bass Coast Planning Scheme are as follows:

A schedule to this overlay must contain:

- *A statement of the nature and significance of the vegetation to be protected.*
- *The vegetation protection objectives to be achieved.*

The proposed facility is located in an already cleared area of the property. The proposed facility is not expected to generate removal of vegetation or trees within the general vicinity. As stated in section 7 of this report, the indicated land in which the proposed is located does not contain any vegetation, nor does it impede on trees within the vicinity. Should council request a statement of the nature and significance of the vegetation to be protected, Indara will supply. Overall, the proposal does not take away from protected vegetation and is consistent with the objectives of this overlay.

6.2.5 Clause 65 Decision Guidelines

In making a decision, Council must consider a number of matters as appropriate. The proposed facility has been sited and designed with consideration for these matters.

65.01 Decision Guidelines	
Matter	**Comments**
The matters set out in section 60 of the Act.	All matters set out in Section 60 of the Act including the objectives of Planning in Victoria as specified in section 4 of the Planning and Environment Act 1987 have been considered and are addressed in the body of this development submission. It is submitted that the proposed facility is consistent with the Bass Coast Planning Scheme and any relevant codes, policy documents and guidelines and will have a positive social and economic effect on the Sunderland Bay area and therefore, accords with Section 60 of the Act.
Any significant effects the environment, including the contamination of land, may have on the use or development.	The proposal will comfortably fit into the existing environment and not be impacted by any existing environmental factors. The site has been checked for contamination and none has been reported.
The Municipal Planning Strategy and the Planning Policy Framework.	It is considered that there is strong State and local policy support for improved telecommunications facilities if, when balancing improved telecommunications services with environmental, including visual impact, where the proposal provides a net community benefit.
The purpose of the zone, overlay or other provision.	The proposal is consistent with the purposes of the zone, overlays and Clause 52.19: Telecommunications Facilities, contained within the Particular Provisions of the Planning Scheme, as addressed earlier in this report.

Any matter required to be considered in the zone, overlay or other provision.	The proposal sits within a designated bushfire prone area. The site itself is distanced from vegetation and is not connected to any high-risk vegetation that would impact risk to bushfire.
The orderly planning of the area.	The proposal is located and designed to ensure off-site impacts are minimised and will not negatively affect the orderly planning of the area for other land uses.
The effect on the environment, human health and amenity of the area.	The proposed new monopole's overall effect on the amenity of the area is addressed by the siting and design of the facility being in a disused area of a mixed use zone, setback from the roadway and with existing infrastructure screening adjacent.
The proximity of the land to any public land.	The facility is on land zoned Farming.
Factors likely to cause or contribute to land degradation, salinity or reduce water quality.	The proposed development is located on flat land and only minor earth works will be required. The subject site is not subject to inundation.

65.01 Decision Guidelines	
Matter	**Comments**
Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site.	Not applicable. The proposal does not collect stormwater. The proposed facility will maintain the quality of stormwater within and exiting the site.
The extent and character of native vegetation and the likelihood of its destruction.	There will be no disturbance of native vegetation as part of the proposed development.
Whether native vegetation is to be or can be protected, planted or allowed to regenerate.	Typically, where native vegetation is in proximity to site, it will be protected in that a minimum amount of lopping is proposed, if required. All existing vegetation on site will be protected.
The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard.	The proposed Sunderland Bay site is not located in land affected by a Floodway or Land Subject to Inundation Overlay. The site is does is not currently subject to flooding from any designated waterway. The land is however, located within a Designated Bushfire Prone Area. The proposed telecommunications facility will continue to assist in providing essential communications including during times of emergency. The proposed monopole will be constructed from materials that are not prone to contributing to the fuel load such as steel and concrete.
The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.	The proposal will not require loading and unloading facilities outside the construction period. Once constructed, traffic will not be impacted as the facility only requires 3-4 maintenance visits per year.

The impact the use or development will have on the current and future development and operation of the transport system.	As stated above, once constructed, traffic will not be impacted as the facility only requires 3-4 maintenance visits per year. Therefore, the functioning of the transport system will not be impacted.

7. Visual Impact

Whilst freestanding mobile base stations are a common feature within urban and rural landscapes, it is a technical requirement that they protrude above the surrounding environment to provide service. It is acknowledged that the facility will be visible from some perspectives close by.

However, in siting and designing the facility, Indara has deliberately sought to minimise its impact for established land uses and local landmarks:

- The facility is a slim monopole rather than a larger, bulkier lattice tower or mast. The colour of the facility is currently unfinished pale grey – grey facilities tend to blend best into the skyline in all weathers. However, Indara would be happy to consider an alternate colour scheme were deemed appropriate by Council.
- The overall height of the facility, including antennas, is 36.4m above ground level. This is the lowest height to which Optus can provide a suitable level of coverage to Sunderland Bay.
- Ground equipment is to be contained within equipment cabinets adjacent to the facility. Equipment cabinets have been chosen because they are less bulky than prefabricated equipment shelters traditionally used by mobile carriers. Ground equipment will generally be shielded from view by established vegetation.
- The facility has been deliberately sited to minimise its visual impact on surrounding development. The facility is set back approximately 420m from Phillip Island Road, and 380m from Back Beach Road. The proposed facility has been deliberately positioned to avoid interrupting potential viewsheds for passing traffic and from residences at Sunset Strip. The facility is also well separated from the closest houses to the south, being 120m from the closest residence.

Indara note that the facility, by virtue of its height, cannot be hidden and will have a visual presence in the environment from some perspectives. However, the site has been deliberately sited and designed to have as small as possible a visual impact on the surrounding area. The facility is not expected to interrupt views from established residences toward the ocean, nor will it be visually dominant from The Esplanade and the Sunderland Bay lookout.

Visual impact has been considered from all perspectives of the area, as follows.



Figure 7: Aerial view of proposed Indara facility. Proposed Facility is located within farming land, boarder's residential dwellings to the east and south, with open rural land north and west. (Source: Google Earth)



Figure 8: View from proposed facility location, looking north towards Phillip Island Road, showing context of existing farm land surrounding the land parcel. (Source: Downer)



Figure 9: View from the east, looking west, showing context of existing vegetation located outside the land parcel. (Source: Downer)



Figure 10: View looking south from the subject site. Area is mainly open farming land. (Source: Downer)



Figure 11: View from the west, looking east. Proposed location is well distance from the nearest residential dwellings. (Source: Downer)

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 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 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 **0.99%** of the Australian standard. Refer to ***Appendix 3***.

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

Downer, for the Indara Group, is seeking development consent to install a new telecommunications facility at Lot 1, Phillip Island Road, Sunderland Bay VIC 3922. The new facility is proposed to improve mobile services in the Sunderland Bay area.

The facility will provide new improved coverage and connectivity to the Sunderland Bay area providing much needed voice and data services to the area and will form a vital component of the Bass Coast Shire Council's infrastructure.

There is strong State policy support for telecommunications facilities if, when balancing improved telecommunications services with environmental impacts; including for example, visual impact and flood or fire hazard, a particular proposal provides a net community benefit. The site has a number of characteristics that make it suitable for the construction of a new telecommunications facility in the manner proposed. The drawings respond to the principles of design, siting, construction, and operation of telecommunications facilities as specified in the Code of Practice whilst meeting state and local planning policy objectives.

The proposed works provide the community with reliable 4G and future 5G access which in turn supports the various commercial industries in the region and forms part of a wider plan to ensure reliable and accessible coverage during emergency situations.

Indara, together with Downer have undertaken an assessment of the relevant matters as required by the Telecommunications Act 1997 and the Bass Coast Planning Scheme. The proposal is considered appropriate in light of the relevant legislative, environmental, technical, radio coverage and public safety requirements.

The proposed facility is considered appropriate for the subject site for the following reasons:

- The facility is located specifically to provide reliable mobile phone service to Sunderland Bay and surroundings.
- The siting of the new facility is away from sensitive land uses and within a farming use zone.
- Public views to the facility are adequately contained due to the siting of the new monopole structure and facility amongst established vegetation.
- The implementation of a monopole at medium scale height ensures that the facility will not impact on the vistas from these public viewpoints or the valued landscape qualities in the area.
- The facility will operate within the regulatory framework of Commonwealth, State and Local Governments;
- The proposal is consistent with the relevant provisions of the Bass Coast Planning Scheme.

- The facility will ensure the provision of significantly improved mobile phone coverage and competition in the Sunderland Bay area, including businesses and residents and along major transport routes.
- The proposal will maintain and improve Optus communications services to the area, including voice calls, video calling and Wireless Broadband - a high speed wireless internet service via the 4G and 5G phone network;
- The proposed facility is part of Optus' strategic plan to improve its mobile service in the Sunderland Bay area, thereby ensuring residents, businesses and visitors have access to the best quality telecommunications service possible which will assist in the delivery of the Council's corporate vision.
- The site has been assessed as a viable option for the effective delivery of Optus coverage and radiofrequency objectives for the search area, in accordance with the 'Precautionary Principle', and will greatly improve access to mobile telecommunications for residents and businesses in the local area;
- The facility will operate within all current and relevant Australian Standards;
- The proposal will not prejudice the existing and future uses of the site; and
- The proposal will have a number of significant economic and social benefits to the area.

Based upon the above, we respectfully request the Bass Coast Shire Council approve the application and issue a development permit for a telecommunications facility at the site, subject to reasonable and relevant conditions, and in accordance with the plans attached in ***Appendix 2***.

Should Council have any further queries regarding the submitted application, please do not hesitate to contact Kaitlen Perkins at kaitlen.perkins@downergroup.com.

Appendix 1: Certificate of Title

Appendix 2: Proposal Plans

Appendix 3: ARPANSA EME Report

Appendix 4: EPBC Protected Matters Report

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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10366 FOLIO 515 Security no : 124106908234C
Produced 16/06/2023 09:17 AM

LAND DESCRIPTION

Lot 1 on Title Plan 967217R.
PARENT TITLE Volume 10019 Folio 858
Created by instrument PS414367V 04/02/1998

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
SUNDERLAND RIDGE PTY LTD of 8-10 FLINTOFF STREET GREENSBOROUGH VIC 3088
AN699565M 31/03/2017

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP967217R FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: PHILLIP ISLAND ROAD SUNDERLAND BAY VIC 3922

DOCUMENT END

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TITLE PLAN

EDITION 2

TP967217R

LOCATION OF LAND

PARISH: PHILLIP ISLAND
TOWNSHIP:
SECTION:
CROWN ALLOTMENT: 143(PT)
CROWN PORTION:
LAST PLAN REFERENCE: PS414367V, LOT 2 (PT)
DERIVED FROM: VOL. 10366 FOL. 515
DEPTH LIMITATION: NIL

NOTATIONS

EASEMENT INFORMATION

E - ENCUMBERING EASEMENT R - ENCUMBERING EASEMENT (ROAD) A - APPURTENANT EASEMENT

Easement Reference	Purpose	Width (Metres)	Origin	Land benefited / In favour of

THIS PLAN HAS BEEN PREPARED BY LAND VICTORIA FOR TITLE DIAGRAM PURPOSES

Checked by: GA

Date: 13/03/2019

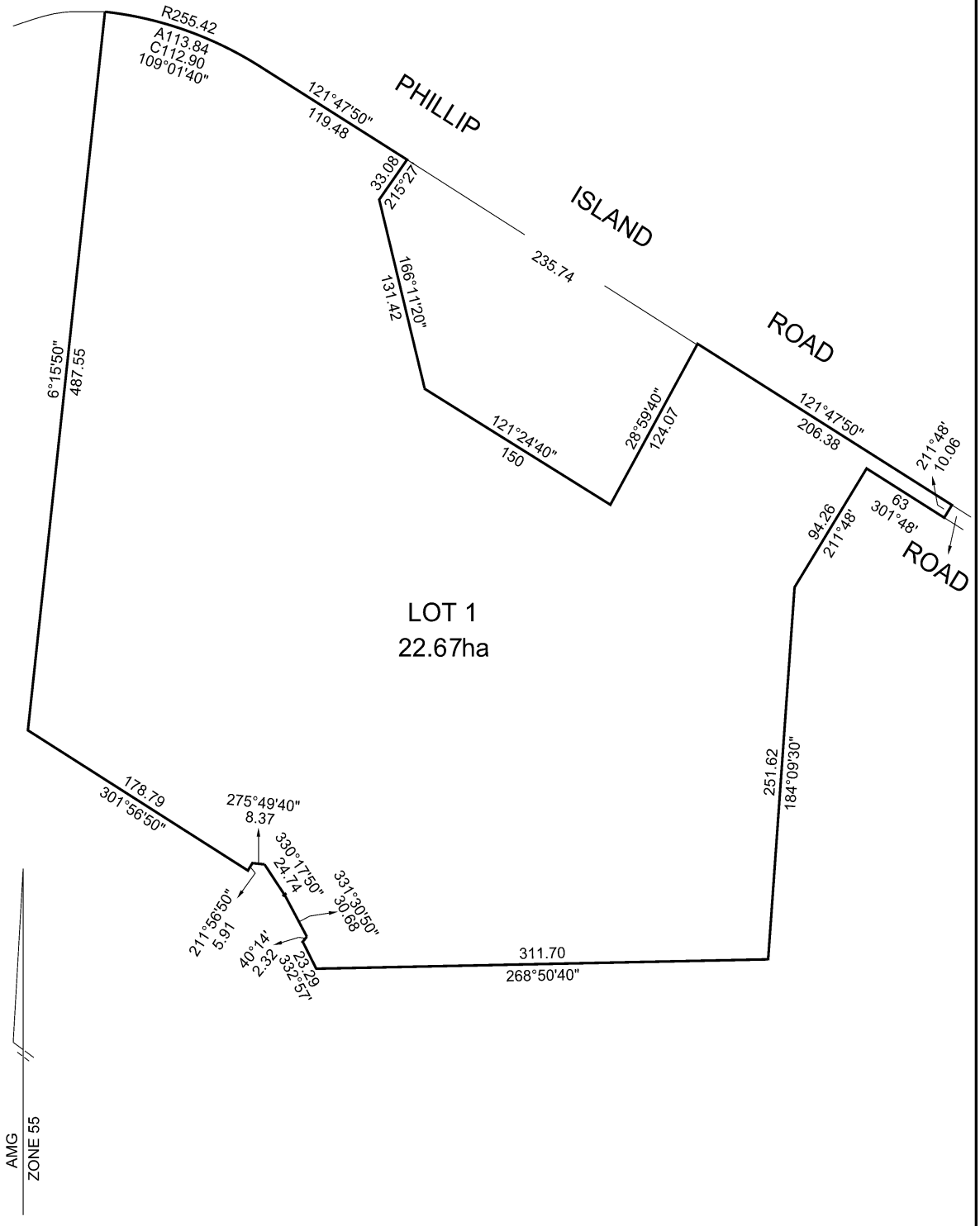
Assistant Registrar of Titles

FOR DIAGRAM INFORMATION SEE SHEET 2

LENGTHS ARE IN METRES	SCALE ——	DEALING / FILE No: AP142270Y	DEALING CODE: 60
		GOVERNMENT GAZETTE No: -	SHEET 1 OF 1

TITLE PLAN

TP967217R



LENGTHS ARE IN METRES	SCALE	DEALING / FILE No: AP142270Y SEC. 60	SHEET 2
	——	GOVERNMENT GAZETTE No: -	

MODIFICATION TABLE

RECORD OF ALL ADDITIONS OR CHANGES TO THE PLAN

PLAN NUMBER

TP967217R

WARNING: THE IMAGE OF THIS DOCUMENT OF THE REGISTER HAS BEEN DIGITALLY AMENDED.
NO FURTHER AMENDMENTS ARE TO BE MADE TO THE ORIGINAL DOCUMENT OF THE REGISTER.

AFFECTED LAND/PARCEL	LAND/PARCEL IDENTIFIER CREATED	MODIFICATION	DEALING NUMBER	DATE	EDITION NUMBER	ASSISTANT REGISTRAR OF TITLES
LOT 1		ADVERSE POSSESSION APPLICATION	AP142494A	12/06/19	2	GLR

Environmental EME Report

Location	Phillip Island Road, SUNDERLAND BAY VIC 3922		
Date	07/06/2023	**RFNSA No.**	3922016

How does this report work?

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at Phillip Island Road, SUNDERLAND BAY VIC 3922. These levels have been calculated by Downer Group using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).
A document describing how to interpret this report is available at ARPANSA's website:
A Guide to the Environmental Report.

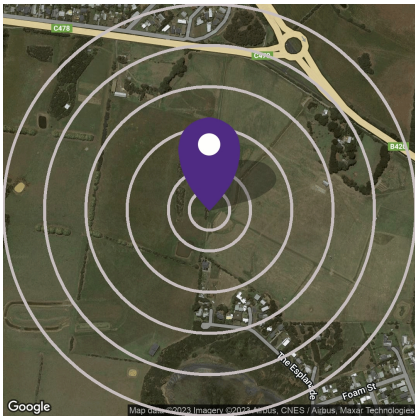
A snapshot of calculated EME levels at this site

There are currently no existing radio systems for this site.

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

0.99%

out of 100% of the public exposure limit, 237 m from the location.



EME levels with the proposed changes

Distance from the site	Percentage of the public exposure limit
0-50 m	0.60%
50-100 m	0.33%
100-200 m	0.88%
200-300 m	0.99%
300-400 m	0.77%
400-500 m	0.45%

For additional information please refer to the EME ARPANSA Report annexure for this site which can be found at *http://www.rfnsa.com.au/3922016*.

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.

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

	Existing configuration			Proposed configuration		
Distance from the site	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
0-50m				3.99	42.17	0.60%
50-100m				3.17	26.64	0.33%
100-200m				4.49	53.56	0.88%
200-300m				4.90	63.57	0.99%
300-400m				4.34	49.95	0.77%
400-500m				3.33	29.35	0.45%

Calculated EME levels at other areas of interest

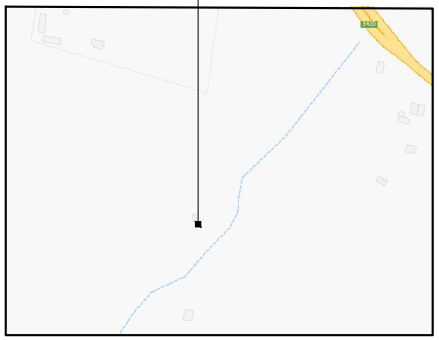
This table contains calculations of the maximum EME levels at selected areas of interest, identified through consultation requirements of the Communications Alliance Ltd Deployment Code C564:2020 or other means. Calculations are performed over the indicated height range and include all existing and any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

Maximum cumulative EME level for the proposed configuration

Location	Height range	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
No locations identified				



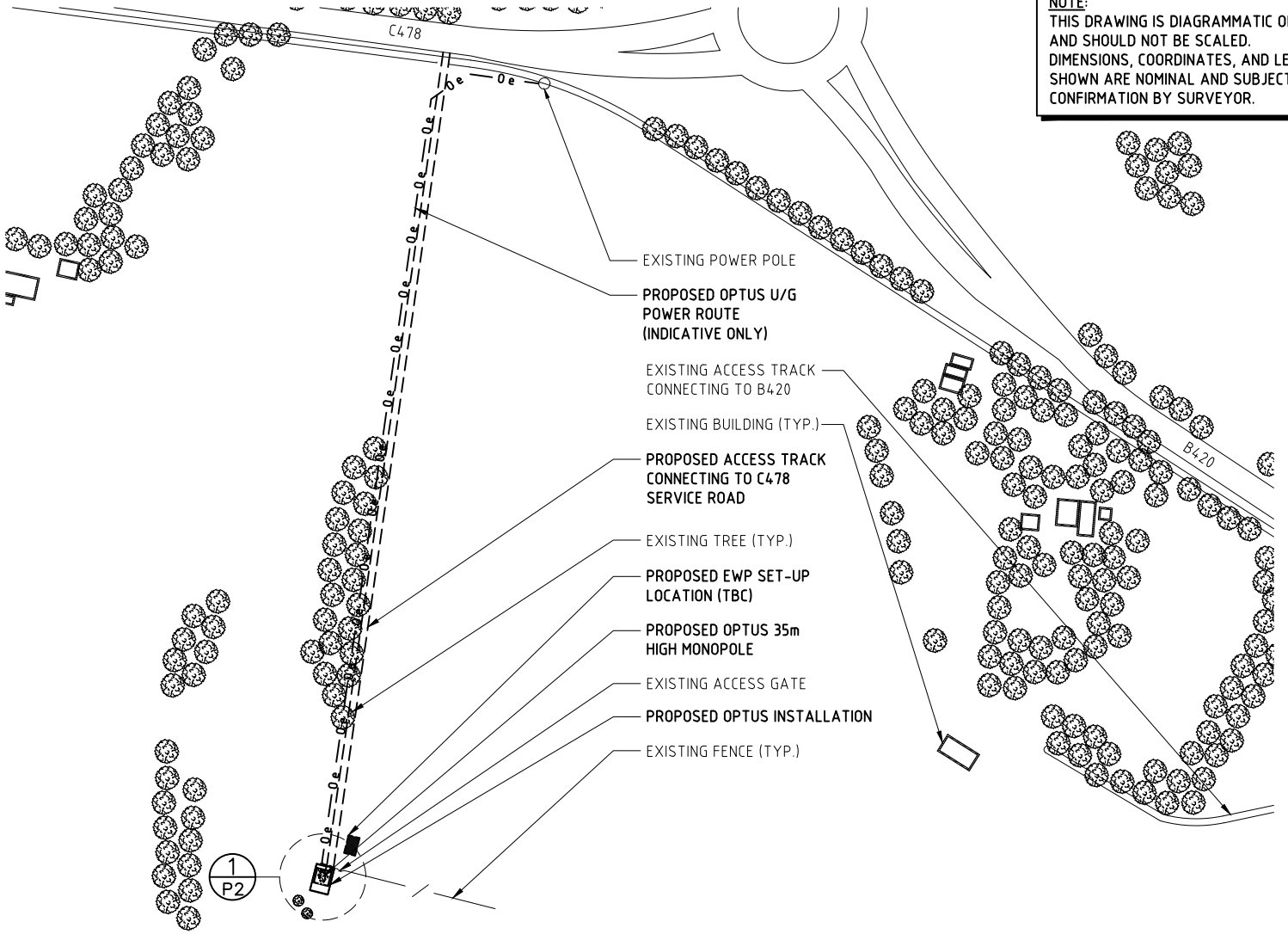
PROPOSED INDARA SITE
(RFNSA NO. 3922016)



LOCALITY MAP

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NOTE:
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LEGEND

- PROPOSED LEASE AREA
- PROPOSED OPTUS FENCE
- PROPOSED U/G POWER ROUTE
- EXISTING FENCE

OVERALL SITE PLAN

SCALE 1:2000

Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver
01	18.07.23	ISSUED FOR APPROVAL	INDARA	JM	JMB	GH	PM

indara DIGITAL INFRASTRUCTURE

Project:
MOBILE NETWORK AUSTRALIA
SITE No:- M3952
SUNDERLAND BAY
3 ROWENA ROAD

Drawing Title:
OVERALL SITE PLAN

Drawing Status: FOR APPROVAL

Drawing No. M3952-P1

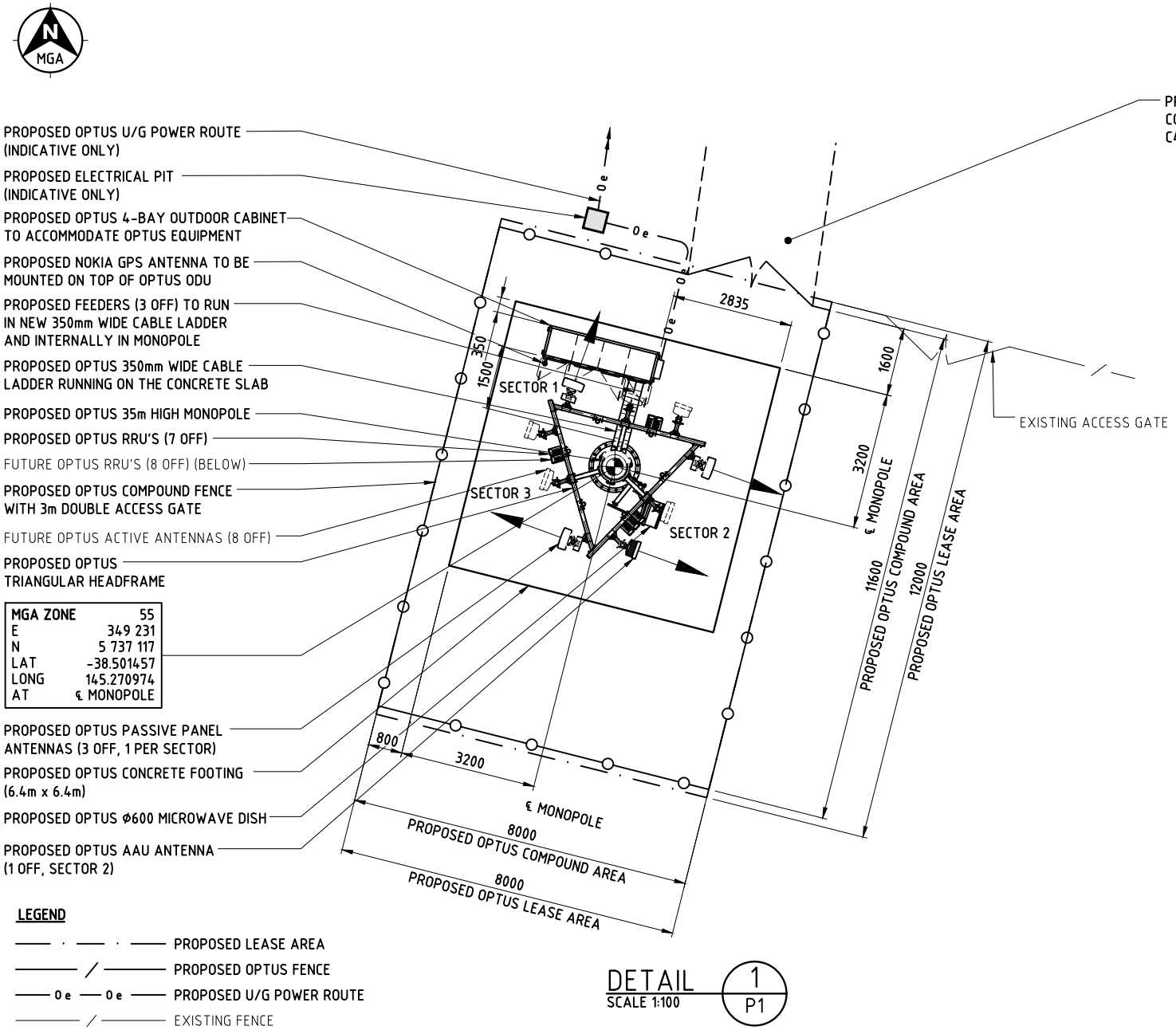
Revision 01

CAD File: C:\Users\Jovan\Desktop\M3952_DSL.dwg Date: 17.07.2023 5:44 PM

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20 10 0 10 20 30 40 50mm

A3



LEGEND

- PROPOSED LEASE AREA
- PROPOSED OPTUS FENCE
- PROPOSED U/G POWER ROUTE
- EXISTING FENCE

DETAIL 1/P1
SCALE 1:100

NOTE:
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SITE ADDRESS:
3 ROWENA ROAD,
SUNDERLAND BAY,
VIC 3922

NOTES:

1. BASIS OF DESIGN
- SITE INSPECTION 24/03/23

2. PANEL ANTENNAS
- PROPOSED SERVICE BEAM 28 PORT ANTENNAS (2 OFF, SECTORS 1 & 3) AT EL 35.0m
- PROPOSED 12 PORT ANTENNA (1 OFF, SECTOR 2) AT EL 35.0m
- PROPOSED OPTUS AAU ANTENNA NR3500 (1 OFF, SECTOR 2) AT EL 36.0m
- FUTURE OPTUS AAU ANTENNA NR3500 (2 OFF, SECTOR 1 & 3) AT EL 36.0m & (3 OFF) AT EL 33.5m
- FUTURE OPTUS AAU ANTENNA NR2300 (3 OFF, 1 PER SECTOR) AT EL 35.0m
- PROPOSED NOKIA GPS ANTENNA TO BE MOUNTED ON TOP OF OPTUS ODU
- SECTOR 1 - 20°, SECTOR 2 - 110°, SECTOR 3 - 290°

3. RRU'S ANCILLARIES EQUIPMENT
- PROPOSED OPTUS RRU'S (7 OFF) AT EL. 35.5m
- FUTURE OPTUS RRU'S (8 OFF) AT EL. 34.5m

4. TRANSMISSION
- PROPOSED OPTUS Ø600mm MICROWAVE DISH ANTENNA AT EL 15.0m

5. EQUIPMENT OUTDOOR CABINET
- PROPOSED 4-BAY OUTDOOR CABINET
- SUPPORTED ON PROPOSED CONCRETE SLAB FOOTING (TBC)

6. MONOPOLE
- PROPOSED 35m HIGH MONOPOLE WITH TRIANGULAR HEADFRAME

7. FEEDER CABLES/HYBRID CABLES
- 9/18 TRUNK CABLES (3 OFF) ALL SECTORS
- LENGTH: 40m ALL SECTORS
- 350mm WIDE HORIZONTAL CABLE LADDER

8. SITE ACCESS
- VIA PROPOSED NEW ACCESS TRACK CONNECTION TO C478 BACK BEACH ROAD VIA GRAVEL ROAD

9. ANTENNA ACCESS
- VIA EWP BY QUALIFIED RIGGER PERSONNEL ONLY

10. POWER SUPPLY
- PROPOSED OPTUS POWER TO BE SOURCED FROM EXISTING POWER SUPPLY AT 55m FROM SITE LOCATION. FINAL DESIGN AND ROUTE TBC
- DETAILS TO BE CONFIRMED/ADVISED

Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver
01	18.07.23	ISSUED FOR APPROVAL	INDARA	JM	JMB	GH	PM

indara DIGITAL INFRASTRUCTURE

Project:
MOBILE NETWORK AUSTRALIA
SITE No:- M3952
SUNDERLAND BAY
3 ROWENA ROAD

Drawing Title:
DRAFT SITE LAYOUT

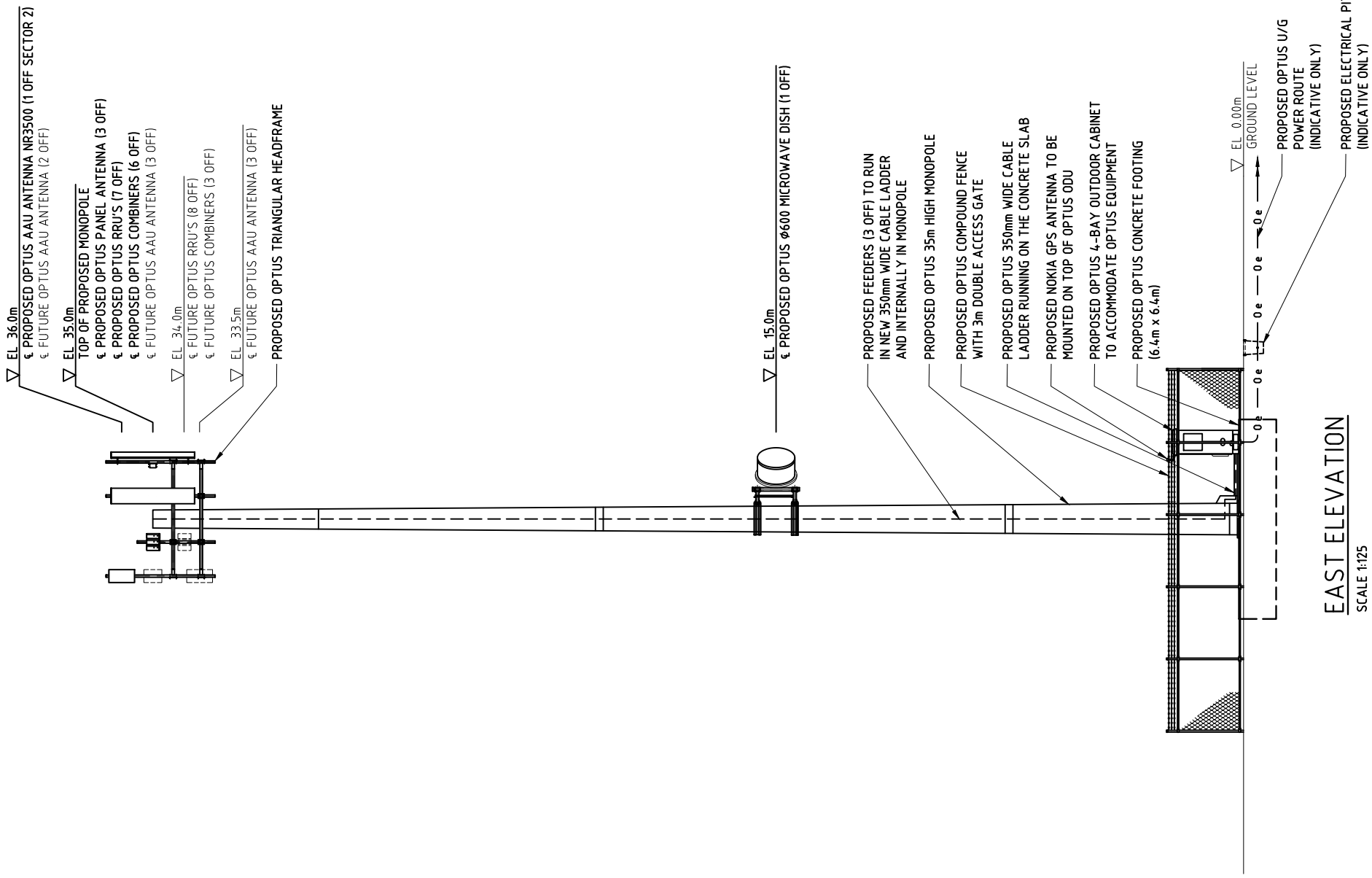
Drawing Status: FOR APPROVAL
Drawing No. M3952-P2
Revision 01

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20 10 0 10 20 30 40 50mm

A3



EAST ELEVATION

SCALE 1:125

NOTE:
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Rev	Date	Revision Details					
01	18.07.23	ISSUED FOR APPROVAL	INDARA	JM	JMB	GH	PM
			Consultant	CAD	Designer	Verifier	Approver

indara DIGITAL INFRASTRUCTURE

Project:
MOBILE NETWORK AUSTRALIA
SITE No:- M3952
SUNDERLAND BAY
3 ROWENA ROAD

Drawing Title:
DRAFT SITE ELEVATION

Drawing Status:
FOR APPROVAL

Drawing No.
M3952-P3

Revision
01

CAD File: C:\Users\Jovan\Desktop\M3952_DSL.dwg Date: 17.07.2023 5:44 PM

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20 10 0 10 20 30 40 50mm

A3

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 16-Jun-2023

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	61
Listed Migratory Species:	45

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	80
Whales and Other Cetaceans:	11
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	5
Key Ecological Features (Marine):	None
Biologically Important Areas:	14
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Western port	Within 10km of Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Giant Kelp Marine Forests of South East Australia	Endangered	Community may occur within area	In feature area
Natural Damp Grassland of the Victorian Coastal Plains	Critically Endangered	Community may occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Botaurus poiciloptilus			
Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris canutus			
Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Migration route likely to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche steadi			
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Thinornis cucullatus cucullatus			
Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
Prototroctes maraena			
Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Seriolella brama			
Blue Warehou [69374]	Conservation Dependent	Species or species habitat known to occur within area	In feature area
Thunnus maccoyii			
Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area
FROG			
Litoria raniformis			
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Balaenoptera musculus			
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area	In feature area
Eubalaena australis			
Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Isoodon obesulus obesulus			
Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Perameles gunnii Victorian subspecies Eastern Barred Bandicoot (Mainland) [88020]	Endangered	Translocated population known to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
Potorous tridactylus trisulcatus Long-nosed Potoroo (southern mainland) [86367]	Vulnerable	Species or species habitat may occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In feature area
PLANT			
Prasophyllum spicatum Dense Leek-orchid [55146]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat may occur within area	In feature area
Pterostylis cucullata Leafy Greenhood [15459]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Senecio psilocarpus Swamp Fireweed, Smooth-fruited Groundsel [64976]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat may occur within area	In buffer area only
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Lissolepis coventryi Swamp Skink, Eastern Mourning Skink [84053]	Endangered	Species or species habitat likely to occur within area	In feature area
SHARK			
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Galeorhinus galeus School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat may occur within area	In feature area
Ardenna tenuirostris Short-tailed Shearwater [82652]		Breeding known to occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Migratory Marine Species			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In feature area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Thalasseus bergii Greater Crested Tern [83000]		Breeding known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]		Species or species habitat may occur within area	In feature area
Ardenna tenuirostris as Puffinus tenuirostris Short-tailed Shearwater [82652]		Breeding known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eudyptula minor Little Penguin [1085]		Breeding known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Larus dominicanus Kelp Gull [809]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Larus pacificus Pacific Gull [811]		Breeding known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Migration route likely to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei as Thalassarche sp. nov. Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Thalassarche impavida](#) Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
[Thalassarche melanophris](#) Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
[Thalassarche salvini](#) Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
[Thalasseus bergii as Sterna bergii](#) Greater Crested Tern [83000]		Breeding known to occur within area	In feature area
[Thinornis cucullatus as Thinornis rubricollis](#) Hooded Plover, Hooded Dotterel [87735]		Species or species habitat known to occur within area overfly marine area	In feature area
[Thinornis cucullatus cucullatus as Thinornis rubricollis rubricollis](#) Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area
Fish			
[Heraldia nocturna](#) Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area	In feature area
[Hippocampus abdominalis](#) Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area	In feature area
Hippocampus minotaur Bullneck Seahorse [66705]		Species or species habitat may occur within area	In feature area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area	In feature area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area	In feature area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area	In feature area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area	In feature area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area	In feature area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area	In feature area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In feature area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In feature area
Mitotichthys mollisoni Mollison's Pipefish [66260]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area	In feature area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area	In feature area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area	In feature area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area	In feature area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area	In feature area
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area	In feature area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In feature area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area	In feature area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In feature area
Stipecampus cristatus Ringback Pipefish, Ring-backed Pipefish [66278]		Species or species habitat may occur within area	In feature area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In feature area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area	In feature area
Mammal			
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area	In feature area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat likely to occur within area	In feature area
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In feature area

Current Scientific Name	Status	Type of Presence	Buffer Status
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In feature area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area	In feature area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In feature area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In feature area

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Phillip Island Nature Park	Other	VIC	In feature area

Nationally Important Wetlands [Resource Information]

Wetland Name	State	Buffer Status
Western Port	VIC	In feature area

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Newhaven Yacht Squadron marina extension	2004/1450	Not Controlled Action	Completed	In feature area
Optic fibre cable installation - San Remo to Cowes	2005/2386	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Biologically Important Areas

Scientific Name	Behaviour	Presence	Buffer Status
Seabirds			
Ardenna tenuirostris Short-tailed Shearwater [82652]	Breeding	Known to occur	In feature area
Ardenna tenuirostris Short-tailed Shearwater [82652]	Foraging	Known to occur	In feature area
Eudyptula minor Little Penguin [1085]	Breeding	Known to occur	In feature area
Eudyptula minor Little Penguin [1085]	Foraging	Known to occur	In feature area
Pelagodroma marina White-faced Storm-petrel [1016]	Foraging	Known to occur	In feature area
Pelecanoides urinatrix Common Diving-petrel [1018]	Foraging	Known to occur	In feature area
Thalassarche cauta cauta Shy Albatross [82345]	Foraging likely	Likely to occur	In feature area
Sharks			

Scientific Name	Behaviour	Presence	Buffer Status
Carcharodon carcharias White Shark [64470]	Foraging	Known to occur	In feature area
Carcharodon carcharias White Shark [64470]	Known distribution	Known to occur	In feature area
Whales			
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Distribution	Known to occur	In feature area
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present	In feature area
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Known Foraging Area	Known to occur	In feature area
Eubalaena australis Southern Right Whale [40]	Known core range	Known to occur	In feature area
Eubalaena australis Southern Right Whale [40]	Migration and resting on migration	Known to occur	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 16-Jun-2023

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	61
Listed Migratory Species:	45

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	80
Whales and Other Cetaceans:	11
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	5
Key Ecological Features (Marine):	None
Biologically Important Areas:	14
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Western port	Within 10km of Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Giant Kelp Marine Forests of South East Australia	Endangered	Community may occur within area	In feature area
Natural Damp Grassland of the Victorian Coastal Plains	Critically Endangered	Community may occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Botaurus poiciloptilus			
Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris canutus			
Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Migration route likely to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche steadi			
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Thinornis cucullatus cucullatus			
Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
Prototroctes maraena			
Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Seriolella brama			
Blue Warehou [69374]	Conservation Dependent	Species or species habitat known to occur within area	In feature area
Thunnus maccoyii			
Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area
FROG			
Litoria raniformis			
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Balaenoptera musculus			
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population)			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area	In feature area
Eubalaena australis			
Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Isoodon obesulus obesulus			
Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Perameles gunnii Victorian subspecies Eastern Barred Bandicoot (Mainland) [88020]	Endangered	Translocated population known to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
Potorous tridactylus trisulcatus Long-nosed Potoroo (southern mainland) [86367]	Vulnerable	Species or species habitat may occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In feature area
PLANT			
Prasophyllum spicatum Dense Leek-orchid [55146]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat may occur within area	In feature area
Pterostylis cucullata Leafy Greenhood [15459]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Senecio psilocarpus Swamp Fireweed, Smooth-fruited Groundsel [64976]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat may occur within area	In buffer area only
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Lissolepis coventryi Swamp Skink, Eastern Mourning Skink [84053]	Endangered	Species or species habitat likely to occur within area	In feature area
SHARK			
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Galeorhinus galeus School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat may occur within area	In feature area
Ardenna tenuirostris Short-tailed Shearwater [82652]		Breeding known to occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Migratory Marine Species			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In feature area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Thalasseus bergii Greater Crested Tern [83000]		Breeding known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]		Species or species habitat may occur within area	In feature area
Ardenna tenuirostris as Puffinus tenuirostris Short-tailed Shearwater [82652]		Breeding known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In feature area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eudyptula minor Little Penguin [1085]		Breeding known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Larus dominicanus Kelp Gull [809]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Larus pacificus Pacific Gull [811]		Breeding known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Migration route likely to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei as Thalassarche sp. nov. Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Thalassarche impavida](#) Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
[Thalassarche melanophris](#) Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
[Thalassarche salvini](#) Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
[Thalasseus bergii as Sterna bergii](#) Greater Crested Tern [83000]		Breeding known to occur within area	In feature area
[Thinornis cucullatus as Thinornis rubricollis](#) Hooded Plover, Hooded Dotterel [87735]		Species or species habitat known to occur within area overfly marine area	In feature area
[Thinornis cucullatus cucullatus as Thinornis rubricollis rubricollis](#) Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area
Fish			
[Heraldia nocturna](#) Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area	In feature area
[Hippocampus abdominalis](#) Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area	In feature area
Hippocampus minotaur Bullneck Seahorse [66705]		Species or species habitat may occur within area	In feature area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area	In feature area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area	In feature area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area	In feature area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area	In feature area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area	In feature area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area	In feature area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In feature area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In feature area
Mitotichthys mollisoni Mollison's Pipefish [66260]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area	In feature area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area	In feature area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area	In feature area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area	In feature area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area	In feature area
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area	In feature area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In feature area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area	In feature area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In feature area
Stipecampus cristatus Ringback Pipefish, Ring-backed Pipefish [66278]		Species or species habitat may occur within area	In feature area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In feature area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area	In feature area
Mammal			
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area	In feature area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat likely to occur within area	In feature area
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In feature area

Current Scientific Name	Status	Type of Presence	Buffer Status
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In feature area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area	In feature area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In feature area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In feature area

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Phillip Island Nature Park	Other	VIC	In feature area

Nationally Important Wetlands [Resource Information]

Wetland Name	State	Buffer Status
Western Port	VIC	In feature area

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Newhaven Yacht Squadron marina extension	2004/1450	Not Controlled Action	Completed	In feature area
Optic fibre cable installation - San Remo to Cowes	2005/2386	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Biologically Important Areas

Scientific Name	Behaviour	Presence	Buffer Status
Seabirds			
Ardenna tenuirostris Short-tailed Shearwater [82652]	Breeding	Known to occur	In feature area
Ardenna tenuirostris Short-tailed Shearwater [82652]	Foraging	Known to occur	In feature area
Eudyptula minor Little Penguin [1085]	Breeding	Known to occur	In feature area
Eudyptula minor Little Penguin [1085]	Foraging	Known to occur	In feature area
Pelagodroma marina White-faced Storm-petrel [1016]	Foraging	Known to occur	In feature area
Pelecanoides urinatrix Common Diving-petrel [1018]	Foraging	Known to occur	In feature area
Thalassarche cauta cauta Shy Albatross [82345]	Foraging likely	Likely to occur	In feature area
Sharks			

Scientific Name	Behaviour	Presence	Buffer Status
Carcharodon carcharias White Shark [64470]	Foraging	Known to occur	In feature area
Carcharodon carcharias White Shark [64470]	Known distribution	Known to occur	In feature area
Whales			
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Distribution	Known to occur	In feature area
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present	In feature area
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Known Foraging Area	Known to occur	In feature area
Eubalaena australis Southern Right Whale [40]	Known core range	Known to occur	In feature area
Eubalaena australis Southern Right Whale [40]	Migration and resting on migration	Known to occur	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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Environmental EME Report

Location	Phillip Island Road, SUNDERLAND BAY VIC 3922		
Date	07/06/2023	**RFNSA No.**	3922016

How does this report work?

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at Phillip Island Road, SUNDERLAND BAY VIC 3922. These levels have been calculated by Downer Group using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).
A document describing how to interpret this report is available at ARPANSA's website:
A Guide to the Environmental Report.

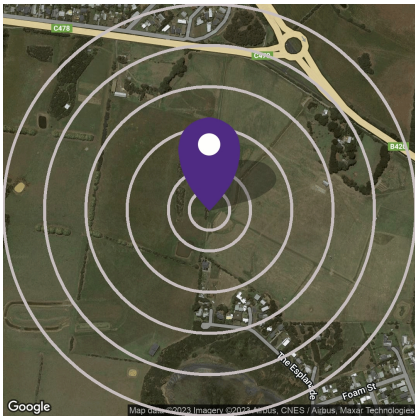
A snapshot of calculated EME levels at this site

There are currently no existing radio systems for this site.

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

0.99%

out of 100% of the public exposure limit, 237 m from the location.



EME levels with the proposed changes

Distance from the site	Percentage of the public exposure limit
0-50 m	0.60%
50-100 m	0.33%
100-200 m	0.88%
200-300 m	0.99%
300-400 m	0.77%
400-500 m	0.45%

For additional information please refer to the EME ARPANSA Report annexure for this site which can be found at *http://www.rfnsa.com.au/3922016*.

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.

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

	Existing configuration			Proposed configuration		
Distance from the site	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
0-50m				3.99	42.17	0.60%
50-100m				3.17	26.64	0.33%
100-200m				4.49	53.56	0.88%
200-300m				4.90	63.57	0.99%
300-400m				4.34	49.95	0.77%
400-500m				3.33	29.35	0.45%

Calculated EME levels at other areas of interest

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

Maximum cumulative EME level for the proposed configuration

Location	Height range	Electric field (V/m)	Power density (mW/m^2)	Percentage of the public exposure limit
No locations identified				