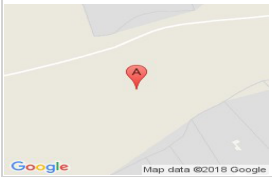
Planning: #144478

Property

127-127A CASCADE ROAD SOUTH HOBART TAS 7004



People

Applicant
*
Catalyst ONE Pty Ltd
James McIver
PO Box 361
SOUTH MELBOURNE VIC 3205
0423187012
jmciver@catalystone.com.au

Owner
*
Cascade Brewery Company Pty Ltd

Cascade Brewery, Cascade Road
SOUTH HOBART TAS 7004
03 8626 2215
ashley.heffernan@cbre.com.au

Entered By
JAMES MCIVER
042318701 2
jmciver@catalystone.com.au

Use

Utilities

Details

Have you obtained pre application advice?

- No

If YES please provide the pre application advice number eg PAE-17-xx

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application.
*

- No

Is the application for SIGNAGE ONLY? If yes, please enter $0 in the cost of development, and you must enter the number of signs under Other Details below.
*

- No

If this application is related to an enforcement action please enter Enforcement Number

Details

What is the current approved use of the land / building(s)?
*

Undeveloped

Please provide a full description of the proposed use or development (i.e. demolition and new dwelling, swimming pool and garage)
*

Use and development of the land for a telecommunications facility

Estimated cost of development
*

250000.00

Existing floor area (m2)	Proposed floor area (m2)	Site area (m2)
0.00	66.60	67

Carparking on Site

Total parking spaces	Existing parking spaces	N/A
0	0	Other (no selection chosen)

Hours of Business

Are the proposed hours of business different from the existing? - Yes

What days and hours of operation are proposed for the business?

	Existing From	Existing To	Proposed From	Proposed To
Monday to Friday			08:00	08:00
Saturday	08:00	08:00		
Sunday			08:00	08:00

Proposed Mon-Fri hours are the same as existing

Proposed Sat-Sun hours are the same as existing

Number of Employees

List the total number of people who will be working on the site.

Proposed number of employees	Existing number of employees
0	0

Goods Deliveries

Will there be any commercial vehicles accessing the site? - Yes

Type of Vehicle	Trips per Week
Very Large (Semi trailer)	
Large	
Medium	1 - 2
Small	

Outdoor storage / seating / number of beds

Is outdoor storage proposed? - No

Other Details

Does the application include signage?
*

No

How many signs, please enter 0 if there are none involved in this application?
*

0

Tasmania Heritage Register

Is this property on the Tasmanian Heritage Register?

- No

Documents

Required Documents

Title (Folio text and Plan and Schedule of Easements)
*
H8095_Title_Folio Text and Plan.pdf

Plans (proposed, existing)
*
H8095_Plan Drawing.pdf

Covering Letter
H8095_Cover Letter 2018 01 05.pdf

Supporting Documents

Planning Report
H8095_Planning Assessment Report.pdf

5 January 2018

Planning Department
Hobart City Council
GPO Box 503
Hobart TAS 7001

Dear Sir or Madam,

Application for Planning Permit – Optus Mobile Pty Ltd Telecommunications Facility

127-127A Cascade Road, South Hobart TAS 7004

Catalyst ONE Pty Ltd (Catalyst) has been engaged by Huawei Technologies (Australia) Pty Ltd (Huawei) to undertake the required town planning services associated with the above proposal, located within the Hobart City Council area.

The proposal involves the development of the land for the purposes of a telecommunications facility comprising a 20m high steel light pole, together with antennas, and an equipment shelter, all within a secure Optus compound area, as detailed within the attached documents.

Herewith, Catalyst provides an Application for Planning Permit for the above proposal, together with all relevant documentation. Please find enclosed the following information to satisfy the Application Requirements:

- A completed Application for Planning Permit form;
- A copy of the Certificate of Title;
- Three (3) copies of plans to scale, including site locality and layout, site set out plan, and site elevation;
- An accompanying Planning Assessment Report, detailing all aspects of the proposal and assessment against relevant legislation, including the Hobart Interim Planning Scheme.
- A cheque for the prescribed fee of $600.00 payable to City of Hobart.

We advise that the Application for Planning Permit has had regard to the relevant provisions of the Hobart Interim Planning Scheme, as detailed in the Planning Assessment Report.

We would appreciate Council's assistance in preparing any public notification of the application, together with referral to the relevant authorities, which may be required as part of the approval.

Catalyst ONE Pty Ltd
PO Box 361, South Melbourne VIC 3205
ABN 55 117 447 140

For further information regarding this application, or to discuss any matter relating to the requirements of Hobart City Council, please contact the undersigned.

Yours sincerely,

James McIver
Catalyst ONE Pty Ltd
M: +61 423 187 012
E: jmciver@catalystone.com.au
A: PO Box 361, South Melbourne VIC 3205

Enclosures

Certificate of Title	[✓]
Copy of plans to scale	[✓]
Planning Assessment Report	[✓]
Cheque for the prescribed fee	[✓]

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
161768	1
EDITION	DATE OF ISSUE
2	27-Oct-2016

SEARCH DATE : 24-Aug-2017
SEARCH TIME : 04.05 PM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Plan 161768
Derivation : Part of 2000 Acres Gtd. to Peter Degraves, Part of 2660 Acres Gtd. to Joseph Allport & Thomas Young, Part of 8A-1R-0P & Whole of 0A-1R-30P Gtd. to Joseph Allport & H S Hurst and Part of 8A-1R-16P & Whole of 0A-0R-8P Gtd. to Henry Degraves
Prior CT 149634/1

SCHEDULE 1

B654287 B964351 C575163 C746215 CASCADE BREWERY COMPANY PTY LTD Registered 27-Apr-2007 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
BURDENING EASEMENT: a Right of Drainage (appurtenant to Lot 42B on D 262/35) over the land marked 'DRAINAGE EASEMENT 1.52 WIDE' on Plan 161768
BURDENING EASEMENT: a Right of Drainage (appurtenant to 1 rood 39 perches of land on D 170/34) over the land marked 'RIGHT OF DRAINAGE 0.91 WIDE' on Plan 161768
BURDENING EASEMENT: a Right of Carriageway (appurtenant to 2 acres 3 roods 38 1/2 perches of land on D 160/32) over the land marked 'RIGHT OF CARRIAGEWAY' on Plan 161768
BURDENING EASEMENT: a Right of Carriageway (appurtenant to Lots 3, 4, 13, 20, 28, 44, 45, 47, 50 and 52 on P 985, Lot 2 on D 36/29, to the land comprised in Certificates of Title Volume 436 Folio 140 and Volume 448 Folio 85 and to 6 acres 11 perches, 5 acres 3 roods 34 4/10 perches, 1 acre 3 roods 10 perches, 11 acres 34 2/10 perches, 12 acres 2 roods 13 perches, 2 roods 32 perches and 12 acres 23 perches of land shown respectively on Diagrams 7/27 BUCK. 9/25 BUCK., 83/5, 84/30, 141/38, 148/17 and 150/23)over such portions of the roads and roadways shown on Plan

161768 as are set forth in the respective Certificates of Title to such Lots and lands

BURDENING EASEMENT: a Right of Carriageway (appurtenant to such portions of the land formerly comprised in Certificate of Title Volume 150 Folio 1 as have been granted the right) over the land marked 'ROADWAY' (ABCD) on Plan 161768

PRE 'A' TRANSFER 99110 BURDENING EASEMENT: Pipeline Rights for the HOBART CITY COUNCIL over the land marked 'EASEMENT FOR PIPELINE 1.83 WIDE' on Plan 161768 together with the right to construct and maintain a pressure tank in connection with the said water mains in the position marked 'PRESSURE TANK' on Plan 161768

PRE 'A' TRANSFER 30057 BENEFITING EASEMENT: the right of the CASCADE BREWERY COMPANY PTY. LTD. to have its three and six inch water pipe which runs from the Hobart Rivulet to the Cascade Brewery and passes through Lots 23, 24, 25 and 26 (Section B) and Lots 4 and 5 (Section E) on P 568 and maintained as at present with full rights of ingress egress and regress for the purpose of repairing or renewing the same

BURDENING EASEMENT: a Right of Way (appurtenant to 1 acre 26 1/10 perches on D 523/13) over the land marked EFG on Plan 161768

BURDENING EASEMENT: a Right of Carriageway (appurtenant to Lot 1 on P 3086) over the roadway marked ABCD on Plan 161768

BENEFITING EASEMENT: the right of the CASCADE BREWERY COMPANY PTY. LTD. to have its three and six inch water pipe which runs from the Hobart Rivulet to the Cascade Brewery and passes through the land in Certificate of Title Volume 3467 Folio 29 maintained as at present with full rights of ingress egress and regress over all the land in the said Certificate of Title for the purpose of repairing or renewing or enlarging the same

BURDENING EASEMENT: (as relates to the land marked 'EMBANKMENT EASEMENT' on Plan 161768) the licence to embank up the adjoining highway under the provisions of Section 6 of the 'HIGHWAYS ACT 1951' created by Instrument A226559

BURDENING EASEMENT: Pipeline Rights for the HOBART CITY COUNCIL over the land marked 'PIPELINE EASEMENT 6.10 WIDE' on Plan 161768

B880015 BURDENING EASEMENT: a Right of Carriageway (appurtenant to Lot 1 on D 84900) over the land marked 'RIGHT OF CARRIAGEWAY' (EGH) on Plan 161768 Registered 08-Mar-1996 at 12.01 PM

C81545 BURDENING EASEMENT: a Right of Carriageway (appurtenant to Lot 2 on Sealed Plan 65558) over the 'ROADWAY 5.03 WIDE' on Plan 161768 Registered 15-Apr-1998 at noon

D96321 AGREEMENT pursuant to Section 71 of the Land Use Planning and Approvals Act 1993 Registered 01-Aug-2013 at noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER CASCADE BREWERY COMPANY PTY LTD

FOLIO REFERENCE F/R 149634 - 1

GRANTEE
PART OF 2000 ACRES GTD TO PETER DEGRAVES, PART OF 2660 ACRES GTD TO JOSEPH ALLPORT & THOMAS YOUNG, PART OF 8-1-0 & WHOLE OF 0-1-30 GTD TO JOSEPH ALLPORT & HENRY STEVENSON HURST, & PART OF 8-1-6 & WHOLE OF 0-0-8 GTD TO HENRY DEGRAVES

PLAN OF TITLE

LOCATION
CITY OF HOBART

FIRST SURVEY PLAN No. P37548
(LARGE MASTER NO. 67)
COMPILED BY
ROGERSON & BIRCH SURVEYORS
SCALE NOT TO SCALE LENGTHS IN METRES

REGISTERED NUMBER
P 161768

APPROVED - 2 MAY 2011
Alice Kava
Recorder of Titles

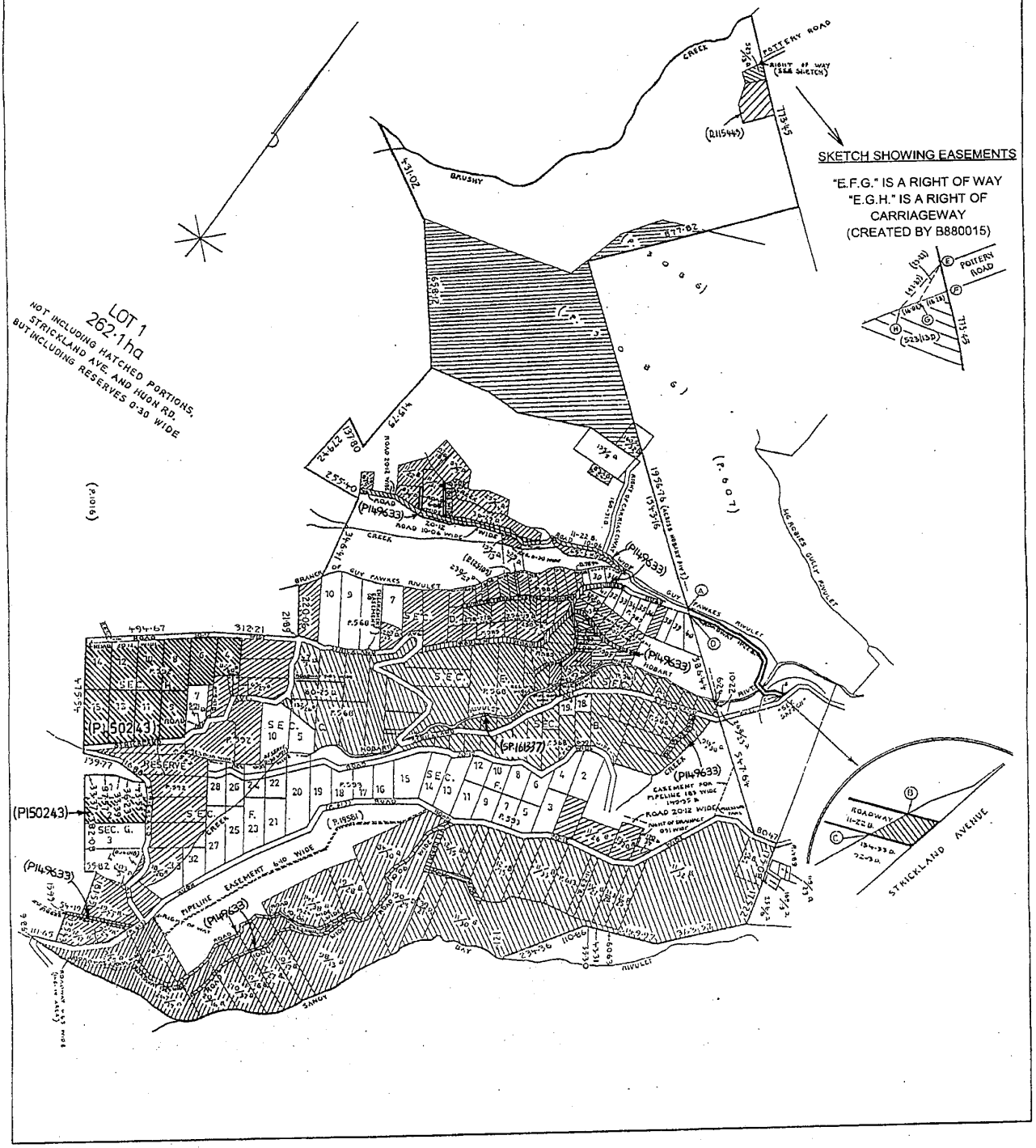
MAPSHEET MUNICIPAL (5225) CODE No. 114 (5224-11)

LAST UPI No. -

LAST PLAN No. P 149634

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

BALANCE PLAN



ROGERSON & BIRCH SURVEYORS

UNIT 1, 2 KENNEDY DRIVE
CAMBRIDGE 7170
PHONE: (03)6248 5898
EMAIL: admin@rbsurveyors.com
WEB: www.rbsurveyors.com

VIEW TOWARDS LEASE AREA

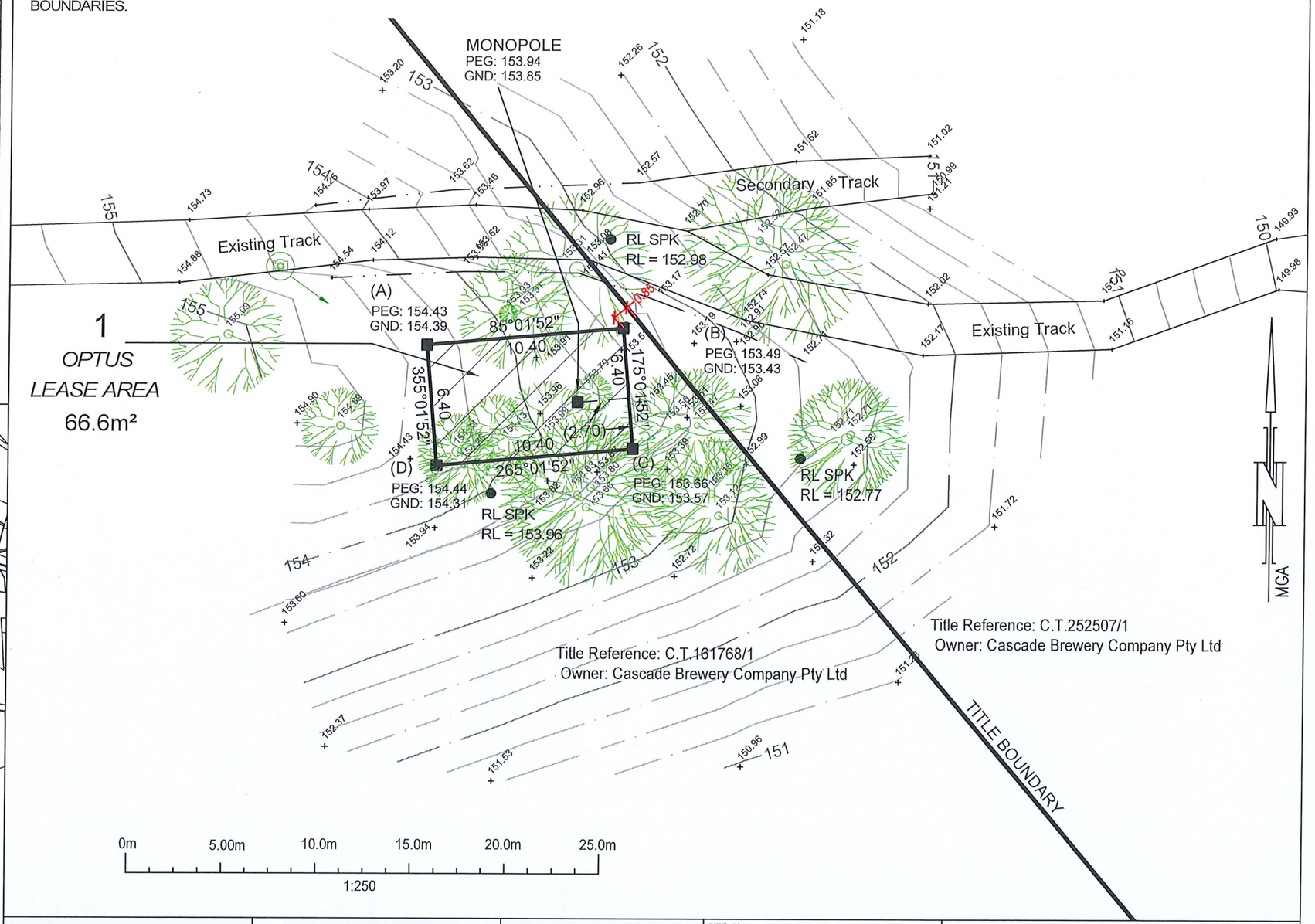
MGA COORDS		
(A) CP	(C) CP	MONOPOLE
E 523542.835	E 523553.746	E 523550.824
N 5250674.561	N 5250669.088	N 5250671.543

NOTES
1. SITE SURVEY BY ROGERSON & BIRCH SURVEYORS.
2. ALL LEVELS ARE IN METRES TO AHD PER RTK GPS
3. GRID COORDINATES ARE TO MGA ZONE 55.
4. TITLE REFERENCE: C.T.161768/1
5. OWNER: CASCADE BREWERY COMPANY PTY LTD
6. THE TITLE BOUNDARIES SHOWN HEREON WERE NOT MARKED AT THE TIME OF SURVEY AND HAVE BEEN DETERMINED BY PLAN DIMENSIONS AND NOT BY FIELD SURVEY.
7. CONTOUR INTERVAL: 0.25M
8. LEASE AREA DETAIL & ORIENTATION BASED ON INFORMATION SUPPLIED BY CATALYST ONE.
9. THE LEASE AREAS ARE WHOLLY CONTAINED WITHIN THE TITLE BOUNDARIES.

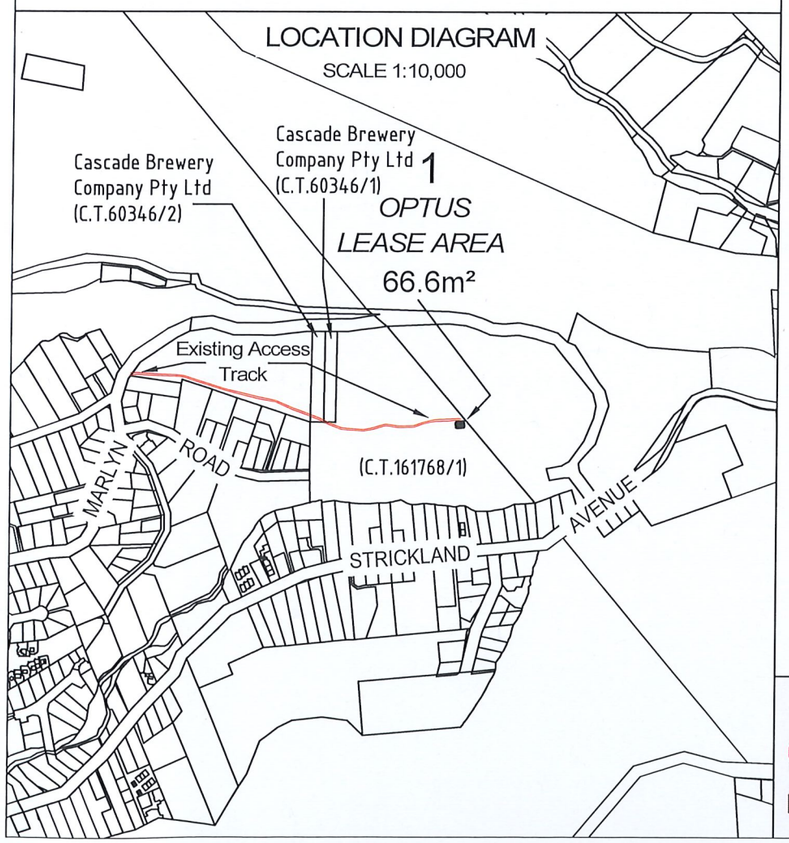
I, Andrew Birch of Rogerson & Birch Surveyors at 1, 2 Kennedy Drive, Cambridge TAS 7170 certify that the GDA94 Coordinates (M.G.A Datum) and Australian Height Datum height measurements are within an absolute accuracy of 0.20 metres as per computations from nearby coordinated survey marks.

.....Registered Land Surveyor

2-11-2017 .....Date



LOCATION DIAGRAM
SCALE 1:10,000



HUAWEI TECHNOLOGIES (AU) PTY LTD
ABN 49 103 750 368
SYDNEY
LEVEL 6 TOWER B 799 PACIFIC HIGHWAY
CHATSWOOD NSW 2067
TEL: +61 2 9928 3888 FAX: +61 2 9411 8533
MELBOURNE
LEVEL 24 459 COLLINS STREET
MELBOURNE VIC 3000
TEL: +61 3 8610 0600 FAX: +61 3 9621 1575

catalyst managers.advisors

OPTUS yes

SITE No: H8095–A
CASCADE BREWERY

LOCATION:
127 CASCADE ROAD
SOUTH HOBART
TAS

LEASE DETAIL SURVEY PLAN

SHEET 1 OF 1

DATE 18/10/2017

SCALE 1:250

REF. No. CATAL20 1050701

Planning Assessment Report

Proposed Telecommunications Facility:

127-127A Cascade Road, South Hobart TAS 7004

Prepared by Catalyst ONE Pty Ltd for Optus Mobile Pty Ltd

January 2018

Executive Summary

Proposal	Optus proposes to install a new mobile base station facility at 127-127A Cascade Road, South Hobart. The proposed facility consists of the installation of: • One (1) 20m monopole with turret headframe; • Three (3) panel antennas, of dimensions 2690mm x 548mm x 150mm, mounted on the headframe at a centreline elevation 21.7m; • Twenty-seven (27) radio remote units installed on a strap mount at 18.5m; • One (1) equipment shelter of dimensions 3.15m x 2.38m, coloured "Pale Eucalypt"; • Secure compound with security fence and access gates; • Cables connecting the antennas to the equipment shelter; • Removal of five (5) trees at the subject site; • Ancillary equipment associated with operation of the facility, including elevated cable trays, cabling, safe access methods, earthing and electrical works, etc. • Power supply works, including a new route via underground conduits to point of supply.	
Purposes	The proposed facility is necessary for Optus to provide mobile and data services to South Hobart and the surrounding area.	
Property Details	Legal description: Certificate of Title Volume 161768 Folio 1; Lot 1 on Plan 161768 Street Address: 127-127A Cascade Road, South Hobart TAS 7004	
Town Planning Scheme	Council: Hobart City Council ("Council") Zone: Environmental Management Zone (EMZ) Principal Designated Use: Nature Reserve	
Applicable Planning Policies	Relevant State and Local Planning Policies	Complies
	Hobart Interim Planning Scheme	Yes
	Use and development of the land for the construction, operation and maintenance of a mobile base station.	Yes
Application	Optus telecommunications facility at 127-127A Cascade Road, South Hobart.	
Applicant	Contact: James McIver Tel: 0423 187 012 Email: jmciver@catalystone.com.au Address: PO Box 361, South Melbourne VIC 3205 Our Ref: H8095 Cascade Brewery	

Table of Contents

1.0 Introduction

This Planning Assessment Report ("report") has been prepared by Catalyst ONE Pty Ltd ("Catalyst") for Optus Mobile Pty Ltd ("Optus") to support an Application for Planning Permit for the development of land for a telecommunications facility at 127-127A Cascade Road, South Hobart TAS 7004. The report details the proposal and identifies the statutory controls relating to the proposed use and development, and provides an assessment of the proposal against these controls. In addition, the report provides an assessment of any environmental impacts associated with the proposal and identifies relevant planning considerations to minimise any impacts.

1.1 Catalyst Information

Catalyst is a leading provider of specialist project management, design and construction, property and environmental planning services to the telecommunications industry.

1.2 Proposal Overview

The proposal involves the installation of a new Optus mobile base station at 127-127A Cascade Road, South Hobart, which consists of a 20m high monopole with antennas together with an equipment shelter located at ground level adjacent to the monopole, all within a secure compound. The mobile base station aims to provide a dominant mobile server in South Hobart and will provide significantly enhanced Optus mobile coverage for users on the Optus network.

2.0 Background

2.1 What is a Mobile Base Station and How Do They Work?

A mobile base station is a facility that provides mobile telephone services to a geographical area. A mobile phone network is made up of base stations which operate together to provide service to users moving from place to place within the coverage area. A mobile base station typically consists of the following components: antennas, support structure, base station and transmission equipment. The antennas are connected by cable to radio equipment usually housed in a room, shelter or outdoor unit. Base stations are connected to the core network by microwave or fibre.

Mobile phones work by sending and receiving low power radio signals, much like 2-way radio system. The signals are sent and received from antennas that are attached to radio transmitters and receivers, commonly referred to as mobile phone base stations. The base stations are linked to the rest of the mobile and fixed phone network and pass the signal/call on into those other parts of the network.

2.2 Benefits of Mobile Technology

Mobile telecommunications play a central role in society and are becoming more deeply integrated into our day to day lives. Mobile communications networks shape how and when people communicate and how we access information on a daily basis. Today, improved connectivity means that mobile devices are used for everything from commerce and research to location-based services and social media. Individuals, families, businesses and society are all benefiting from the improved connectivity facilitated by mobile technologies.

In addition to its personal and social value, the evolution of mobile technologies has delivered significant benefits to the Australian economy by improving productivity, business management and customer engagement. Since its introduction, mobile technology has played a key role in stimulating labour productivity growth by allowing employees to be more efficient, with more productive use of time. According to Deloitte (2016), the Australian economy is approximately $34 billion larger in 2015 than it would otherwise be due to the long-term productivity of mobile technologies.

Mobile technology's economic contribution is not limited to improving productivity. It improves connectivity and participation in the workforce. Mobile technology also provides employees with the flexibility to work from home, promoting sustainable commuting and also reducing traffic congestion. According the Australian Mobile Telecommunications Association (AMTA), two decades ago only 4% of Australians owned a mobile device. According to the Australia Bureau of Statistics, there are now over 21 million subscribers with internet access connections via a mobile handset in Australia (ABS, 2015). Mobile technology's continual development has allowed it to become the preferred channel to access the internet for most people in Australia and the rest of the world.

2.3 Purpose of the Proposal

To cater for the growing demand for mobile services, Optus has embarked on a nationwide rollout to deliver an improved, reliable telecommunications network to the Australian public. The rollout will provide improved mobile coverage and enhanced services in metropolitan, regional and rural areas throughout Australia. This rollout consists of the upgrade of existing telecommunications facilities and where required the installation of new mobile base stations to expand the coverage footprint and offer seamless mobile services.

Additional base stations are required where surrounding facilities cannot provide sufficient coverage to a target area. New facilities are also required when existing base stations are fully utilised and cannot serve additional users in the area. Optus has undertaken analysis of their mobile network in South Hobart and has identified areas where coverage and network quality needs to be improved. If this investment is not made, the following main issues will arise:

- Users may have difficulty connecting to the mobile network or the call may drop out. This impacts businesses, residents, visitors to the area and the ability of the user to contact emergency services.
- Users may experience reduced data speeds, longer download times and poor network performance at busy times of the day with data intensive and time sensitive applications (e.g. newscasts, social media, mobile banking, weather forecasts, sports highlights etc.).

Once Optus identifies the need for improved network performance, the optimisation of existing Optus facilities throughout the region is explored and undertaken where required. In some cases, this option resolves network deficiencies in an area. In this instance the optimisation of surrounding facilities has not been able to achieve a satisfactory outcome for the network at South Hobart. Optus has also undertaken investigations into the use of other Carrier and broadcast facilities in the area. However, the use of existing facilities could not adequately accommodate the required Optus equipment and the coverage to the target area could not be achieved (refer to Section 4.2). Accordingly, the deployment of a new Optus mobile base station in the South Hobart area was the only viable solution.

The primary objective of the mobile base station is to provide inbuilding coverage to the commercial and residential areas in South Hobart. The target coverage levels at various points of interest includes:

- Corner of Smithurst Avenue and Strickland Avenue, of latitude -42.898037 and longitude 147.289165, needs a target level of >-73dBm;
- South Hobart Soccer Club, needs a target level of >-80dBm;
- Corner of Marlyn Road and Saunders Crescent, of latitude -42.895961 and longitude 147.296053, needs a target level of >-80dBm.

In order to adequately receive and transmit radio signals, base station antennas must be established at an appropriate height, in this instance, on a stand-alone monopole. The location and height of the monopole is therefore determined by the following factors:

- The availability of a suitable site based on the land use context of the area.
- The availability of a suitable site to minimise amenity impacts associated with the required facility.
- The required antenna height to clear surrounding obstacles, such as trees and buildings.
- The required antenna height based on the topography of the area.

The factors above are used to determine the height and location of the mobile base station based on Optus' coverage objectives.

3.0 Regulatory Framework

The following legislation is relevant to the preparation of this planning assessment report:

- *Telecommunications Act 1997* ("the Act");
- *Telecommunications Code of Practice 1997* ("the Code");
- *Telecommunications (Low-impact Facilities) Determination* 1997 ("the Determination");
- Industry Code C564:2011 - Mobile Phone Base Station Deployment' ("the Deployment Code");
- *Environmental Protection and Biodiversity Act 1999* ("the EPB&C Act");
- *Land Use Planning and Approvals Act 1993* ("the LUPA Act")
    - Hobart Interim Planning Scheme 2015 ("the Scheme").

3.1 Commonwealth

3.1.1 Telecommunications Act 1997

The Act came into operation in July 1997 setting up a framework for regulating the actions of telecommunications carriers and service providers. Optus is a licensed Carrier within the meaning of the Act. The Determination, made under subclause 6(3) of Schedule 3 of the Act, establishes the criteria for 'low-impact' telecommunications facilities. A proposed facility is a low-impact facility if it meets the requirements of the Determination, exempting Carriers from State and Local planning controls. Under the Act and the Determination certain telecommunications facilities cannot be classified as low-impact facilities. In this instance, a new monopole cannot be classified as a low-impact facility under the legislation, and accordingly, State and Local planning controls apply.

3.1.2 Telecommunications Code of Practice 1997

The Code is established under the Act, which sets out the conditions under which a carrier must operate. Section 2.11 of the Commonwealth Code sets out the design, planning and installation requirements for the carriers to ensure the installation is in accordance with industry "best practice". This is required to:

> *"…Minimise the potential degradation of the environment and the visual amenity associated with the facilities*"

Best practice also involves the carrier complying with any relevant industry code or standard that is registered by the Australian Communications and Media Authority (ACMA) under Part 6 of the Act.

3.1.3 Industry Code C564:2011 - Mobile Phone Base Station Deployment

The Australian Communications and Media Authority (ACMA) is the Federal Government regulator of telecommunications, and can investigate complaints about carrier non-compliance with the Act, Ministerial Code of Practice or a registered Industry Code, including the Deployment Code.

In response to calls for greater council and community involvement when telecommunications facilities are installed, the Communications Alliance Ltd developed the Deployment Code. The Deployment Code cannot change the existing regulatory framework for telecommunications at Local, State or Federal level. However, it supplements the existing obligations on carriers, particularly in relation to community consultation and the consideration of exposure to radio signals, sometimes known as electromagnetic energy (EME or EMR).

The Deployment Code imposes mandatory levels of notification and community consultation for sites complying with the Determination. It identifies varying levels of notification and/or consultation depending on the type and location of the infrastructure proposed.

As the proposed telecommunications facility is not considered to be a 'low-impact' facility under the Determination, it is not subject to the notification or consultation requirements associated with the Deployment Code. These processes are handled within the relevant State and Local consent public notification procedures.

Nevertheless, Sections 4.1 and 4.2 of the Deployment Code are relevant to the preparation of this Application for Planning Permit and we confirm that Optus has applied the Precautionary Approach to site selection and design in accordance with Sections 4.1 and 4.2 of the Deployment Code. The Precautionary Approach Checklist (PAC) has been prepared in accordance with Sections 4.1 and 4.2 of the Deployment Code are enclosed at Appendix A.

Included in the Section 4.1 PAC is a statement on how the public's exposure to EME from the site has been minimised. All emissions from the site will be well within the limits of the relevant Australian Standard. Details of this standard are contained in the section "Public Health". The Section 4.2 PAC demonstrates how the proposed facility has been designed in accordance with the Deployment Code 'precautionary approach'. The subject site and proposed facility have been selected and designed to comply with the requirements of the Deployment Code and the precautionary approach, which has been adhered to.

3.1.4 Environmental Protection and Biodiversity Act 1999

The EPB&C Act relates to 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.
The subject site is located within an industrial area and the land has previously been cleared of vegetation. The proposal is not considered to have a significant impact on the matters in the EPB&C Act, as such, the proposal is not of national environmental significance as defined under the EPB&C Act, as it will not impact on:

- World Heritage Areas;
- Wetlands protected by International Treaty (The RAMSAR Convention);
- Nationally listed threatened species and communities; and
- Nationally listed migratory species;

It is therefore considered that the proposal does not warrant referral to the Commonwealth Government under the requirements of the EPB&C Act. Please refer to Section 9 for further details.

3.2 State

The LUPA Act is an integral component of the Resource Management and Planning System (RMPS) of the State of Tasmania and inter alia, establishes processes that regulate use and development of land in Tasmania. The LUPA Act creates the 'Tasmanian Planning Scheme' which consists of the State Planning Provisions (SPP) and specific local provisions schedules, representing a single planning scheme for the entire State. However, as the creation of the SPP is at present in final draft stage, it is the LUPA Act and local planning schemes that regulate use and development of land in Tasmania.

An important feature of the Draft State Planning Provisions (DSPP) that has also been adopted by a number of local councils in their interim planning schemes is the delineation between code and zoning provisions. Code provisions provide a set of standards for use or development of land that deal with particular issues or values across numerous zones, and therefore have a far wider application than the provisions of a singular zone. Where a conflict arises between a code and a zone provision, the former prevails. An example of a specific code that is outlined in the DSPP and which has been adopted in a number of interim local planning schemes is the Telecommunications Code.

3.3 Local

The subject site is located within the Hobart City Council (Council) area and is therefore subject to the statutory controls of the Scheme. The Scheme sets out controls for the use and development of land and provides an assessment framework for any proposals to use and develop land. The Telecommunications Code is located at Part E19 of the Scheme. The Telecommunications Code outlines 'Acceptable Solutions and Performance Criteria' that guide the development of telecommunications facilities in Tasmania.

4.0 Site Selection

4.1 Site Selection Process

Optus carefully examined a range of possible deployment options in the area before concluding that a new telecommunications facility located at 127-127A Cascade Road would be the most appropriate solution. Optus commenced the site selection process with a search of potential sites that meet the network's technical requirements, with a view to also having the least possible impact on the surrounding area. Optus applies and evaluates a range of criteria as part of this site selection process.

Optus assesses the technical viability of potential sites using computer modelling tools that produce predictions of the coverage that may be expected from these sites, as well as from the experience and knowledge of the radio engineers.

There are also a number of other important criteria that Optus uses to assess and select potential site options. These consider factors other than the technical performance of the site, and include:

- The potential to upgrade existing Optus facilities within the region.
- The potential to co-locate on an existing telecommunications facility.
- The potential to locate on an existing building or structure.
- The ability to minimise environmental, visual and heritage impacts.
- Proximity of the site to community sensitive locations.
- Regulatory compliance and the potential to obtain relevant planning approvals.
- Proximity to community sensitive locations and areas of environmental heritage.
- Impacts on the existing use of the site.
- The ability to secure tenure with a landowner.
- The cost of developing the site and the provision of utilities (power, access to the facility and transmission links).

During the detailed site selection process for the new facility, Optus carefully considered the above criteria where relevant, and the considerations are detailed in the following sections.

4.2 Co-location with an Existing Facility

The Deployment Code promotes the use of existing sites to mitigate the effects of facilities on the landscape. The potential to co-locate the proposed Optus facility with an existing Telstra monopole was investigated. The Telstra site is located at 127 Cascade Road, South Hobart, and consists of a 20m monopole. The existing facility is well located, with significant screening vegetation surrounding the site. The low height of the Telstra facility also minimises its visual impact, with only a small portion of the tower visible above the tree line.

An assessment of the Telstra facility determined that the proposed site could not structurally and technically accommodate the Optus equipment. In addition, the surrounding tree height was greater than the aperture available to Optus. As the existing facility cannot accommodate the Optus equipment, a co-location would require the replacement of the existing monopole with a substantially taller structure. Increasing the height of the Telstra facility from 20m to 30m would have an unacceptable level of impact on the visual amenity of the surrounding area. Accordingly, co-location with the Telstra facility was not a viable alternative to a new, stand-alone Optus facility.

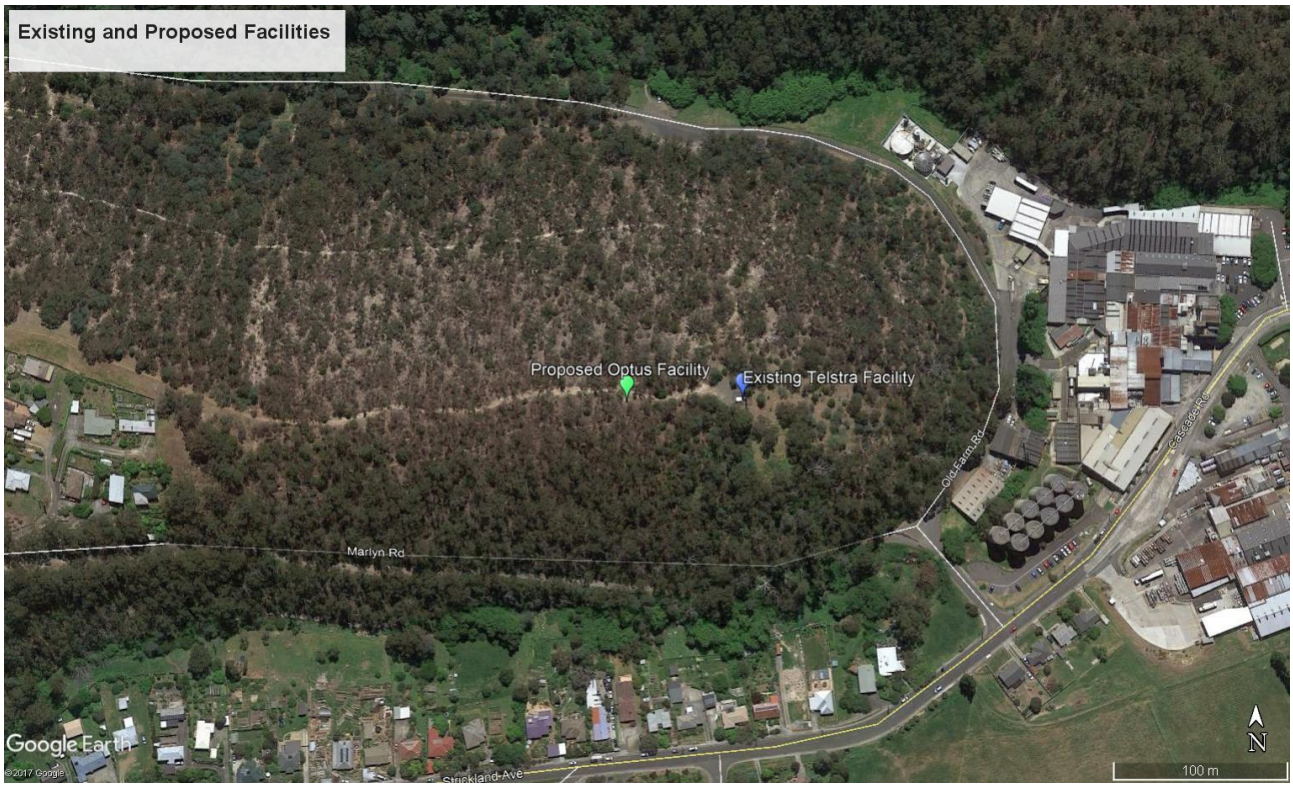


Figure 1: Existing and proposed facility locations (Google Earth 2017)

4.3 New Facility Locations

4.3.1 Candidate A - 127-127A Cascade Road, South Hobart TAS 7004

Proposal	New Optus 20m monopole with antennas at the top of the structure, together with an equipment shelter located at ground level.
Description	The site is located approximately 60m west of the existing Telstra facility at 127 Cascade Road, and is in an Environmental Management Zone, the site is surrounded by dense bushland providing effective screening to minimise visual impact associated with the facility. The topography of the area varies significantly, with the site located on a ridgeline that slopes upwards to the west. The closest residential property is located approximately 170m south of the subject site, with minimal direct views towards the proposed facility.
Conclusion	Establishment of an additional monopole at 127-127A Cascade Road is the most appropriate solution to achieve Optus' coverage objectives. The location provides a suitable context for the development and opportunities to minimise impact on visual amenity and loss of environmental values.

4.4 Site Selection Conclusion

A thorough examination of potential telecommunications facility sites in the surrounding area has been undertaken. However, most of these sites have been ruled out for one or more reasons;

- Lack of required coverage and network performance;
- Unacceptable visual impact.

The site selection process provided limited candidates for the establishment of a new Optus facility. In this instance, the subject site at 127-127A Cascade Road has been identified as the most appropriate location for the development, based on all discipline requirements. Co-location with the existing Telstra facility was investigated, however, the visual impact associated with the replacement of the existing monopole with a substantially taller structure was considered too great. The replacement structure would protrude well above the tree line and screening opportunities would be considerably less effective. Establishment of a new Optus facility of a suitable height is the most appropriate outcome, with impact to visual amenity mitigated by the topography of the area and screening provided by surrounding vegetation.

5.0 Site Analysis

The proposal has been planned in accordance with relevant legislation as detailed above. The following sections provide a response to the identified planning controls and provide an assessment of the proposal against those controls.

5.1 Scope of Works

The proposal involves the development of the land for a telecommunications facility comprising:

- One (1) 20m monopole with turret type headframe;
- Three (3) panel antennas, of dimensions 2690mm x 548mm x 150mm, mounted on the headframe;
- Twenty-seven (27) radio remote units installed on a strap mount at 18.5m;
- One (1) equipment shelter of dimensions 3.15m x 2.38m, coloured "Pale Eucalypt";
- Secure compound with security fence and access gates;
- Cables connecting the antennas to the equipment shelter;
- Removal of five (5) mature trees;
- Ancillary equipment associated with operation of the facility, including elevated cable trays, cabling, safe access methods, earthing and electrical works, etc.
- Power supply works, including a new route via underground conduits to the point of supply.

Preliminary plans and elevation drawings of the proposal are enclosed at Appendix B.

5.2 Subject Site and Locality

The subject property is legally identified in Certificate of Title Volume 161768 Folio 1; Lot 1 on Plan 161768, at 127-127A Cascade Road, South Hobart TAS 7004.

Figure 2: Subject site and the surrounding area (Google Maps 2017)

The subject site is located on land at 127-127A Cascade Road, South Hobart, within an Environmental Management Zone. Dense bushland occupies most of the land, with some cleared areas including access tracks. The site is predominantly cleared of vegetation which adjoins a main access track along the ridgeline. An existing Telstra facility is located approximately 60m to the east of the subject site. Cascade Road is located approximately 200m south of the subject site and Cascade Brewery is located approximately 250m east of the subject site.

The following attributes provide a suitable context for the development, as the site:

- is reasonably separated from places of heritage significance;
- is positioned to minimise direct views towards the facility;
- has suitable access;
- requires limited removal of vegetation.

Photographs of the subject site are provided below.

Figure 3: View of the subject site from the east.

Figure 4: View of the subject site from the west

Figure 5: Existing Telstra facility located 60m east of the subject site.

5.2.1 Access Details

Access to the site is proposed via an existing access track which connects to Jubilee Road, approximately 600m west of the subject site.

As the facility will operate on a continuously unmanned basis, and will only require periodic visits for maintenance purposes, no dedicated car parking is proposed at the site. Accordingly, there will be no adverse impact on local traffic movements. Routine maintenance would generally involve one vehicle per visit and parking is available within the property for this purpose. Other maintenance would occur on an as-needs basis and would not generate significant traffic movements. Any resulting impact on the local road system is negligible.

Details of the access are shown in preliminary plan drawings enclosed at Appendix B.

Figure 6: Existing access track looking east

5.2.2 Power

Power is proposed via a new underground supply from an existing power pole and transformer on Jubilee Road. The underground route follows the existing access track, approximately 600m in length. The power supply does not require the clearance of vegetation.

Figure 7: Power supply route from Jubilee Road

5.2.3 Construction

The construction of a telecommunications facility consists of site preparation, facility construction, and equipment installation and commissioning.

Traffic impacts associated with construction will be short-term and are not anticipated to adversely impact on the surrounding road network. An outline of construction activities is provided below:

- Monopole foundations: Excavation followed by concrete (excavators and concrete trucks, up to 10 tonnes);
- Monopole delivery: delivery of monopole in sections (semi-trailer and crane, 15-20 tonnes;
- Monopole placement: cherry picker (15 tonnes) and mobile crane (50 tonnes).

The use of heavy vehicles and the timing of movements varies depending on the timing of foundation work, delivery of materials and weather conditions.

5.2.4 Emissions

The operation of a mobile phone base station is not associated with significant emissions:

- No odour;
- No solid waste;
- No discharge of liquid waste;
- Limited noise emissions.

The emission of electromagnetic energy (EME) from the operational facility is detailed below under the Section 'Public Health'.

As the proposed facility will operate on a continuously unmanned basis, connection to a potable water supply or a sewage disposal service is not required. Additionally, the telecommunications facility will not be connected to any local storm water drainage networks given its small footprint with no change to drainage conditions at the site.

Noise and vibration emissions associated with construction of the facility will be limited to the construction phases outlined above. Noise generated during the construction phase will be short term and will be in accordance with relevant standards

6.0 Planning Response

An assessment of the proposal against the relevant planning provisions is provided in the sections below.

6.1 Land Use Planning and Approvals Act 1993

The LUPA Act outlines requirements that a planning authority must consider in determining an application for planning permit. Section 51(2) reads in part:

(2) In determining an application for a permit, a planning authority –

a) must seek to further the objectives set out in Schedule 1; and
b) must take into consideration such of the prescribed matters as are relevant to the use or development the subject of the application; and
c) must take into consideration the matters set out in representations relating to the application that were made during the period referred to in section 57(5);

Schedule 1 of the LUPA Act outlines the objectives of the resource management and planning system of Tasmania. It reads:

1. The objectives of the resource management and planning system of Tasmania are –

   a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and
   b) to provide for the fair, orderly and sustainable use and development of air, land and water; and
   c) to encourage public involvement in resource management and planning; and
   d) to facilitate economic development in accordance with the objectives set out in paragraphs (a), (b) and (c); and
   e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State.

2. In clause 1(a), ***sustainable development*** means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while –

   a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and
   b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
   c) avoiding, remedying or mitigating any adverse effects of activities on the environment

It is considered that the proposal is consistent with the objectives outlined above. The proposed telecommunications facility will facilitate economic development in South Hobart by providing residents and businesses with modern telecommunications services that can contribute to more efficient and effective economic activity. The development will also make a positive contribution as modern telecommunications services allow for increased home-based employment activity and consequently a reduction in car-related carbon emissions. It is therefore submitted that the proposed development is consistent with the definition of sustainable development in the LUPA Act.

6.2 Hobart Interim Planning Scheme 2015

The Scheme at Part B, 8.10.1 outlines that in determining an application for any permit, in addition to the requirements of section 51(2) of the LUPA Act, the planning authority must take into consideration:

a) all applicable standards and requirements in this planning scheme;
b) any representations received pursuant to and in conformity with ss57(5) of the Act,

but in the case of the exercise of discretion, only insofar as each such matter is relevant to the particular discretion being exercised.

The subject site is zoned Environmental Management Zone pursuant to Part D29.0 of the Scheme and as stipulated in the use table in D29.2, a utility use, other than a use permitted where a reserve management plan applies, is defined as a discretionary use. Pursuant to Part B, 5.3 of the Scheme, only minor telecommunications works are permit exempt. The proposed facility does not satisfy the requirements of Part B 5.3 of the Scheme, and is therefore considered a discretionary use. In addition, Part B 8.8 of the Scheme indicates that a reliance on a performance criterion for use or development to satisfy an applicable standard of a zone converts a use or development to discretionary status.

The *general* planning assessment guidelines for a discretionary use are found at Part B 8.10.2 of the Scheme. It reads:

In determining an application for a permit for a discretionary use the planning authority must, in addition to the matters referred to in Part B 8.10.1, have regard to:

a) The purpose of the applicable zone;

b) any relevant local area objective or desired future character statement for the applicable zone;

c) the purpose of any applicable code; and

d) the purpose of any applicable specific area plan,

but only insofar as each such purpose, local area objective or desired future character statement is relevant to the particular discretion being exercised.

There are no Local Area Objectives or Desired Future Character Statements under the Environmental Management Zone relevant to the proposed development. An assessment of the proposed facility against the purpose of the zone and applicable codes is contained in sections 6.3, 6.4 and 6.5 this report.

6.3 Zoning

The subject site is within an Environmental Management Zone, pursuant to Part C 29.0 of the Scheme. The use of land for a telecommunications facility is a discretionary use under the use table at Part C 29.2.

The purpose of the Environmental Management Zone is:

- To provide for the protection, conservation and management of areas with significant ecological, scientific, cultural or aesthetic value, or with a significant likelihood of risk from a natural hazard.
- To only allow for complementary use or development where consistent with any strategies for protection and management.
- To facilitate passive recreational opportunities which are consistent with the protection of natural values in bushland and foreshore areas.
- To recognise and protect highly significant natural values on private land.
- To protect natural values in un-developed areas of the coast.

It is considered that the proposal is reasonably consistent with the purpose of the Environmental Management Zone. The proposed telecommunications facility will provide improved telecommunications services that will service residents and businesses in South Hobart. Furthermore, the siting and design of the proposed facility minimises environmental impacts. The proposed development is reasonably consistent with the purpose of the Environmental Management Zone, having regard to the unique nature of telecommunications facilities.

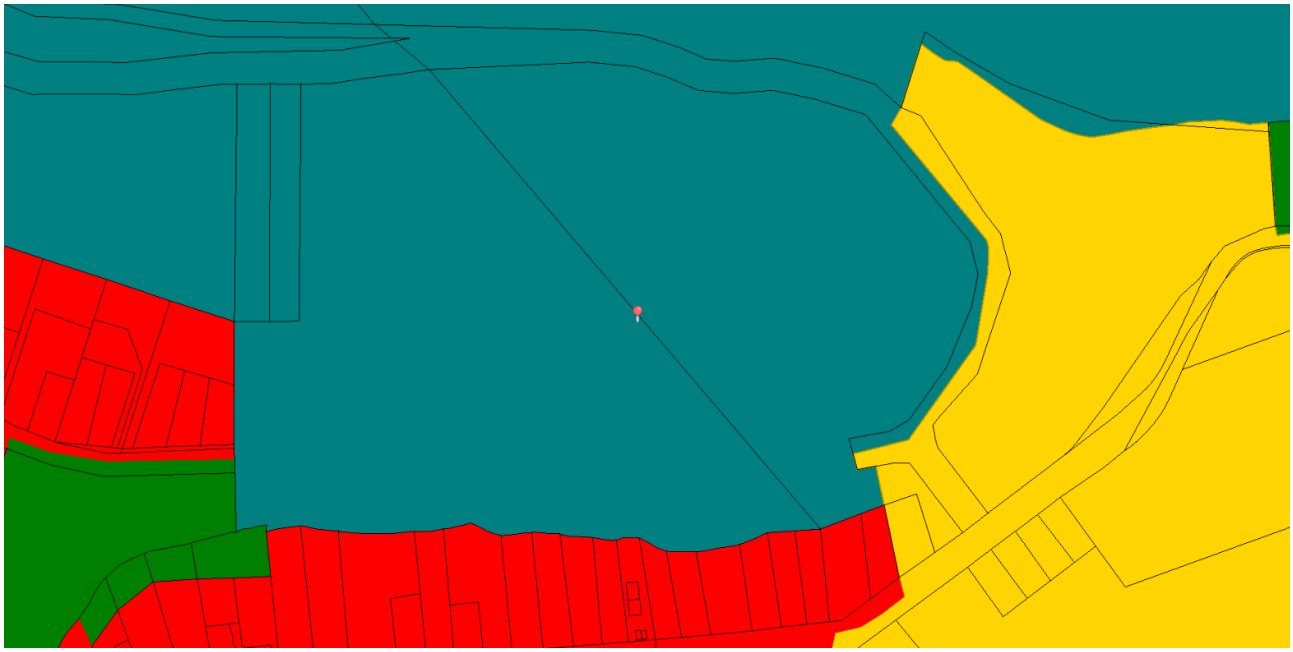


Figure 8: Subject site and land use zoning. Environmental Management Zone, coloured 'blue'.

6.3.1 Environmental Management Zone Provisions

Pursuant to Part B7.5 of the Scheme, a use or development must comply with the acceptable solution *or* performance criterion of the applicable standard in the zone. The applicable zoning standards are located at Part D29.0 of the Scheme (Environmental Management Zone).

E29.4.1 Building Height Objective: To ensure that building height contributes positively to the landscape and does not result in unreasonable impact on residential amenity of adjoining land.

Acceptable Solutions	Performance Criteria	Planning Response
A1: Building height comply with any of the following: (a) As prescribed in an applicable reserve management plan; (b) Be no more than 7.5m.	**P1**: Building height must satisfy all of the following: (a) Be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape of the area; (b) Be sufficient to prevent unreasonable adverse impacts on residential amenity on adjoining lots by: (i) Overlooking and loss of privacy; (ii) Visual impact when viewed from adjoining lots, due to bulk and height; (c) Be reasonably necessary due to the slope of the site or for the functional requirements of infrastructure.	**P1 Response** (a) No Desired Future Character Statements apply to the subject site. The landscape of the area has been considered in the design of the proposed facility, the form and scale has been considered accordingly. (b) The proposed facility has been appropriately sited to prevent unreasonable adverse impacts on residential amenity: (i) The facility is operated on an unmanned basis; the maintenance of the facility will not contribute to overlooking of adjoining properties or loss of privacy. (ii) Screening vegetation and variations in topography assist to limit impacts to an acceptable level. Further detail is provided in Section 7. (iii) Due to the nature of telecommunications facilities, the antennas need to be established at sufficient heights above surrounding obstacles (including trees) to provide coverage to the area. Accordingly, the facility must be visible to be effective, though the antenna height has been limited to minimal protrusion above the tree line.

E29.4.2 Setback Objective: To maintain desirable characteristics of the landscape, protect amenity of adjoining lots, avoid land use conflict and fettering of use on nearby rural land and protect environmental values on adjoining land zoned Environmental Living and adjoining land in the World Heritage Area.

Acceptable Solutions	Performance Criteria	Planning Response
A1: Building setback from frontage must comply with any of the following: (a) As prescribed in an applicable reserve management plan; (b) Be no less than 30m.	**P1**: Building setback from frontage must satisfy all of the following: (a) Be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape; (b) Minimise adverse impact on the landscape as viewed from the road; (c) Be consistent with the prevailing setbacks of existing buildings on nearby lots; (d) Minimise loss of native vegetation within the front setback where such vegetation makes a significant contribution to the landscape as viewed from the road.	**A1 Response** The proposal complies with the acceptable solution, the proposed facility is appropriately setback from adjoining lots, with no conflict in land use.
A2: Building setback from side and rear boundaries must comply with any of the following: (a) As prescribed in an applicable reserve management plan; (b) Be no less than 30m.	**P2:** Building setback from side and rear boundaries must satisfy all of the following: (a) Be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape; (b) Be sufficient to prevent unreasonable adverse impacts on residential amenity on adjoining lots by: (i) Overlooking and loss of privacy; (ii) Visual impact, when viewed from adjoining lots, through building bulk and massing.	**P2 Response** Side and rear setbacks for the subject site are also considered to be sufficient for the mitigation of visual impact.

A3: Buildings and works must be setback from land zoned Environmental Living no less than 30m.	**P3:** Building and works must be setback from land zoned Environmental Living to satisfy all of the following: (a) There is no unreasonable impact from the development on the environmental values of the land zoned Environmental Living; (b) The potential for the spread of weeds or soil pathogens onto the land zoned Environmental Living is minimised; (c) There is minimal potential for contaminated or sedimented water runoff impacting the land zoned Environmental Living; (d) There are no unreasonable and practical alternatives to developing close to land zoned Environmental Living.	**A3 Response** The area zoned Environmental Living to the west is significantly separated (approximately 300m) from the subject site.

E29.4.3 Design Objective: To ensure that the location and appearance of buildings and works minimises adverse impact on natural values and on the landscape.

Acceptable Solutions	Performance Criteria	Planning Response
A1: The location of buildings and works must comply with any of the following: (a) be located on a site that does not require the clearing of native vegetation and is not on a skyline or ridgeline; (b) be located within a building area, if provided on the title; (c) be an addition or alteration to an existing building; (d) as prescribed in an applicable reserve management plan.	**P1**: The location of buildings and works must satisfy all of the following: (a) be located in an area requiring the clearing of native vegetation only if: (i) there are no sites clear of native vegetation and clear of other significant site constraints such as access difficulties or excessive slope; (ii) the extent of clearing is the minimum necessary to provide for buildings, associated works and associated bushfire protection measures; (iii) the location of clearing has the least environmental impact;	**P1 Response** (a) The proposed development requires the clearing of native vegetation: (i) There are no sites clear of native vegetation and other site constraints (including meeting Optus' coverage objectives); (ii) The extent of the clearing is the minimum necessary for the required equipment and compound size; (iii) The location of the clearing has the least impact adjacent to the existing cleared access track. (b) The proposed facility is located on a ridgeline:

	(b) be located on a skyline or ridgeline only if: (i) there are no sites clear of native vegetation and clear of other significant site constraints such as access difficulties or excessive slope; (ii) there is no significant impact on the rural landscape; (iii) building height is minimised; (iv) any screening vegetation is maintained. (c) be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape.	(i) There are no sites clear of native vegetation and other site constraints that are suitable, considering the benefits of the proposed location and opportunities to minimise amenity impacts; (ii) There is no significant impact on the landscape; (iii) The height of the facility is minimised whilst still meeting Optus' technical requirements; (iv) Screening vegetation is maintained in the area surround the compound, the opportunities to minimise impacts are maintained at this location. (c) There are no Desired Future Character Statement for the area, the siting and design of the facility has considered the landscape and topography of the area.
A2: Exterior building surfaces must be coloured using colours with a light reflectance value not greater than 40 percent.	**P2:** Exterior building surfaces must avoid adverse impacts on the visual amenity of neighbouring land and detracting from the contribution the site makes to the landscape, views and vistas.	**P2 Response** All equipment will be treated with a "Pale Eucalypt" colouring (a neutral colour with low light reflectance), minimising the visual impact of the facility against the surrounding landscape.
A3: Fill and excavation must comply with all of the following: (a) height of fill and depth of excavation is no more than 1 m from natural ground level, except where required for building foundations; (b) extent is limited to the area required for the construction of buildings and vehicular access.	**P3:** Fill and excavation must satisfy all of the following: (a) there is no adverse impact on natural values; (b) does not detract from the landscape character of the area; (c) does not affect land stability on the lot or adjoining land.	**P3 Response** Excavation is required for the foundations which are a pad footing, and: (a) there is no adverse impact on natural values; (b) works are limited to the construction phase and will not have a permanent impact on the landscape character of the area; (c) will not contribute to degradation in land stability on the lot or adjoining land.

6.4 The Telecommunications Code

An applicable code provision is the Telecommunications Code pursuant to Part E19 of the Scheme. The purpose of this provision is to:

- *facilitate equitable provision and access to high-speed broadband and telecommunication networks as services essential for the prosperity, security and welfare of the community;*
- *encourage new telecommunication and digital facilities to form part of a local or regional telecommunications network for all carriers;*
- *encourage shared use and co-location of facilities to minimise the number of towers within the municipal area;*
- *minimise likely adverse impact of communication systems on community health and safety;*
- *minimise adverse visual impact of towers and antennae.*

It is considered that the proposal is consistent with the purpose of the Telecommunications Code, as it facilitates equitable provision and access to high-speed telecommunications network to an area of Hobart that requires improved coverage and services. The proposed telecommunications facility provides the recognised benefits of improved services to the South Hobart community, whilst minimising any adverse impacts on the visual amenity of the South Hobart area.

6.4.1 Telecommunications Code Provisions

Pursuant to Part B7.5 of the Scheme, a use or development must comply with the acceptable solution or performance criterion of the applicable standard in the Telecommunications Code. The Development Standards under the Telecommunications Code are located at Part E 19.7 of the Scheme. There are no Use Standards specified under Part E19.6 of the Scheme.

E19.7.1 Shared Use and Co-Location Objective: To minimise the total number of towers and antenna within the municipal area.

Acceptable Solutions	Performance Criteria	Planning Response
A1: A new antenna must be located on an existing tower.	**P1**: A new antenna may be located on a new tower if it is impracticable to co-locate on an existing tower, having regard to the following: (a) no existing tower is located within the telecommunications network area with technical capacity to meet the requirements for the antenna; (b) no existing tower is located within the telecommunications network area with sufficient height to meet the requirements of the antenna; (c) no existing tower is located within the telecommunications network area with sufficient structural strength to support the proposed antenna and related equipment; (d) there is risk of electromagnetic interference between the antenna and an existing antenna on an existing tower; (e) there are other limiting factors that render existing towers unsuitable.	**P1 Response** There are no existing towers within the telecommunications network area to co-locate the required infrastructure. The existing Telstra facility would require replacement and a substantial height increase to accommodate the antennas of Telstra and Optus. The existing facility: (b) does not have the technical capacity to meet Optus' coverage requirements; (c) does not have sufficient height to meet Optus' coverage requirements; (d) does not have sufficient structural strength to support the combined equipment; (e) does not present interference issues; (f) would require replacement with a substantially taller structure, with significant visual impact. Accordingly, a stand-alone Optus tower is required.
A2: A new tower or mast must be structurally and technically designed to accommodate comparable additional users, including by the rearrangement of existing antenna and the mounting of antenna at different heights.	No performance criteria.	**A2 Response** The proposed facility is structurally and technically designed to accommodate comparable additional users.

E19.7.2 Visual Amenity Objective: To minimise detrimental impact upon the visual amenity of a locality by reducing prominence of telecommunications infrastructure.

Acceptable Solutions	Performance Criteria	Planning Response
A1: The location of telecommunications infrastructure must comply with all of the following: (a) be within existing utility corridors and sites and use existing infrastructure; (b) be externally finished and maintained in a neutral colour that minimises visual intrusiveness; (c) not: (i) be located on skylines that can be seen in silhouette; (ii) be aligned diagonally to the principal slope of a hill; (iii) cross at a low point of a saddle between hills; (iv) be located around the base of a hill; (v) be along the edge of an existing clearing; (vi) be artificially lit unless required for air navigation safety; (vii) be used for signage purposes, other than necessary warning and equipment information, (d) aerial telecommunication lines or additional supporting structures are erected and operated in residential and commercial areas only where overhead cables exist; (e) equipment housing and other visually intrusive infrastructure is screened from public view.	**P1**: The location of telecommunications infrastructure not complying with A1 must ensure any detrimental impact upon visual amenity is minimised by reducing the prominence of telecommunications infrastructure, and important public views such as vistas to significant public buildings, streetscapes and heritage areas are protected.	**P1 Response** • The facility will have a low level of impact on the visual amenity of the surrounding area of South Hobart. • All equipment will be coloured "Pale Eucalypt", reducing the prominence of the facility against the surrounding landscape, particularly the backdrop to the north (i.e. the elevated terrain which limits the prominence of direct views towards the facility from residential areas to the south). • It is considered that the facility has been appropriately sited to minimise visual impact associated with the development. Visual impact is detailed further in Section 7 of this report.

A2: Height above natural ground level must be no more than: (a) 60 metres in the Environmental Management, Rural Resource and Significant Agriculture Zones;	**P2**: Height above natural ground level not complying with A2 must satisfy all of the following: (a) the predominant height of existing infrastructure or vegetation in the immediate vicinity is above the specified height limit; (b) there is no adverse impact on heritage or ecological values, or visual amenity of the locality; (c) it is critical for the role of the facility within the telecommunications network.	**A2 Response** The proposed facility is 23.3m above natural ground level.

E19.7.3 Environmental Values Objective: To ensure that environmental values are protected.

Acceptable Solutions	Performance Criteria	Planning Response
A1: Telecommunications infrastructure must not be located in an area of environmental significance.	**P1:** Telecommunications infrastructure located in an area of environmental significance must ensure environmental and heritage values are not significantly impacted.	**A1 Response** The proposed facility is not located in an area of environmental significance as defined in the Determination.

E19.7.4 Access Objective: To ensure that telecommunications infrastructure does not impede movement of vehicular and other modes of transport.

Acceptable Solutions	Performance Criteria	Planning Response
A1: Telecommunications infrastructure must not impede movement of vehicular and other modes of transport.	**P1:** Telecommunications infrastructure must provide for adequate clearance for vehicular traffic and must not pose a danger or encumbrance to users of other land or aircraft.	**A1 Response** The proposed development will not impede movement of vehicular and other modes of transport, with a proposed dedicated access track to provide further access to the subject site.

E19.7.5 Significant Agricultural Land: Not applicable.

6.5 Biodiversity Code

Under Part E10.2.1 the Biodiversity Code applies to development involving clearance and conversion or disturbance of native vegetation within a Biodiversity Protection Area. As the proposal requires the removal of vegetation the Biodiversity Code applies. The purpose of the provision is to:

(a) Minimise loss of identified threatened native vegetation communities and threatened flora species;
(b) Conserve identified threatened fauna species by minimising clearance of important habitat and managing environmental impact;
(c) Minimise loss of other biodiversity values that are recognised as locally significant by the Planning Authority.

It is considered that the proposal is consistent with the purpose of the Biodiversity Code to minimise loss and to conserve species, and an assessment against the provisions of the code is provided below.

6.5.1 Biodiversity Code Provisions

Pursuant to Part B7.5 of the Scheme, a use or development must comply with the acceptable solution or performance criterion of the applicable standard in the Biodiversity Code. The applicable standards under the Biodiversity Code include Part E10.7 Development Standards. There are no Use Standards specified at Part E10.6.

E10.7.1 Building and Works Objective: To ensure that development for buildings and works that involves clearance and conversion or disturbance within a Biodiversity Protection Area does not result in unnecessary or unacceptable loss of priority biodiversity values.

Acceptable Solutions	Performance Criteria	Planning Response
A1: Clearance and conversion or disturbance must comply with one of the following: (a) be within a Building Area on a plan of subdivision approved under this planning scheme. (b) the development is for a single dwelling on an existing lot within the Low Density Residential Zone, Rural Living Zone or Environmental Living Zone and: (i) clearance and conversion or disturbance is confined to Low Priority Biodiversity Values; (ii) the area of clearance and conversion is no more than 3,000 m^2; (iii) the area of disturbance is no more than 3,000 m^2. (c) the development is other than	**P1:** Clearance and conversion or disturbance must satisfy the following: (a) if low priority biodiversity values: (i) development is designed and located to minimise impacts, having regard to constraints such as topography or land hazard and the particular requirements of the development; (ii) impacts resulting from bushfire hazard management measures are minimised as far as reasonably practicable through siting and fire-resistant design of habitable buildings; (b) if moderate priority biodiversity values: (i) development is designed and	**P1 Response** <u>Table E10.1 Priority Biodiversity Values</u> Low priority biodiversity values have been identified for: • Vegetation communities; • Ecological communities. High priority biodiversity values have been identified for: • Fauna habitat. The subject site has been designed and located to minimise the impact on the identified biodiversity values. The proposed location has

for a single dwelling on an existing lot within the Low Density Residential Zone, Rural Living Zone or Environmental Living Zone and: (i) clearance and conversion or disturbance is confined to Low Priority Biodiversity Values; (ii) the area of clearance and conversion is no more than 1,000 m^2; (iii) the area of disturbance is no more than 1,000 m^2	located to minimise impacts, having regard to constraints such as topography or land hazard and the particular requirements of the development; (ii) impacts resulting from bushfire hazard management measures are minimised as far as reasonably practicable through siting and fire-resistant design of habitable buildings; (iii) remaining moderate priority biodiversity values on the site are retained and improved through implementation of current best practice mitigation strategies and ongoing management measures designed to protect the integrity of these values; (c) if high priority biodiversity values: (i) development is designed and located to minimise impacts, having regard to constraints such as topography or land hazard and the particular requirements of the development; (ii) impacts resulting from bushfire hazard management measures are minimised as far as reasonably practicable through siting and fire-resistant design of habitable buildings; (iii) remaining high priority biodiversity values on the site are retained and improved through implementation of current best practice mitigation strategies and ongoing management measures designed to protect the integrity of these values; (iv) special circumstances exist.	been selected as it is substantially cleared and is adjacent to an existing access track, which significantly minimises the clearance required for the development. The proposed development is considered to satisfy the performance criteria for the identified values, low for vegetation and ecological communities, high for fauna habitat. In accordance with Part E10.5 of the Scheme further information may be requested to determine compliance with performance criteria: *(a) a natural values determination;* *(b) a natural values assessment;* *(c) a report detailing how impacts on priority biodiversity values will be avoided, minimised, and/or mitigated;* *(d) a special circumstances justification report.*

6.6 Southern Tasmania Regional Land Use Strategy

The subject site is located in South Hobart, and is therefore in an area covered by the Southern Tasmania Regional Land Use Strategy 2010-2035. The strategy, at Part A 2.2.3 sets outs ten strategic directions for the region. Of relevance to the proposed development are the strategic directions of improving economic infrastructure of the region, facilitating the region's increased capacity to be competitive on a national and international level and increasing responsiveness to the region's national environment. Specifically, the strategy identifies the development of a 'strong intelligent communication technology network' as 'critical' to the region's long term economic future.[1]

It is considered that the proposed development is accordance with the strategic directions. The provision of modern telecommunications services is an essential part of increasing economic productivity and thereby increasing a region's ability to compete on national and global markets. As noted in Section 2.3 of this report, South Hobart is identified as an area where coverage and network quality needs to be improved. The proposed development will contribute to improving the economic and social vitality of South Hobart. In addition, and as detailed in sections 4.2 and 5.2 and 7, the proposed development will not have an adverse impact on the cultural and natural landscape features of the South Hobart area. Accordingly, the proposed development is in keeping with the overarching strategic direction of the Southern Tasmania Regional Land Use Strategy 2013-2035.

[1] Southern Tasmania Regional Land Use Strategy 2010-2035, p 18.

7.0 Visual Impact

7.1 Existing Visual Environment

7.1.1 Land Form

The subject site is in an area characterised by significant variations in topography. The subject site is located on a ridgeline (154m), the whole of which is located adjacent to Hobart Rivulet. A higher ridgeline (191m elevation) is located approximately 400m to the north. The peak of Mount Wellington is located 4.2km to the west at an elevation of 1250m. South of Cascade Road the elevation increases significantly to the south, rising to 230m at Huon Road.

The proposed facility is setback approximately 170m from Old Farm Road (north), 200m from Cascade Road (south), 225m from Old Farm Road (east) and 600m from Jubilee Road (west). The area bounded by these roads, including the ridgeline and site location, is characterised by dense bushland consisting of mature, native trees, ranging in height from 12-17m.

7.1.2 Land Uses

The land is currently undeveloped, though comprises a main access track along the ridgeline which runs from the west at Jubilee Road to the east, terminating at the Telstra facility. The land is part of a Biodiversity Protection Area; however, portions of the land have been subject to significant disturbance, including several disused access tracks. The area is popular for walking, and is located to the east of Cascade Brewery.

The surrounding area is best described as environmental living, with the closest residential property located approximately 170m south of the subject site, with residential properties to the south and west. Cascade Brewery is located 250m to the east. The proposed facility is located approximately 60m west of the existing Telstra communications facility.

7.1.3 Significant Views

Optus considers the significant views to a proposed facility as part of the site selection process. In this instance, two significant views have been identified:

- Significant view 1 is located along Strickland Avenue to the south of the subject site.
- Significant view 2 is located at Cascade Road to the east of the subject site.

Figure 9: Map of the significant views towards the proposed facility.

7.2 Visual Impact Statement Methodology

This visual impact statement has been carried out by undertaking the following:

- Analysis of the existing visual environment, considering views in an immediate, local and regional context. Significant views and vantage points within the surrounding area are identified.
- Each viewpoint is then taking into consideration: period of view, view distance, number of viewers and visual absorption capacity of the landscape. Each of these factors is rated to determine the visual impact rating of the proposed when seen from a particular viewpoint.

7.3 Impact Assessment

7.3.1 Significant view 1 – Strickland Avenue, 250m to the south-west

Located at Strickland Avenue, to the south-west of the subject site.

- Typical viewers include residents of Strickland Avenue and users of Cascade Road, including tourists, predominantly vehicular traffic.
- The expected period with the most viewers is during the morning and afternoon peak travel periods.
- The distance to the subject site from view 1 is approximately 250m.
- Direct views towards the proposed facility are obscured by screening vegetation surrounding the site, and by the backdrop of the ridgeline to the north, which is a higher elevation. The backdrop provides an appropriate colour-matching opportunity to obscure the facility. The proposed colour of "pale eucalypt" will assist to blend it into the background.
- The landscape at South Hobart and the site has a moderate visual absorption capacity. The proposed facility will not significantly transform the visual landscape and quality of the South Hobart area.
- The visual impact rating from this view is therefore considered to be low.

7.3.2 Significant view 2 – Cascade Road, 400m to the east

- Located at Cascade Road to the east of the subject site.
- Typical viewers include users of Cascade Road, visitors to Cascade Brewery and residents.
- The expected period with the most viewers is during the morning and afternoon peak travel periods.
- The distance to the subject site from view 2 is approximately 400m.
- Significant views from this location include Cascade Brewery and its main façade, and the surrounding landscape. The proposed facility will be obscured by the existing built form at Cascade Brewery.
- Direct views to the proposed facility are limited and not in direct line with the historic Cascade Brewery façade. Screening vegetation and the distance of the facility to the view assist to limit direct views.
- The landscape at South Hobart and the site has a moderate visual absorption capacity. The proposed facility will not significantly transform the visual character and quality of the South Hobart area, nor impact on views from historic sites to the east.
- The visual impact rating from this view is therefore considered to be low.

7.4 Visual Impact Conclusion

This assessment has identified the proposed telecommunications facility as having a low visual impact. The visual impact of the proposed development will vary depending on the viewing distance, number of viewers, period of view and vantage point within the surrounding areas.

Attention has been given to the design of the various elements of the telecommunications facility. Careful consideration of these elements will ensure the best possible outcome to minimise the impact on views within the visual catchment of the site.

Overall it is anticipated that the proposed development will not have a significant visual impact on the surrounding area. The proposed facility will be visible from some distance, given its location and required height to gain optimal network performance for South Hobart and surrounding areas. Two views were considered to have low visual impacts, and these were in locations approximately 250m south and 400m east from the proposed facility.

Although the proposal will have a localised impact, the site is situated within a peri-urban setting, and is therefore largely separated from residential areas, minimising the level of visual impact. This is also lessened by the neutral colour of the facility and use of vegetation for screening purposes to minimise visual disturbance and improve assimilation into its immediate and wider surroundings

Given the advantages to be gained by the public by receiving improved telecommunications services, it is considered that the facility provides an acceptable level of impact which outweighs any general loss of visual amenity.

8.0 Public Health

8.1 Electromagnetic Energy (EME)

Optus acknowledges some people are genuinely concerned about the possible health effects of electromagnetic energy (EME) from mobile phone base stations and is committed to addressing these concerns responsibly. Optus, along with the other mobile phone carriers, must strictly adhere to Commonwealth Legislation and regulations regarding mobile phone facilities and equipment administered by the Australian Communications and Media Authority (ACMA).

Mobile Carriers ensure that facilities operate well within the prescribed health standards mandated by the ACMA. The limits for public human exposure to EME are based on the Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300GHz, developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), and referred to as the ARPANSA Standard. In 2003 the ACMA adopted this technical standard for continuous exposure of the general public to RF EME from mobile base stations. The standard, known as the Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003, was prepared by ARPANSA and is the same as that recommended by ICNIRP (International Commission for Non-Ionising Radiation Protection), an agency associated with the World Health Organisation (WHO). Mobile carriers must comply with the Australian Standard on exposure to EME set by the ACMA.

The Standard operates by placing a limit on the strength of the signal (or RF EME) that Optus can transmit to and from any network base station. The general public health standard is not based on distance limitations, or the creation of “buffer zones”. The environmental standard restricts the signal strength to a level low enough to protect everyone at all times. It has a significant safety margin, or precautionary approach, built into it.

In order to demonstrate compliance with the standard, ARPANSA created a prediction report using a standard methodology to analyse the maximum potential impact of any new telecommunications facility. Carriers are obliged to undertake this analysis for each new facility and make it publicly available.

Importantly, the ARPANSA-created compliance report demonstrates the maximum signal strength of a proposed facility, assuming that it’s handling the maximum number of users 24-hours a day.

In this way, ARPANSA requires network carriers to demonstrate the greatest possible impact that a new telecommunications facility could have on the environment, to give the community greater peace of mind. In reality, base stations are designed to operate at the lowest possible power level to accommodate only the number of customers using the facility at any one time. This design function is called “adaptive power control” and ensures that the base station operates at minimum, not maximum, power levels at all times.

Using the ARPANSA standard methodology, Optus has undertaken a compliance report that predicts the maximum levels of radiofrequency EME from the proposed installation. The maximum environmental EME level from the site, once it is operational, will comply with the ACMA mandated exposure limit (See Appendix C). Optus complies with the public health and safety standard by a significant margin. Where the facility operates in accordance with prescribed standards as mandated by the ACMA, the emission of EME is not relevant to the assessment of the planning merits of a site.

Optus relies on the expert advice of national and international health authorities such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and the World Health Organisation (WHO) for overall assessments of health and safety impacts. The WHO advises that all expert reviews on the health effects of exposure to radiofrequency fields have concluded that no adverse health effects have been established from exposure to radiofrequency fields at levels below the international safety guidelines that have been adopted in Australia.

Optus has strict procedures in place to ensure its mobile phones and base stations comply with these guidelines. Compliance with all applicable EME standards is part of Optus's responsible approach to EME and mobile phone technology.

9.0 Flora and Fauna

A detailed list of flora and fauna known to exist within a 1km radius of the site is enclosed at Appendix D; the Protected Matters Search Report.

Matters of National Environmental 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:	1
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	25
Listed Migratory Species:	11

Figure 10: Excerpt of a summary from the Protected Matters Report at Appendix D.

9.1 The Environment Protection and Biodiversity Conservation (EPBC) Act 1999

The *EPBC Act 1999* obliges telecommunications carriers to consider 'matters of national environmental significance'. Under this legislation, an action will require approval from the Minister of Environment if the action has or is likely to have an impact on a matter of 'national environmental significance'. According to the *EPBC Act 1999*, there are nine matters of national significance which must be considered.

This proposal is not of national environmental significance, as it will not impact on:

- World Heritage Areas;
- National Heritage Places;
- Wetlands Protected by International Treaty (The RAMSAR Convention);
- Nationally Threatened Species and Ecological Communities;
- Nationally Listed Migratory Species;
- Commonwealth Marine Areas;
- The Great Barrier Reef Marine Park;
- All Nuclear Actions (including Uranium Mining); and
- Water Resource, in relation to coal seam gas development and large coal mining development.

The proposed development has been assessed and determined not to have a significant impact on the flora and fauna at the site or the area surrounding the site.

10.0 Heritage

10.1 Indigenous

As part of the development application, a desktop assessment form was submitted to Aboriginal Heritage Tasmania (AHT) to determine the Aboriginal heritage significance of the subject site.

AHT completed a search of the Aboriginal Heritage Register (AHR) regarding the proposed subject site and advised that there were no Aboriginal heritage sites recorded within or close to the property (refer to Appendix E for the application details and email transcript). Accordingly, there is no necessity for an Aboriginal heritage investigation and AHT have no objection to the project proceeding.

Note: All Aboriginal heritage is protected under the *Aboriginal Relics Act 1975*. If at any time during works, it is suspected that an item of Aboriginal heritage significance has been discovered, works will cease immediately and contact with AHT will be established to seek its advice on the matter.

10.2 Non-Indigenous

Heritage registers exist at the Commonwealth, state and local level. After an initial desktop assessment of the Cascade Road subject site it is anticipated that the proposed facility will not have a significant effect on a place that is entered in a register relating to heritage conservation, a terrestrial or marine reserve for nature conservation purposes, a site on the world heritage list or a place covered by International Treaties.

The subject as noted previously is in proximity to the world, national and state heritage listed Cascades Female Factory site. The subject site is well separated from the Cascade Female Factory, with a separation distance of approximately 870m. Consequently, it is not considered that the proposed will have any impact on its heritage significance.

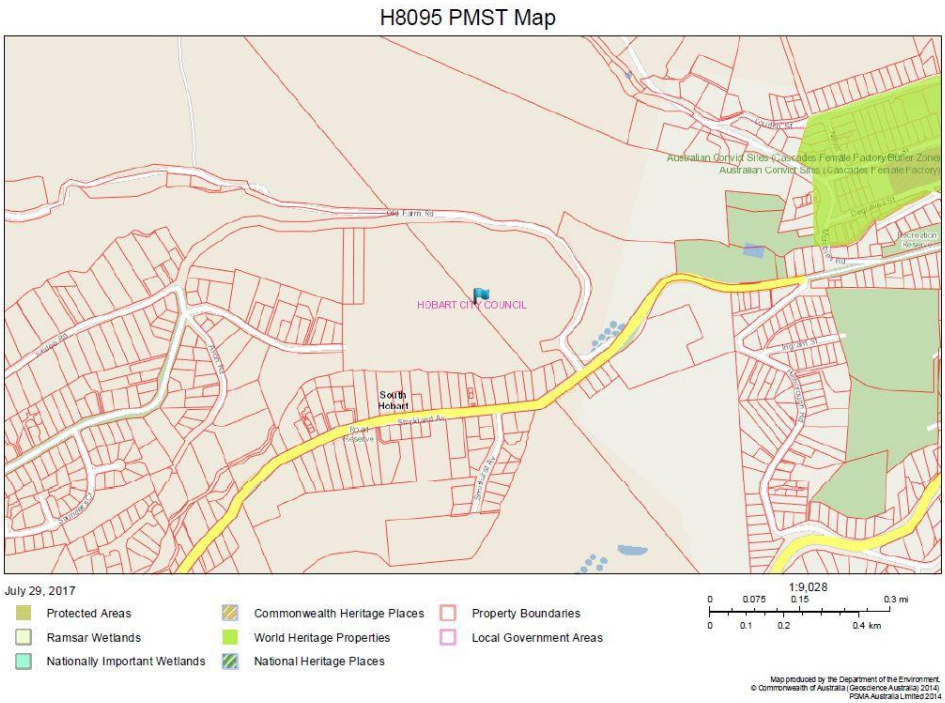


Figure 11: Protected Matters Search Tool Map

11.0 Conclusion

11.1 Summary

This report provides the necessary information to support the application for planning approval to use and develop the land at 127-127A Cascade Road, South Hobart, for a telecommunications facility. An assessment of the proposed site has been undertaken with a view to ensuring that the proposal complies with relevant Commonwealth, State and Local legislation, planning policies and controls as applicable. It is submitted that the proposed use will not conflict with surrounding land uses, nor will it decrease the general amenity of the area or have a detrimental impact on the local environment. The proposal is consistent with the objectives of the *Land Use Planning and Approvals Act 1993*, the planning scheme controls in the Environmental Management Zone, and the provisions in the Telecommunications and Biodiversity Codes. The development ensures that telecommunications infrastructure and services are provided in an efficient and cost-effective manner to meet community needs, whilst having a minimal impact on the amenity of the area.

Approval of the proposed use and development will be consistent with:

- The *Land Use Planning and Approvals Act 1993*;
- The Telecommunications Code;
- The zone and overlay controls, including all relevant objectives and decision guidelines in the Scheme.

11.2 Recommendation

The subject site at 127-127A Cascade Road, South Hobart is suitable for the proposed development, which demonstrates compliance with all relevant legislation and guidelines. Subject to the outcomes of appropriate referrals to relevant authorities, it is recommended that Hobart City Council approve the Application for Planning Permit.

Appendix A – Precautionary Approach Checklists

OPTUS

Precautionary Approach Checklist – Site Selection (Code Ref Section 4.1)

Issue Date	**7/23/2017**	**Carrier**	**Optus**	**Location**	**127 Cascade Road South Hobart TAS 7004**	**RFNSA No.**	**7004003**
Description of Infrastructure	Scope of works summary: -Install proposed 20m monopole with turret headframe to support Optus eJV antennas at 21.7m (monopole, antennas and all ancillary equipment to coloured pale eucalypt). -Install proposed Optus eJV zone cool shelter coloured pale eucalypt. -Install new cable ladder on support post between shelter and monopole. -Install Optus compound fence and access gate for the site as per drawings. -Install new 5m long 3m wide access track to proposed Optus compound. -Install earthing as per Optus and Australian standards. -Install electrical pit if required. -Proposed Optus eJV power supply via new underground conduit; existing point of supply to Optus eJV compound to be confirmed by Tas Networks. -Existing 5 off trees inside the proposed Optus compound to be removed.						

4.1 Application of Precautionary Approach to Site Selection		
Section No.	**Industry Code C564:2011Requirement 7004 For each site the Carrier must have regard to:**	**Comments on how the Carrier has had regard to each item.**
4.1.3	For new sites, once the preferred option has been selected, the Carrier must make available to the public on request the summary of the sites considered and the reasons for the selection of the preferred option.	Other sites considered include: • Existing Telstra Facility, 127 Cascade Road, South Hobart The surrounding tree height is greater than the aperture available to Optus. A pole swap was also considered however, the visual impact associated with a 30-35m structure to accommodate both carriers was considered unacceptable.

OPTUS

Precautionary Approach Checklist – Site Selection (Code Ref Section 4.1)

4.1.5 (a)	The reasonable service objectives of the carrier including (i) the area the planned service must cover (ii) power levels needed to provide quality of service (iii) the amount of usage the planned service must handle	(i) The proposed works will provide the surrounding area with access to enhanced mobile communications. (ii) The transmit power settings at this facility will be set to accomplish the desired coverage, capacity and call quality within the areas listed above. The specifications provide for the ability for the facility to reduce the transmitting power to each user based on the radio environment. (iii) This site will provide peak traffic/in-building/hand held on street coverage
4.1.5 (b)	Minimisation of EMR exposure to public	This facility will be designed and will be installed in accordance with relevant regulations relating to exposure to EME. The environmental EME level is minimised through radio network design. Adaptive power control is the network feature that automatically adjusts the power and hence minimises EME from both the base station and the handset. Another feature, called discontinuous transmission, reduces EME emissions by automatically switching the transmitter off when no speech or data is sent. The site has been designed to restrict public access to any areas that exceed the general public exposure limits. EME exposure to the public will be minimised by: • On site signage • Restricted access
4.1.5 (c)	The likelihood of an area being a community sensitive location.	A review of community sensitive locations both at and surrounding the site has been undertaken as part of the site selection process. This assessment takes in to account the environmental and community issues that have been identified and an evaluation is made as to whether the proposal is to proceed in its current form.

		It is acknowledged that the site is located in proximity to residential land uses. In addition a 'Points of Interest' report has been undertaken to identify any sensitive locations (see EME Report).
4.1.5 (d)	The objective of avoiding community sensitive locations	Optus seeks to avoid community sensitive locations when siting new telecommunications facilities. In some circumstances, sites need to be located near community sensitive locations due to the area that Optus is trying to provide service to. Quality mobile network services can only be maintained where base stations are located in close proximity to the user. A desktop study with a 500m search ring was undertaken to identify community sensitive locations and determined the following community Points of Interest: • 1. Cascade Gardens located approximately 490m east of the site.
4.1.5 (e)	Relevant state and local government telecommunications planning policies	Considerations of the relevant state and local government telecommunications planning policies have been undertaken. A Development Application is required for the proposed facility. The local government authority in this location is Hobart City Council . The proposal is considered to be consistent with the applicable regulatory requirements.
4.1.5 (f)	The outcomes of consultation processes with Councils and Interested and Affected parties as set out in Section 6.7.	Consultation will be conducted in accordance with the Development Application and its associated notification and consultation requirements.
4.1.5 (g)	The heritage significance (built, cultural and natural)	A review of the heritage significance both at and around the site has been undertaken as part of the site assessment process. This assessment has taken in to account any built, cultural and natural factors that have been identified. • No heritage listings relevant to this site.

OPTUS **Precautionary Approach Checklist – Site Selection (Code Ref Section 4.1)**

4.1.5 (h)	The physical characteristics of the locality including elevation and terrain	The physical characteristics of the proposed site have been considered including the elevation and terrain. • The proposed site is approximately 145m ASL. • The topography of the area varies significantly. • The site provides a suitable context when considering the target area. • The proposed site maximises the RF performance when considering surrounding obstacles.
4.1.5 (i)	The availability of land and public utilities	The site is adequately serviced with all public utilities and infrastructure located in proximity to the site.
4.1.5 (j)	The availability of transmission to connect the radiocommunications infrastructure with the rest of the network, e.g. line of sight for microwave transmission	The proposed site will utilise radio transmission.
4.1.5 (k)	The radiofrequency interference the planned service may cause to other services	Radio propagation analysis has been used to select appropriate antenna tilts to meet the requirements for coverage from the facility, while minimising interference to the existing network. Due consideration has been given to control interference to other services, for example: • Transmitters are designed to comply with ACMA regulations which minimise spurious interference to other services. • Sufficient antenna separation is maintained at co-located sites. • Detailed RF modelling has been performed to ensure that interference into other services (such as domestic electrical equipment, medical equipment and fuel/explosive stores etc) is within acceptable limits.
4.1.5 (l)	The radiofrequency interference the planned service could experience at that location from other services or sources of radio emissions	Radio propagation analysis has been used to select appropriate antenna tilts to meet the requirements for coverage from the facility. Interference from other services has been considered in the process.

OPTUS

Precautionary Approach Checklist – Site Selection (Code Ref Section 4.1)

4.1.5 (m)	Any obligations, and opportunities, to co-locate facilities	Desktop studies of the area and actual site assessment have been undertaken. All existing infrastructure including public utilities were considered as part of this study. However, no suitable opportunities for co-location were identified.
4.1.5 (n)	Cost factors	Preliminary costing of the proposed facility has been undertaken. The costs are considered to be reasonable.

OPTUS

Precautionary Approach Checklist – Infrastructure Design (Code Ref 4.2)

Issue Date	7/23/2017	Carrier	Optus	Location	127 Cascade Road, South Hobart TAS 7004
Description of Infrastructure	Scope of works summary: -Install proposed 20m monopole with turret headframe to support Optus eJV antennas at 21.7m (monopole, antennas and all ancillary equipment to coloured pale eucalypt). -Install proposed Optus eJV zone cool shelter coloured pale eucalypt. -Install new cable ladder on support post between shelter and monopole. -Install Optus compound fence and access gate for the site as per drawings. -Install new 5m long 3m wide access track to proposed Optus compound. -Install earthing as per Optus and Australian standards. -Install electrical pit if required. -Proposed Optus eJV power supply via new underground conduit; existing point of supply to Optus eJV compound to be confirmed by Tas Networks. -Existing 5 off trees inside the proposed Optus compound to be removed.				

4.2 Application of Precautionary Approach to Infrastructure Design		
Section No.	**Industry Code C564:2011Requirement** **For each site the Carrier must have regard to:**	**Comments on how the Carrier has had regard to each item**
4.2.3 (a)	the reason for the installation of the infrastructure considering – coverage, capacity and quality	This facility is intended to provide enhanced mobile phone services, improved capacity, and call quality in the South Hobart area.
4.2.3 (b)	the positioning of antennas to minimise obstruction of radio signals	The antennas have been located at the most appropriate location to minimise the obstruction of radio signals and to also meet the objectives outlined in Section No 4.2.3 (a).
4.2.3 (c)	the objective of restricting access to areas where RF exposure may exceed limits of the EMR standard	This facility is designed and will be installed in accordance with Optus Guidelines to restrict public access to any areas that exceed the general public EME exposure limits.

OPTUS

Precautionary Approach Checklist – Infrastructure Design (Code Ref 4.2)

4.2.3 (d)	the type and features of the infrastructure that are required to meet service needs including: (i) the need for macro, micro or pico cells; and (ii) the need for directional or non-directional antennas	This facility consists of macro cells utilising directional antennas to meet the objectives outlined in Section No 4.2.3 (a).
4.2.3 (e)	the objective of minimising power whilst meeting service objectives	The transmit power settings at this facility will be set to accomplish the desired coverage, capacity and call quality within the area listed in 4.2.3 (a). The Over the Air specifications provide for the ability for the facility to reduce the transmitting power to each user based on the radio environment.
4.2.3 (f)	whether the costs of achieving this objective are reasonable	Optus has under taken preliminary costing of this facility and are of the opinion these costs are reasonable.
4.2.5	Site EMR assessments for Mobile Phone Radiocommunication Infrastructure must be made in accordance with the ARPANSA prediction methodology and report format (see Appendix B – Additional Design Information and Appendix C – ARPANSA EME Report Format)	EMR assessments in accordance with ARPNASA have been completed and have been uploaded onto the RFNSA (www.rfnsa.com.au). RFNSA ID is: 7004003

Appendix B – Drawings

ROGERSON & BIRCH SURVEYORS

UNIT 1, 2 KENNEDY DRIVE
CAMBRIDGE 7170
PHONE: (03)6248 5898
EMAIL: admin@rbsurveyors.com
WEB: www.rbsurveyors.com

VIEW TOWARDS LEASE AREA

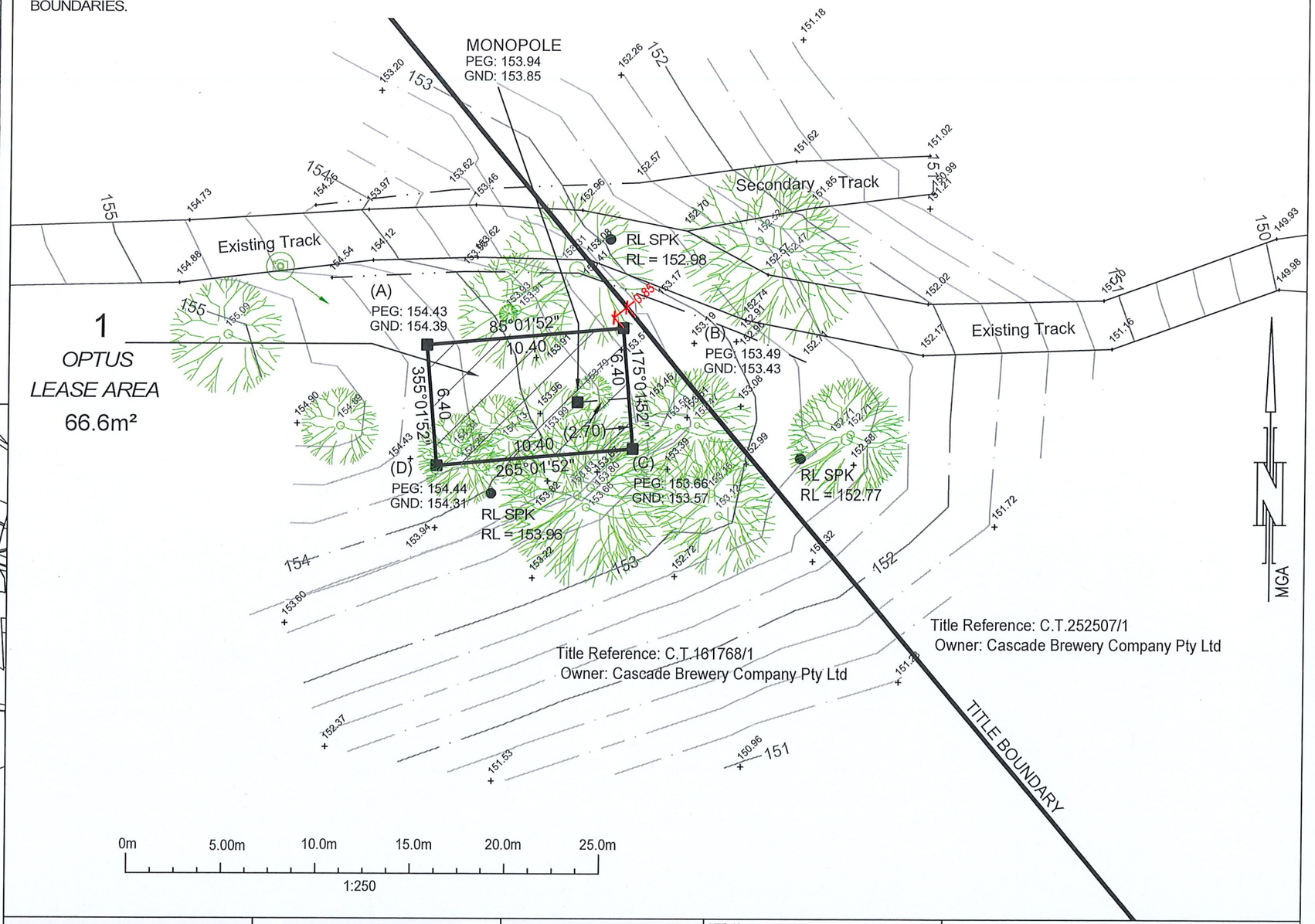
MGA COORDS		
(A) CP	(C) CP	MONOPOLE
E 523542.835	E 523553.746	E 523550.824
N 5250674.561	N 5250669.088	N 5250671.543

NOTES
1. SITE SURVEY BY ROGERSON & BIRCH SURVEYORS.
2. ALL LEVELS ARE IN METRES TO AHD PER RTK GPS
3. GRID COORDINATES ARE TO MGA ZONE 55.
4. TITLE REFERENCE: C.T.161768/1
5. OWNER: CASCADE BREWERY COMPANY PTY LTD
6. THE TITLE BOUNDARIES SHOWN HEREON WERE NOT MARKED AT THE TIME OF SURVEY AND HAVE BEEN DETERMINED BY PLAN DIMENSIONS AND NOT BY FIELD SURVEY.
7. CONTOUR INTERVAL: 0.25M
8. LEASE AREA DETAIL & ORIENTATION BASED ON INFORMATION SUPPLIED BY CATALYST ONE.
9. THE LEASE AREAS ARE WHOLLY CONTAINED WITHIN THE TITLE BOUNDARIES.

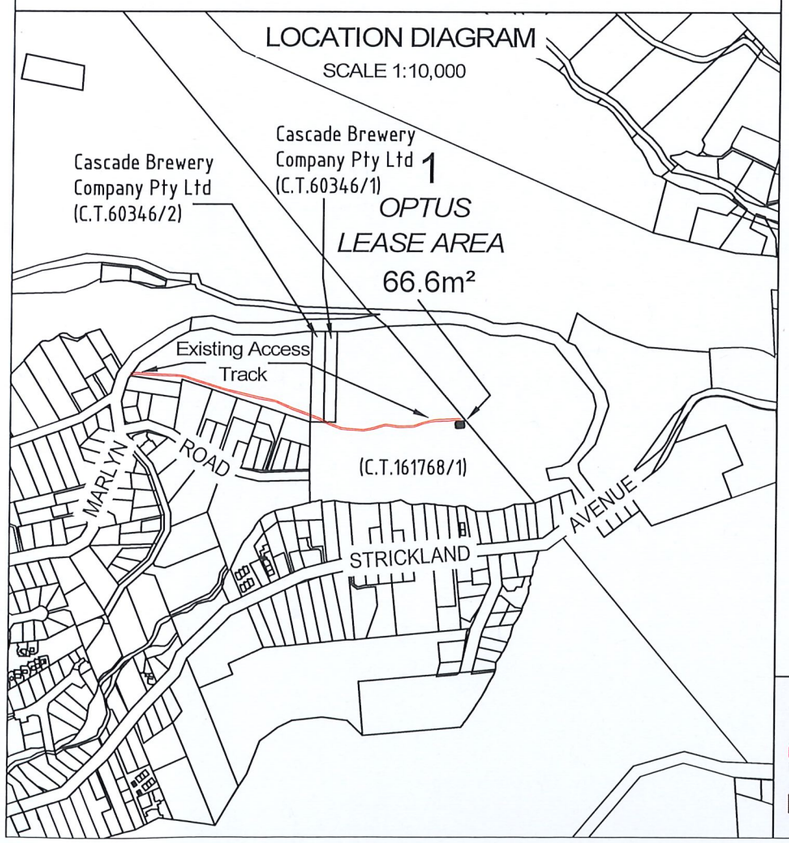
I, Andrew Birch of Rogerson & Birch Surveyors at 1, 2 Kennedy Drive, Cambridge TAS 7170 certify that the GDA94 Coordinates (M.G.A Datum) and Australian Height Datum height measurements are within an absolute accuracy of 0.20 metres as per computations from nearby coordinated survey marks.

.....Registered Land Surveyor

2-11-2017 .....Date



LOCATION DIAGRAM
SCALE 1:10,000



HUAWEI TECHNOLOGIES (AU) PTY LTD
ABN 49 103 750 368
SYDNEY
LEVEL 6 TOWER B 799 PACIFIC HIGHWAY
CHATSWOOD NSW 2067
TEL: +61 2 9928 3888 FAX: +61 2 9411 8533
MELBOURNE
LEVEL 24 459 COLLINS STREET
MELBOURNE VIC 3000
TEL: +61 3 8610 0600 FAX: +61 3 9621 1575

catalyst managers.advisors

OPTUS yes

SITE No: H8095–A
CASCADE BREWERY

LOCATION:
127 CASCADE ROAD
SOUTH HOBART
TAS

LEASE DETAIL SURVEY PLAN

SHEET 1 OF 1

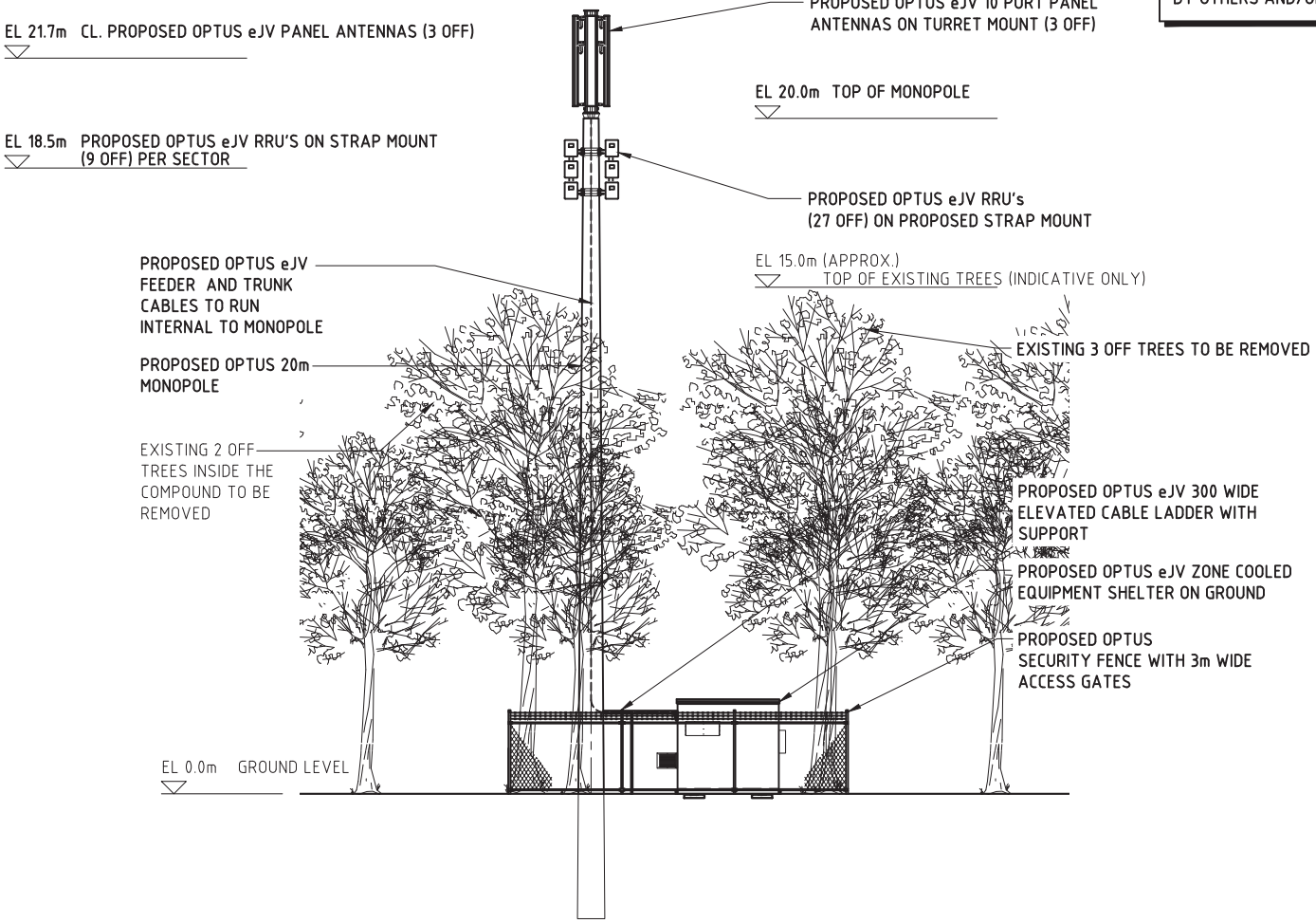
DATE 18/10/2017

SCALE 1:250

REF. No. CATAL20 1050701

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

NOTE:
EXISTING ANTENNAS AS SHOWN ARE INDICATIVE ONLY AND ARE BASED ON INFORMATION SUPPLIED BY OTHERS AND/OR BY INSPECTION ON SITE.



SOUTH ELEVATION

SCALE 1:150

Rev	Date	Revision Details						
A	25.07.17	ISSUED FOR APPROVAL	CATALYST Consultant	SK CAD	IC Designer	SG Verifier	PB Approver

HUAWEI TECHNOLOGIES (AU) PTY LTD
ABN 49 103 793 380
SYDNEY
LEVEL 6 TOWER B 799 PACIFIC HIGHWAY
CHATSWOOD NSW 2067
TEL: +61 2 9928 3888 FAX: +61 2 9411 8533
MELBOURNE
LEVEL 24 459 COLLINS STREET
MELBOURNE VIC 3000
TEL: +61 3 8610 0600 FAX: +61 3 9621 1575

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE No:- H8095 - A
CASCADE BREWERY
127 CASCADE ROAD

Drawing Title: DRAFT SITE LAYOUT

Drawing Status: FOR APPROVAL

Drawing No. H8095-P2

Revision 01

CAD File: M:\B-Projects\Huawei\Huawei_Optus GF 2015\Sites\H8095 Cascade Brewery TAS\Draffting\1. Draft Site Layout\H8095_Cascade Brewer_DSL.dwg Date: 28.07.2017 10:03 AM

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Appendix C – Environmental EME Report

Environmental EME Report

127-127A Cascade Road, Via Jubilee Road, SOUTH HOBART TAS 7004

This report provides a summary of Calculated RF EME Levels around the wireless base station

Date 28/12/2017 **RFNSA Site No. 7004003**

Introduction

The purpose of this report is to provide calculations of EME levels from the existing facilities at the site and any proposed additional facilities.

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at 127-127A Cascade Road, Via Jubilee Road SOUTH HOBART TAS 7004. These levels have been calculated by Huawei using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

The maximum EME level calculated for the proposed systems at this site is 1.59% of the public exposure limit.

The ARPANSA Standard

ARPANSA, an Australian Government agency in the Health and Ageing portfolio, has established a Radiation Protection Standard specifying limits for general public exposure to RF transmissions at frequencies used by wireless base stations. The Australian Communications and Media Authority (ACMA) mandates the exposure limits of the ARPANSA Standard.

How the EME is calculated in this report

The procedure used for these calculations is documented in the ARPANSA Technical Report "Radio Frequency EME Exposure Levels - Prediction Methodologies" which is available at http://www.arpansa.gov.au.

RF EME values are calculated at 1.5m above ground at various distances from the base station, assuming level ground.

The estimate is based on worst-case scenario, including:

- wireless base station transmitters for mobile and broadband data operating at maximum power
- simultaneous telephone calls and data transmission
- an unobstructed line of sight view to the antennas.

In practice, exposures are usually lower because:

- the presence of buildings, trees and other features of the environment reduces signal strength
- the base station automatically adjusts transmit power to the minimum required.

Maximum EME levels are estimated in 360° circular bands out to 500m from the base station.

These levels are cumulative and take into account emissions from all wireless base station antennas at this site.
The EME levels are presented in three different units:

- volts per metre (V/m) – the electric field component of the RF wave
- milliwatts per square metre (mW/m²) – the power density (or rate of flow of RF energy per unit area)
- percentage (%) of the ARPANSA Standard public exposure limit (the public exposure limit = 100%).

Results

The maximum EME level calculated for the proposed systems at this site is 6.21 V/m; equivalent to 102.15 mW/m² or 1.59% of the public exposure limit.

Radio Systems at the Site

There are currently no existing radio systems for this site.

It is proposed that this base station will have equipment for transmitting the following services:

Carrier	Radio Systems
Vodafone	WCDMA900 (proposed), LTE850 (proposed), LTE2100 (proposed), LTE1800 (proposed)
Optus	WCDMA900 (proposed), LTE700 (proposed), WCDMA2100 (proposed), LTE2100 (proposed), LTE2600 (proposed)

Calculated EME Levels

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.

Distance from the antennas at 127-127A Cascade Road, Via Jubilee Road in 360° circular bands	Maximum Cumulative EME Level at 1.5m above ground – all carriers at this site					
	Existing Equipment			Proposed Equipment		
	Electric Field V/m	Power Density mW/m²	% ARPANSA exposure limits	Electric Field V/m	Power Density mW/m²	% ARPANSA exposure limits
0m to 50m				3.76	37.57	0.55%
50m to 100m				3.5	32.45	0.61%
100m to 200m				6.21	102.15	1.59%
200m to 300m				5.52	80.93	1.25%
300m to 400m				3.87	39.65	0.61%
400m to 500m				2.88	22.032	0.34%
Maximum EME level				6.21	102.15	1.59
				149.46 m from the antennas at 127-127A Cascade Road, Via Jubilee Road		

Calculated EME levels at other areas of interest

This table contains calculations of the maximum EME levels at selected areas of interest that have been identified through the consultation requirements of the Communications Alliance Ltd Deployment Code C564:2011 or via any other means. The calculations are performed over the indicated height range and include all existing and any proposed radio systems for this site.

Additional Locations		Height / Scan relative to location ground level	Maximum Cumulative EME Level All Carriers at this site Existing and Proposed Equipment		
			Electric Field V/m	Power Density mW/m²	% of ARPANSA exposure limits
1	No locations identified				

RF EME Exposure Standard

The calculated EME levels in this report have been expressed as percentages of the ARPANSA RF Standard and this table shows the actual RF EME limits used for the frequency bands available. At frequencies below 2000 MHz the limits vary across the band and the limit has been determined at the Assessment Frequency indicated. The four exposure limit figures quoted are equivalent values expressed in different units – volts per metre (V/m), watts per square metre (W/m²), microwatts per square centimetre (µW/cm²) and milliwatts per square metre (mW/m²). Note: 1 W/m² = 100 µW/cm² = 1000 mW/m².

Radio Systems	Frequency Band	Assessment Frequency	ARPANSA Exposure Limit (100% of Standard)
LTE 700	758 – 803 MHz	750 MHz	37.6 V/m = 3.75 W/m² = 375 µW/cm² = 3750 mW/m²
WCDMA850	870 – 890 MHz	900 MHz	41.1 V/m = 4.50 W/m² = 450 µW/cm² = 4500 mW/m²
GSM900, LTE900, WCDMA900	935 – 960 MHz	900 MHz	41.1 V/m = 4.50 W/m² = 450 µW/cm² = 4500 mW/m²
GSM1800, LTE1800	1805 – 1880 MHz	1800 MHz	58.1 V/m = 9.00 W/m² = 900 µW/cm² = 9000 mW/m²
LTE2100, WCDMA2100	2110 – 2170 MHz	2100 MHz	61.4 V/m = 10.00 W/m² = 1000 µW/cm² = 10000 mW/m²
LTE2300	2302 – 2400 MHz	2300 MHz	61.4 V/m = 10.00 W/m² = 1000 µW/cm² = 10000 mW/m²
LTE2600	2620 – 2690 MHz	2600 MHz	61.4 V/m = 10.00 W/m² = 1000 µW/cm² = 10000 mW/m²
LTE3500	3425 – 3575 MHz	3500 MHz	61.4 V/m = 10.00 W/m² = 1000 µW/cm² = 10000 mW/m²

Further Information

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is a Federal Government agency incorporated under the Health and Ageing portfolio. ARPANSA is charged with responsibility for protecting the health and safety of people, and the environment, from the harmful effects of radiation (ionising and non-ionising).

Information about RF EME can be accessed at the ARPANSA website, http://www.arpansa.gov.au, including:

- Further explanation of this report in the document "Understanding the ARPANSA Environmental EME Report"
- The procedure used for the calculations in this report is documented in the ARPANSA Technical Report; "Radio Frequency EME Exposure Levels - Prediction Methodologies"
- the current RF EME exposure standard
  Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), 2002, 'Radiation Protection Standard: Maximum Exposure Levels to Radiofrequency Fields — 3 kHz to 300 GHz', Radiation Protection Series Publication No. 3, ARPANSA, Yallambie Australia.
  [Printed version: ISBN 0-642-79400-6 ISSN 1445-9760] [Web version: ISBN 0-642-79402-2 ISSN 1445-9760]

The Australian Communications and Media Authority (ACMA) is responsible for the regulation of broadcasting, radiocommunications, telecommunications and online content. Information on EME is available at http://emr.acma.gov.au

The Communications Alliance Ltd Industry Code C564:2011 'Mobile Phone Base Station Deployment' is available from the Communications Alliance Ltd website, http://commsalliance.com.au .

Contact details for the Carriers (mobile phone companies) present at this site and the most recent version of this document are available online at the Radio Frequency National Site Archive, http://www.rfnsa.com.au.

Appendix D – Protected Matters Search Report

Australian Government
Department of the Environment and Energy

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.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

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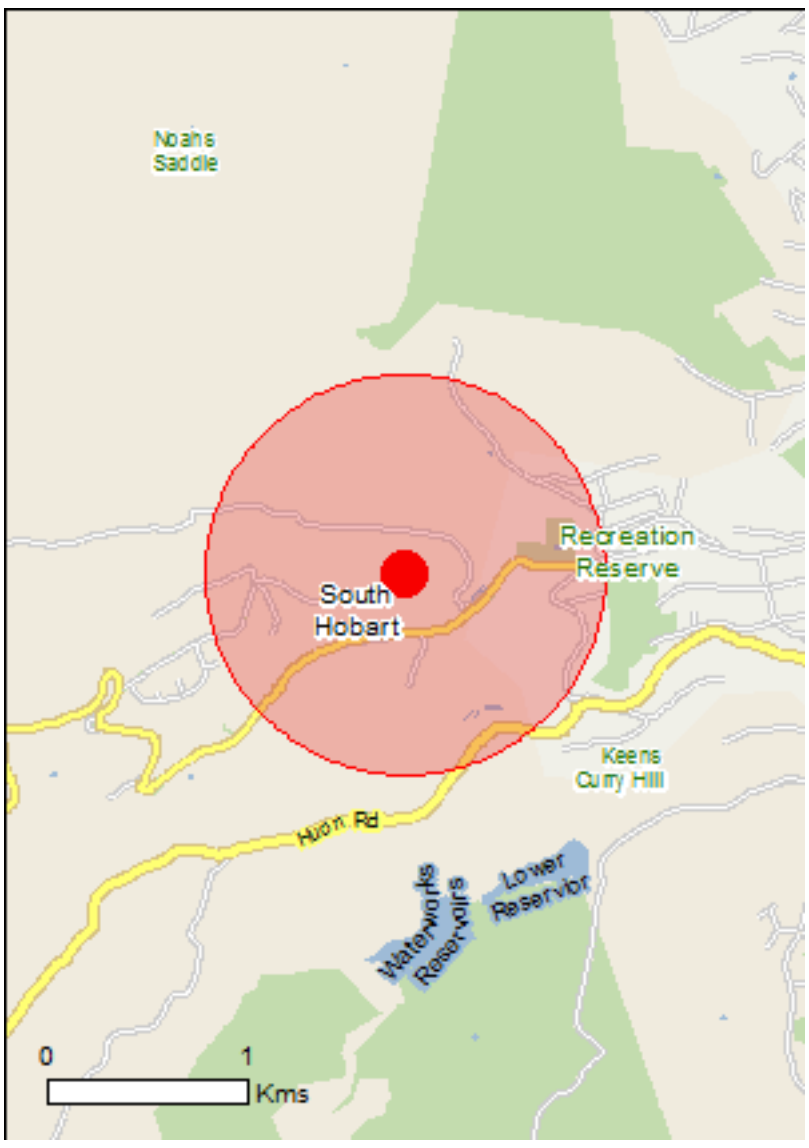

Coordinates

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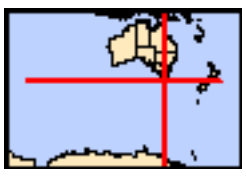


Summary

Matters of National Environmental 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:	1
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	25
Listed Migratory Species:	11

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 http://www.environment.gov.au/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 Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	1
Invasive Species:	34
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

World Heritage Properties		[Resource Information]
Name	State	Status
Australian Convict Sites (Cascades Female Factory Buffer Zone)	TAS	Buffer zone

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Aquila audax fleayi Tasmanian Wedge-tailed Eagle, Wedge-tailed Eagle (Tasmanian) [64435]	Endangered	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Ceyx azureus diemenensis Tasmanian Azure Kingfisher [25977]	Endangered	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Breeding likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Tyto novaehollandiae castanops (Tasmanian population) Masked Owl (Tasmanian) [67051]	Vulnerable	Breeding known to occur within area
Fish		
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area
Insects		
Antipodia chaostola leucophaea Tasmanian Chaostola Skipper, Heath-sand Skipper [77672]	Endangered	Species or species habitat known to occur within area
Mammals		
Dasyurus maculatus maculatus (Tasmanian population) Spotted-tail Quoll, Spot-tailed Quoll, Tiger Quoll	Vulnerable	Species or species

Name	Status	Type of Presence
(Tasmanian population) [75183]		habitat known to occur within area
Dasyurus viverrinus Eastern Quoll, Luaner [333]	Endangered	Species or species habitat known to occur within area
Perameles gunnii gunnii Eastern Barred Bandicoot (Tasmania) [66651]	Vulnerable	Species or species habitat known to occur within area
Sarcophilus harrisii Tasmanian Devil [299]	Endangered	Species or species habitat likely to occur within area
Other		
Discocharopa vigens Ammonite Snail [82806]	Critically Endangered	Species or species habitat known to occur within area
Plants		
Caladenia caudata Tailed Spider-orchid [17067]	Vulnerable	Species or species habitat known to occur within area
Caladenia sylvicola Forest Fingers [64860]	Critically Endangered	Species or species habitat likely to occur within area
Colobanthus curtisiae Curtis' Colobanth [23961]	Vulnerable	Species or species habitat may occur within area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat may occur within area
Epacris virgata Pretty Heath, Dan Hill Heath [20375]	Endangered	Species or species habitat known to occur within area
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area
Lepidium hyssopifolium Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area
Prasophyllum apoxychilum Tapered Leek-orchid [64947]	Endangered	Species or species habitat known to occur within area
Prasophyllum perangustum Knocklofty Leek-orchid [64952]	Critically Endangered	Species or species habitat likely to occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species

Name	Threatened	Type of Presence
		habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species

Name	Threatened	Type of Presence
		habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Breeding likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
Tasmania RFA	Tasmania

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus scandens Asparagus Fern, Climbing Asparagus Fern [23255]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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.

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

Where very little information is available for 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 reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

Coordinates

-42.89612 147.28839

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.

Department of the Environment
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

Appendix E – Aboriginal Heritage Desktop Assessment Form Response

Aboriginal Heritage SEARCH RECORD

This search for

127-127A CASCADE RD SOUTH HOBART TAS 7004 (PID 7570663)

has not identified any registered Aboriginal relics or apparent risk of impacting Aboriginal relics.

This Search Record has been requested for Brad Spinks at 11:35AM on 05 September 2017 and delivered to bspinks@catalystone.com.au.
This Search Record expires on 05 March 2018.
Your personal Search Identification Number is PS0001256.

Please be aware that the absence of records on the Aboriginal Heritage Register for the nominated area of land does not necessarily mean that the area is devoid of Aboriginal relics. If at any time during works you suspect the existence of Aboriginal relics, cease works immediately and contact Aboriginal Heritage Tasmania for advice.

It is also recommended that you have on hand during any ground disturbance or excavation activities the Unanticipated Discovery Plan, to aid you in meeting requirements under the *Aboriginal Heritage Act 1975* should Aboriginal relics be uncovered. There are requirements that apply under the *Aboriginal Heritage Act 1975*. It is an offence to interfere with relics and there is an obligation to report findings of relics.

This Search Record is confirmation that you have checked the Aboriginal Heritage Property Search website for this property. This Search Record will expire in six months from the search date.

If you have any queries please do not hesitate to contact Aboriginal Heritage Tasmania on **1300 487 045** or at **aboriginal@heritage.tas.gov.au**.

Site Ref: H8095 Cascade Brewery TAS
Council Ref: PLN-18-25

30 April 2018

Planning Department
Hobart City Council
GPO Box 503
Hobart TAS 7001
Via Email: coh@hobartcity.com.au

Dear Sir/Madam,

Re: Application for Planning Permit – Optus Mobile Pty Ltd Telecommunications Facility – Further Information Request

127-127A Cascade Road, South Hobart TAS 7004

I am writing in regard to the proposed Optus telecommunications facility at the aforementioned address, for which Council requested further information on 25th January 2018 (Council reference PLN-18-25).

Please find enclosed a Natural Values Assessment prepared by North Barker Ecosystem Services addressing the relevant provisions of Clause E10 Biodiversity Code of the *Hobart Interim Planning Scheme 2015* (HIPS) of Council's request.

In addition, it is noted that the new facility has been sited to balance the requirements of Clause E10 Biodiversity Code and the need to remove vegetation against the design standards of Clause E19 Telecommunications which seeks to minimises the visual amenity disturbance of the proposed facility.

In consideration of the above, the proposed facility remains compliant with the HIPS and represents an appropriate compromise against competing clauses.

Optus investigated siting the proposed facility on alternative locations on the property, including to the east of the subject site, however these were subsequently discounted on the following grounds;

- Increased visual amenity disturbance, citing lower terrain and less vegetative screening;
- Industry practice to allow adequate separation distance (at least 50-100m) between two facilities to ensure operational functionality and avoid interference.

The Optus compound is located adjacent to an existing access track which has already been subject to significant disturbance. The siting minimises the extent of vegetation removal required and adequately reduces the impact on any threatened flora or fauna.

www.CatalystONE.com.au
Catalyst O.N.E. Pty Ltd
ABN 55 117 447 140

M 0408 114 498
E gbazeley@catalystone.com.au
A PO Box 361, South Melbourne VIC 3205

We trust the information provided satisfies Council's request for further information. Should you require any further information, please do not hesitate to contact the undersigned.

Yours sincerely,

George Bazeley
On behalf of **Optus Mobile Pty Ltd**

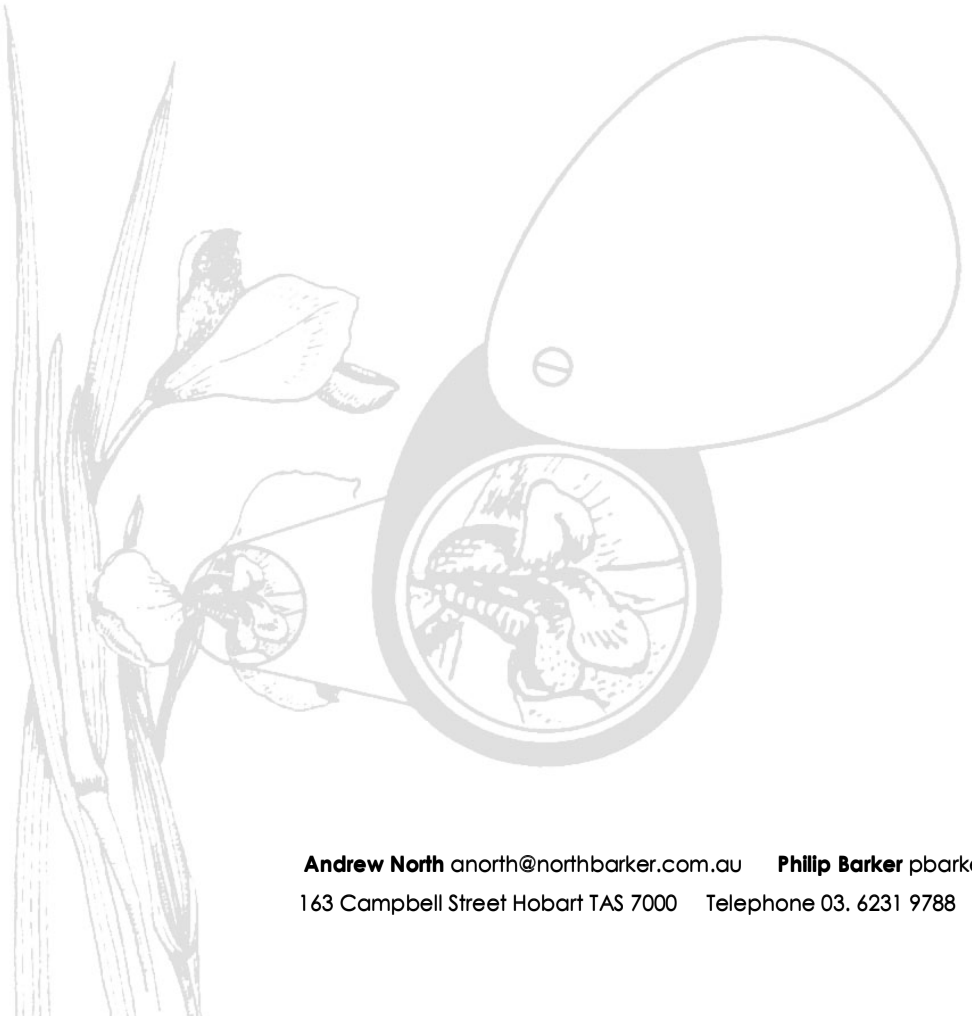
northbarker
ECOSYSTEM SERVICES

Mobile Base Station Facility at 127 Cascade Road South Hobart

Natural Values Assessment

30th April 2018

For Optus (OPT002)



Andrew North anorth@northbarker.com.au **Philip Barker** pbarker@northbarker.com.au
163 Campbell Street Hobart TAS 7000 Telephone 03. 6231 9788 Facsimile 03. 6231 9877

Summary

Application: Mobile Base Station Facility at 127 Cascade Road South Hobart

Natural Values

Hobart Interim Planning Scheme 2015	Environmental Management
HCCIPS Overlay	Biodiversity Protection Area
HCCIPS High Priority	Native vegetation – DTO.
HCCIPS Moderate Priority	NA
HCCIPS Low priority	N/A
Threatened Flora	NA
Threatened Fauna	NA
Threatened vegetation	*Eucalyptus tenuiramis* forest on sediments (DTO)
Impact	Approx. 0.006 ha Native Vegetation - DTO
EPBC Act	No significant impact to MNES
TSP Act	NA
Weed Mngt Act	N/A

1. Project Details

Background:

Optus are looking to construct a Mobile Base Station Facility at 127 Cascade Road South Hobart Planning Application NO.PLN-18-25. The site which is 6x10m, will contain a shed, a monopole and the compound secured with fencing. Hobart City Council requested the following additional information to support the application including;

- Documentation detailing the native vegetation proposed to be removed including the species size and location of the 5 trees proposed to be removed and any other vegetation proposed for removal.
- A Natural Values Assessment as defined in Section E10.3 of the Biodiversity Code of the Hobart Interim Planning Scheme 2015
- If native vegetation determined by the Natural Values Assessment to be of high priority biodiversity value is proposed to be removed a special circumstances justification report presenting a case why special circumstances (as defined in Section E10.3 of the code exist.
- A statement indicating whether there are other suitable alternative locations on the property that would not require removal of native vegetation or would require the removal of less native vegetation, and if so why such an alternative sites have not been selected.

Date of Field Survey: 11th April 2018.

Field Survey, Report and Photos : Stephen Casey.

Methods: Plant species composition of the values was surveyed using an area search based on the Timed Meander Search Procedure[1]. Vegetation was classified according to TASVEG 3.0 units, with boundaries determined in the field and with the aid of aerial imagery.

The Tasmanian Natural Values Atlas database was interrogated for records of threatened species and vegetation types within a 5 km radius. The possibility of threatened values known from within this radius occurring within the impact area has been considered in the interpretation of results.

Limitations: The field survey was undertaken in mid-Autumn. Values that are seasonal may have been overlooked or absent; the potential for this is considered where relevant in the discussion. The quality of fauna habitat, including the presence of tree hollows, was assessed from ground level only.

Site Values

Site Characteristics (Figure 1)

The site occurs on an east–westerly facing ridge that runs between Old Farm Road and Strickland Avenues in South Hobart. The ridge is largely Permian mudstones and sandstones and slopes moderately steeply to the north and south. The site for the monopole is situated on an access track that runs along the top of the ridgeline.

Vegetation (Figure 2)

The vegetation is native *Eucalyptus tenuiramis* woodland on sediments (DTO). Much of the vegetation on the site has been impacted by being situated on a spur of the access track and has lost much of its original soil profile and associated litter however the vegetation away from the access tracks (and compound site) is still in good condition.

[1] Goff *et al.* 1982

Due to the ridgeline being highly insolated and its proximity to suburban Hobart the site has been frequently burnt and so the trees are mostly regrowth and many exhibit coppicing from lignotubers. No mature or hollow bearing trees were present in the immediate vicinity of the site and few were observed along the whole ridge line. Five *Eucalyptus tenuiramis* trees will have to be removed to build the site. The five trees are single and multi-stemmed and have a range of diameters from 8-25 cm dbh (diameter at breast height) and their relative location can be seen in Figure 2 and Plate 1.

No declared weeds were recorded on the site.

In the context of the HCC IPS 2015 Dry *Eucalyptus tenuiramis* forest and woodland on sediments (DTO) is a High priority.

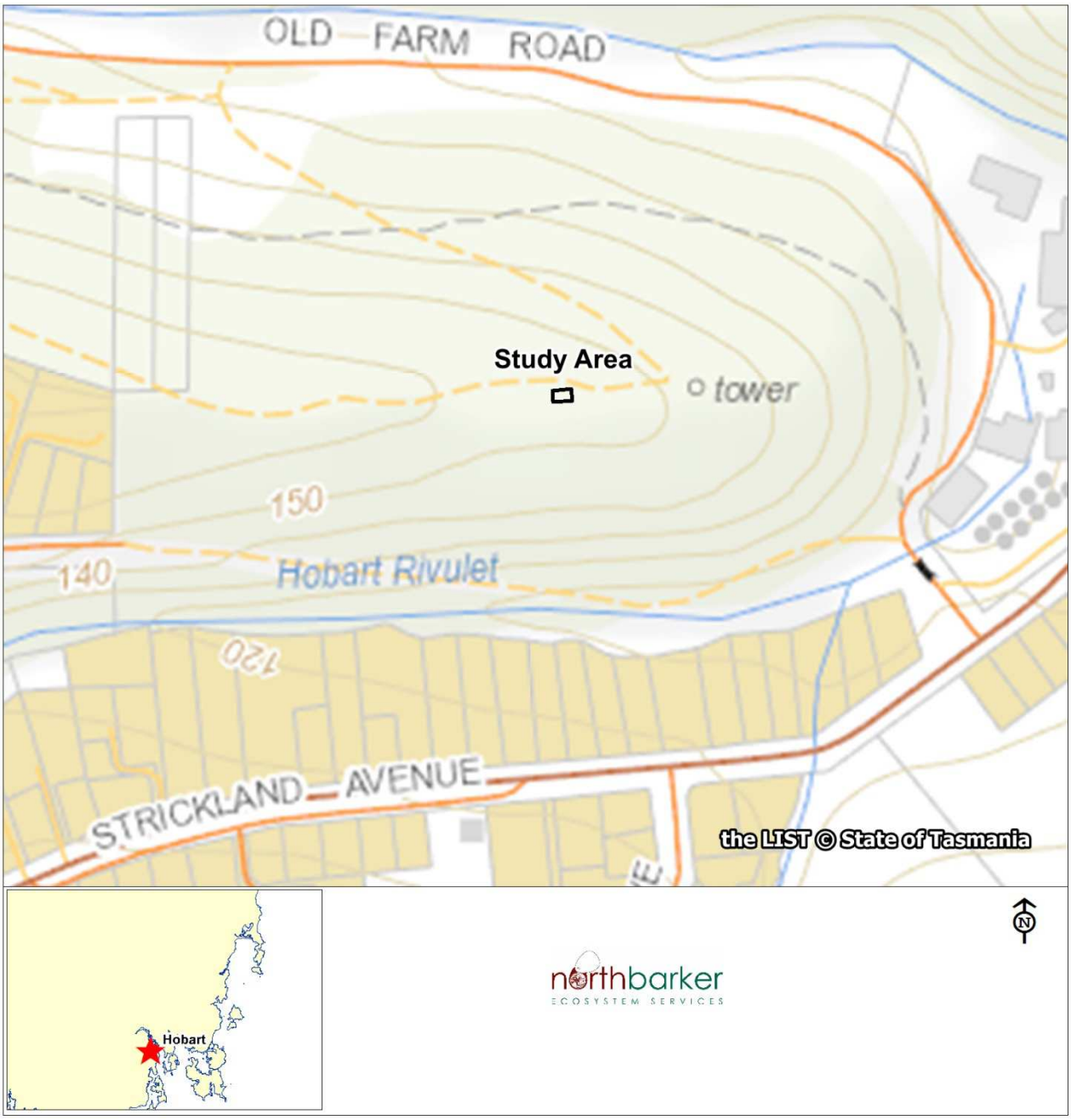


Figure 1. Location of the Mobile Base Station Facility at 127 Cascade Road South Hobart.

Plate 1: Relative location of the of the site (marked in red) for the facility on a spur of the access track

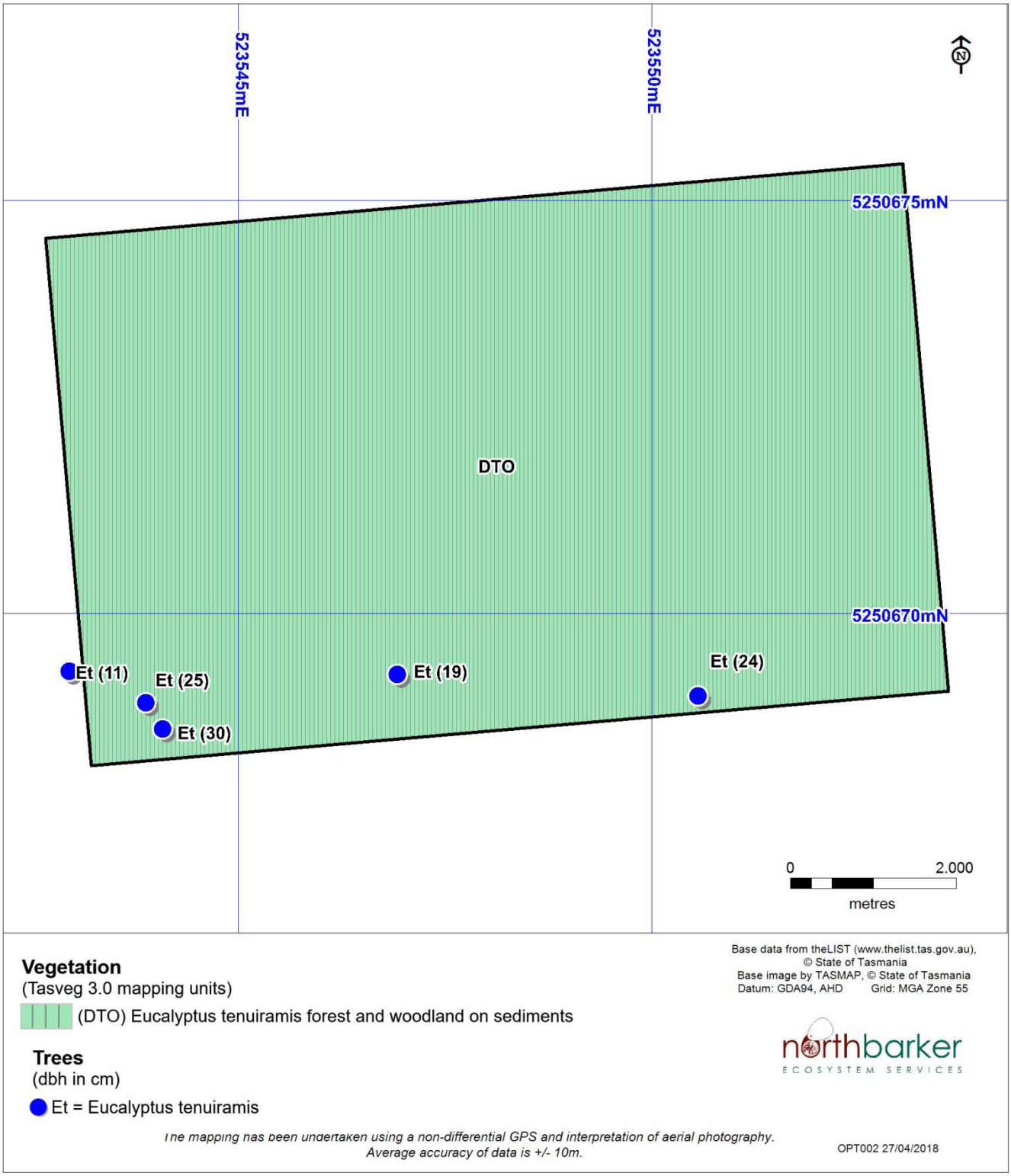


Figure 2: Location of the five *Eucalyptus tenuiramis* trees which will need to be removed to build the facility.

Plant Species of Conservation Significance

Eighteen vascular plant taxa were recorded within the study area. No threatened flora species were observed.

Flora Species known within vicinity.

The Tasmanian *Natural Values Atlas* list five observations of threatened flora species within 500 m of the study area[2] (Table 1).

Fifty five threatened taxa are known from within 5 km [3](Table 2). Given the small size of the study area and good ground visibility none of these species were found, were likely to occur or were likely to have been overlooked within the study area.

Particular attention was given to searching for *Corunastylis nudiscapa* and *C. nuda* which have been recorded nearby. The survey coincided with *the* peak flowering period as far it is understood for *C. nudiscapa*. It has been in flower on the hill and at nearby Huon Road re-discovery site since late February based on online images and surveys (M. Wapstra pers. comm.). *Corunastylis nuda* should also have been in evidence as it is only just past peek flowering for this species. These species are not considered likely at this site as it is degraded and known occurrences for both species are further down on the northerly facing slope of the hill.

Table 1: Threatened flora within 500m of the proposal – SS = Tasmanian *Threatened Species Protection Act 1995*, NS = Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Carex longebrachiata	drooping sedge	r		n	1	01-Jan-1893
Corunastylis nuda	tiny midge-orchid	r		n	11	20-Mar-2011
Corunastylis nudiscapa	bare midge-orchid	e		e	35	26-Mar-2011
Rytidosperma indutum	tall wallabygrass	r		n	1	19-Mar-2011
Thismia rodwayi	fairy lanterns	r		n	1	01-Dec-1890

[2] nvr_27-Mar-2018
[3] nvr_27-Mar-2018

Table 2: Threatened flora within 5km of the proposal – SS = Tasmanian *Threatened Species Protection Act 1995*, NS = Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Allocasuarina duncanii	conical sheoak	r		e	7	19-Jan-2016
Asperula scoparia subsp. scoparia	prickly woodruff	r		n	17	01-Mar-2016
Atriplex suberecta	sprawling saltbush	v		n	1	01-Jan-1900
Australina pusilla subsp. muelleri	shade nettle	r		n	1	01-Jan-1896
Austrostipa bigeniculata	doublejointed speargrass	r		n	52	21-Feb-2017
Austrostipa blackii	crested speargrass	r		n	1	20-Dec-2011
Austrostipa scabra	rough speargrass	r		n	7	02-Sep-2016
Bolboschoenus caldwellii	sea clubsedge	r		n	2	28-Apr-1940
Brachyscome perpusilla	tiny daisy	r		n	1	12-Oct-1901
Brachyscome radicata	spreading daisy	r		t	3	01-Apr-1913
Caladenia caudata	tailed spider-orchid	v	VU	e	8	24-Sep-2017
Caladenia filamentosa	daddy longlegs	r		n	1	13-Oct-2016
Caladenia sylvicola	forest fingers	e	CR	e	7	26-Oct-2009
Carex gunniana	mountain sedge	r		n	15	19-Aug-2013
Carex longebrachiata	drooping sedge	r		n	10	03-Sep-2016
Centropappus brunonis	tasmanian daisytree	r		e	37	05-Mar-2012
Comesperma defoliatum	leafless milkwort	r		n	1	01-Sep-1892
Corunastylis nuda	tiny midge-orchid	r		n	27	28-Apr-2013
Corunastylis nudiscapa	bare midge-orchid	e		e	104	08-Mar-2015
Dianella amoena	grassland flaxlily	r	EN	n	4	08-Dec-2006
Diuris palustris	swamp doubletail	e		n	3	01-Jan-1970
Epacris virgata (Kettering)	pretty heath	pv		e	2	20-Oct-1995
Eryngium ovinum	blue devil	v		n	1	06-Apr-2004
Eucalyptus risdonii	risdon peppermint	r		e	1	17-Jun-2014
Euphrasia gibbsiae subsp. wellingtonensis	mt wellington eyebright	r		e	26	06-Dec-2015
Euphrasia scabra	yellow eyebright	e		n	11	18-Dec-2009
Goodenia geniculata	bent native-primrose	e		n	1	01-Jan-1805
Hyalosperma demissum	moss sunray	e		n	2	15-Oct-1898
Hydrocotyle laxiflora	stinking pennywort	e		n	31	03-Sep-2016
Isoetopsis graminifolia	grass cushion	v		n	6	01-Jan-1896
Isolepis habra	wispy clubsedge	r		n	3	06-Mar-1974
Juncus vaginatus	clustered rush	r		n	1	14-Mar-2001
Lachnagrostis punicea subsp. filifolia	narrowleaf blowngrass	r		n	1	01-Jan-1929
Lepidium hyssopifolium	soft peppercress	e	EN	n	2	01-Feb-1995
Olearia hookeri	crimsontip daisybush	r		e	55	04-Apr-2013
Pimelea flava subsp. flava	yellow riceflower	r		n	14	28-Apr-2007
Prasophyllum amoenum	dainty leek-orchid	v	EN	e	1	14-Feb-2013
Prasophyllum apoxychilum	tapered leek-orchid	v	EN	e	2	29-Jan-1996
Prasophyllum castaneum	chestnut leek-orchid	e	CR	e	1	01-Feb-1891
Prasophyllum perangustum	knocklofty leek-orchid	e	CR	e	12	04-Dec-2009
Pterostylis squamata	ruddy greenhood	v		n	3	06-Feb-1967
Ranunculus pumilio var. pumilio	ferny buttercup	r		n	2	04-Jan-1984
Rhodanthe anthemoides	chamomile sunray	r		n	1	15-Jan-1898
Rumex bidens	mud dock	v		n	1	01-Dec-1891
Rytidosperma indutum	tall wallabygrass	r		n	124	31-Jul-2017
Scleranthus fasciculatus	spreading knawel	v		n	70	31-Aug-2017
Senecio squarrosus	leafy fireweed	r		n	61	01-Mar-2016
Thelymitra bracteata	leafy sun-orchid	e		n	1	18-Nov-1970
Thismia rodwayi	fairy lanterns	r		n	11	17-Dec-2017
Velleia paradoxa	spur velleia	v		n	23	04-Dec-2016
Vittadinia burbidgeae	smooth new-holland-daisy	r		e	8	12-Mar-2011
Vittadinia cuneata var. cuneata	fuzzy new-holland-daisy	r		n	2	01-Jan-1993
Vittadinia gracilis	woolly new-holland-daisy	r		n	11	27-Mar-2007
Vittadinia muelleri	narrowleaf new-holland-daisy	r		n	142	31-Aug-2017
Westringia angustifolia	narrowleaf westringia	r		e	1	01-Jan-0001

Threatened Fauna Habitat

Fauna Species known within vicinity

Five TSPA or EPBCA listed species have previously been reported from within 500 m of the property[4] (Table 3)

Table 3: Threatened fauna within 500m of the proposal – SS = Tasmanian *Threatened Species Protection Act 1995*, NS = Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Accipiter novaehollandiae	grey goshawk	e		n	1	01-Dec-1992
Dasyurus viverrinus	eastern quoll		EN	n	1	01-Jan-1995
Lathamus discolor	swift parrot	e	CR	mbe	3	15-Sep-1987
Perameles gunnii	eastern barred bandicoot		VU	n	4	25-Jun-2016
Tyto novaehollandiae	masked owl	pe	PVU	n	1	24-Jan-1987

The study area is located within core range of the following eight TSPA or EPBCA listed species[5] (Table 4).

Table 4: Threatened fauna based on habitat ranges within 500 m of the proposal – SS = Tasmanian *Threatened Species Protection Act 1995*, NS = Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Species	Common Name	SS	NS	BO	Potential	Known	Core
Discocharopa vigens	ammonite snail	e	CR		1	0	1
Litoria raniformis	green and gold frog	v	VU	n	1	0	1
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Pardalotus quadragintus	forty-spotted pardalote	e	EN	e	1	0	0
Antipodia chaostola	chaostola skipper	e	EN		1	0	1
Aquila audax	wedge-tailed eagle	pe	PEN	n	1	0	0
Tyto novaehollandiae	masked owl	pe	PVU	n	1	0	1
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1
Lathamus discolor	swift parrot	e	CR	mbe	1	0	1
Accipiter novaehollandiae	grey goshawk	e		n	1	0	1
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Prototroctes maraena	australian grayling	v	VU	ae	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0

Of the species listed in Tables 3 and 4 that could conceivably occur in this type of habitat at this location are:

- Tasmanian masked owl, *Tyto novaehollandiae* ssp. *castanops:* No trees were large enough to support nesting hollows for this species. The area may be part of the foraging range of this species.
- Eastern barred-bandicoot. Although within the range of this species evident from many records nearby. The habitat on the site is no longer suitable for nesting due to the reduction in cover in the understorey. The EB bandicoot is likely to forage on the site from time to time.
- Eastern quoll. The site is not considered likely to be used for denning by the eastern quoll as no suitable denning opportunities are located there. The site is likely to be part of the foraging habitat for this species.
- Swift parrot –there is no suitable core foraging habitat in the vicinity of the study area in the form of *Eucalyptus globulus or E. ovata* trees.
- Chaostola skipper-There were no food plants (*Gahnia radula, G. microstachya*) of this species present on the site. No impact expected.

[4] nvr_27-Mar-2018
[5] nvr_27-Mar-2018

- Grey goshawk – there is no suitable nesting habitat for this bird of prey. It is likely to occasionally fly over and potentially hunt in the adjacent woodlands and gardens.

Weeds

No weeds declared under the Tasmanian *Weed Management Act 1999* were observed on the site.

2. Impact Assessment and Scope for Mitigation

Vegetation Communities

The DTO is a High biodiversity priority in the HCC IPS 2015. While the proposal will result in the clearance of five trees there will be minimal impact on the community as a whole. The five trees are regrowth and coppices with little habitat value for fauna. The site is on a degraded old track and the site selection has minimised impact on native vegetation to the extent possible.

Special circumstances exist with regard to building of the facility. Special circumstances are considered to exist if the following applies:

a) The use or development will result in significant long term social or economic community benefit and there is no feasible alternative location.

The facility is for telecommunications infrastructure to service the residents of Hobart. The site has been chosen for it location adjacent to existing supporting infrastructure and has been sited on an existing disturbed track where the requirement for removal of vegetation is minimised.

Threatened Flora Species

The proposal is will not impact on any threatened flora.

Threatened Fauna Habitat

The proposal is unlikely to impact on any HCC IPS priority threatened fauna habitat of high or moderate significance. This assessment includes consideration of the criteria listed below;

- the known and potential range of the species;
- the specific habitat requirements and preferences of the species for successful completion of its lifecycle including feeding, shelter and reproduction;
- the extent, distribution, prevalence, condition and likely availability of the specific habitat requirements and preferences of the species on the site;
- the extent, distribution, prevalence, condition and likely availability of the specific habitat requirements and preferences of the species elsewhere;
- observations of species on the site;
- records of species observations on the site and elsewhere.

The overwhelming reason for the low significance of the habitat is its size, habitat structure and condition in comparison to broad areas of habitat elsewhere in the immediate vicinity and within the range of each species.

The lack of dense cover in the understorey vegetation, due in part to high fire frequency and depauperate understorey, is unsuited to denning or nesting of small ground dwelling mammals. While each species could conceivable traverse the site from time to time it could not be described as significant habitat.

Weeds

The site is currently weed free and few weeds were seen in the immediate vicinity of the site. Best practice site hygiene should be implemented to prevent the introduction and, spread of weeds to the site as a result of the proposal.

Legislative Implications

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

The EPBCA is structured for self-assessment; the proponent must indicate whether or not the project is considered a 'controlled action', which, if confirmed, would require approval from the Commonwealth Minister.

No values present on the lot are required to be assessed under this Act. Consequently, referral to the Minister is not considered to be necessary for this proposal.

Tasmanian *Threatened Species Protection Act 1995*

There are no regulatory requirements under this Act.

Tasmanian *Weed Management Act 1995*

It is incumbent of the proponents to ensure that the weeds do not spread to land free of the weeds or to reserves. Proper hygiene measures should be implemented to ensure weeds are not spread in to the area which is largely weed free.

Tasmanian *Forest Practices Regulations 2017*

A Forest Practices Plan will not be required. The Regulations state-

A Forest Practices Plan is not required where:

(j) the harvesting of timber or the clearing of trees on any land, or the clearance and conversion of a threatened native vegetation community on any land, for the purpose of enabling –

(i) the construction of a building within the meaning of the Land Use Planning and Approvals Act 1993 or of a group of such buildings; or

(ii) the carrying out of any associated development – if the construction of the buildings or carrying out of the associated development is authorised by a permit issued under that Act;

References

Goff, F.G., G.A. Dawson, and J.J. Rochow. 1982. Site examination for threatened and endangered plant species. Environmental Management 6(4):307–316.