Attachment 2 - 19 Jinglers Drive, Youngtown - Plans of Proposal (pages =44)

		27/10/16							
DATE OF ISSUE									
DRAWING PACKAGE VERSION		1							
GENERAL DRAWINGS									
G1	SITE AND LOCALITY PLANS	A							
G2	SITE SETOUT PLAN	A							
G3	SITE ELEVATION	A							
G4	ANTENNA CONFIGURATION & ANCILLARIES TABLE	A							
STRUCTURAL DRAWINGS									
ELECTRICAL DRAWINGS									
FITOUT ROOM DRAWINGS									
RADHAZ / EXCLUSION ZONE DRAWING									
TRANSMISSION DRAWINGS									
REFERENCE DRAWINGS									
DISTRIBUTION LIST									
VODAFONE		1							

vodafone

VODAFONE AREA PM: _____
DATE: _____ SIGN: _____
VODAFONE RF ENGINEER: _____
DATE: _____ SIGN: _____

VODAFONE SITE 780033
YOUNGTOWN

YOUNGTOWN MEMORIAL PARK
TAS 7249

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BLACKSPOT PROJECT

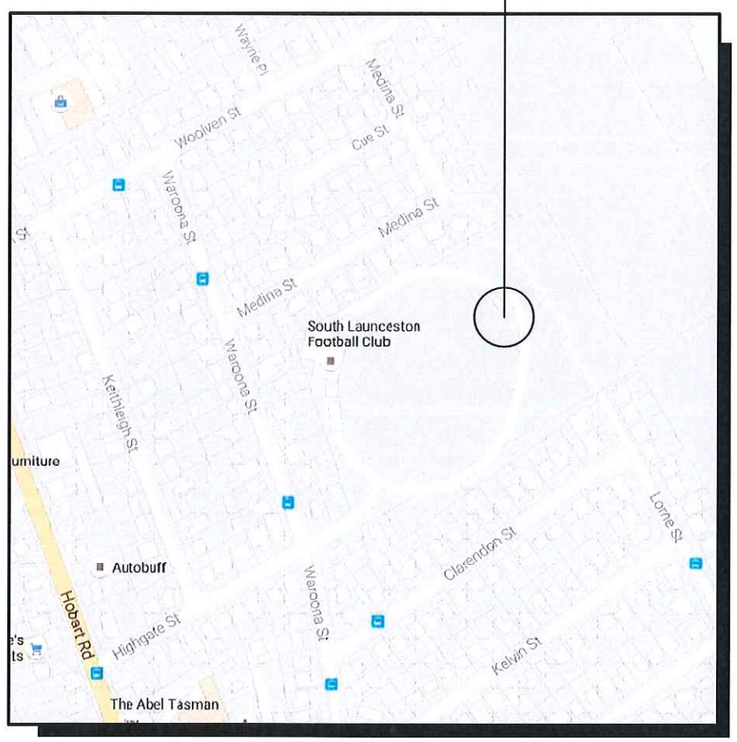
PRELIMINARY

DRAWING NO. 780033-00

A3

N

VODAFONE SITE 780033



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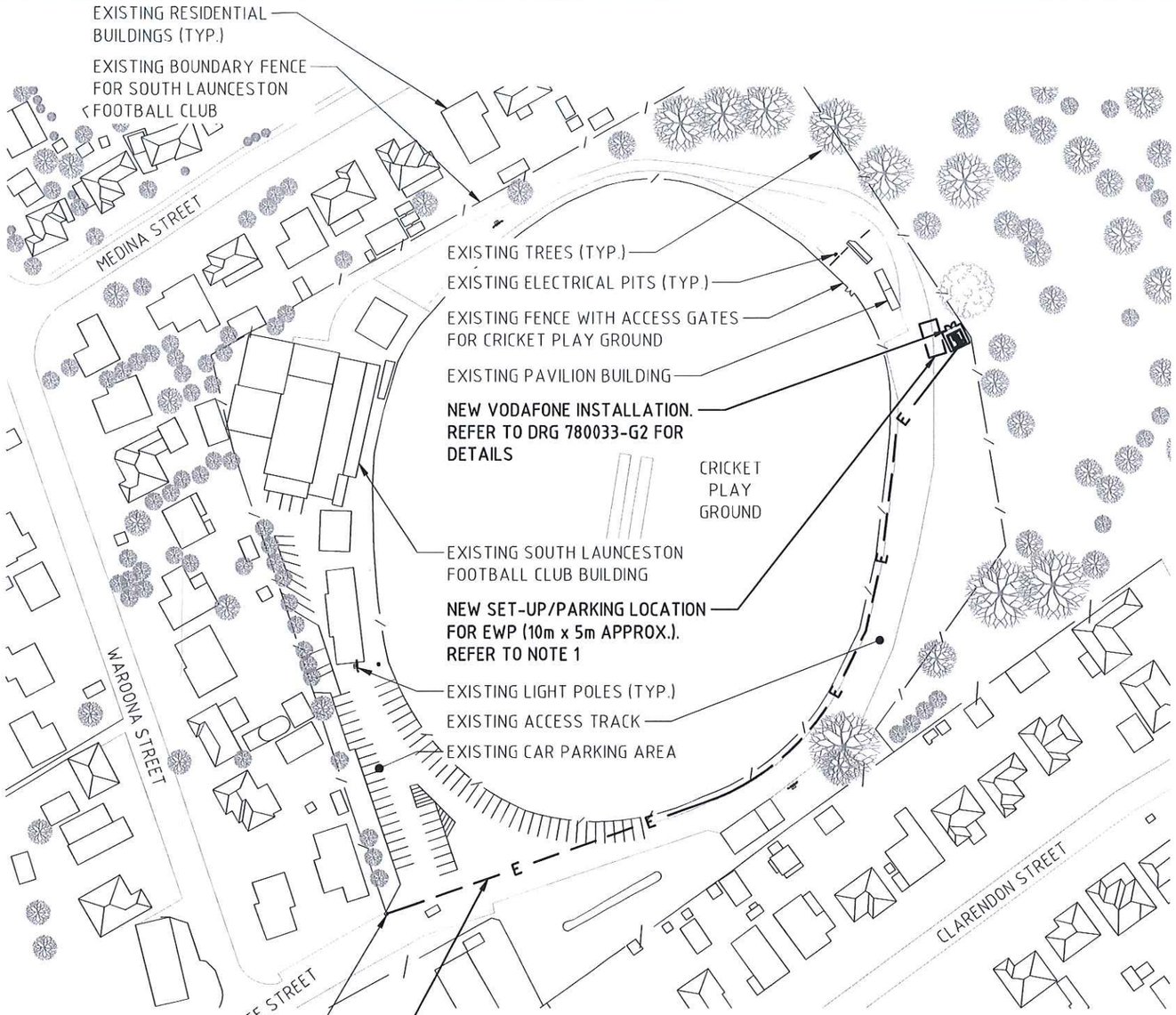
SITE LOCALITY PLAN

NOT TO SCALE

RFNSA NUMBER: NEW SITE		
CARRIER	SITE NAME	SITE ID
VODAFONE	YOUNGTOWN	780033



SITE ACCESS

SCALE 1:1500

NOTES:

1. CONSTRUCTION CONTRACTOR TO CONFIRM SUITABILITY OF NEW EWP SET-UP / PARKING LOCATION ON SITE PRIOR TO WORK COMMENCING.

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
A	27.10.16	PRELIMINARY ISSUE (BLACKSPOT PROJECT)	SSMC	SM	NP	SM

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TITLE: SITE AND LOCALITY PLANS

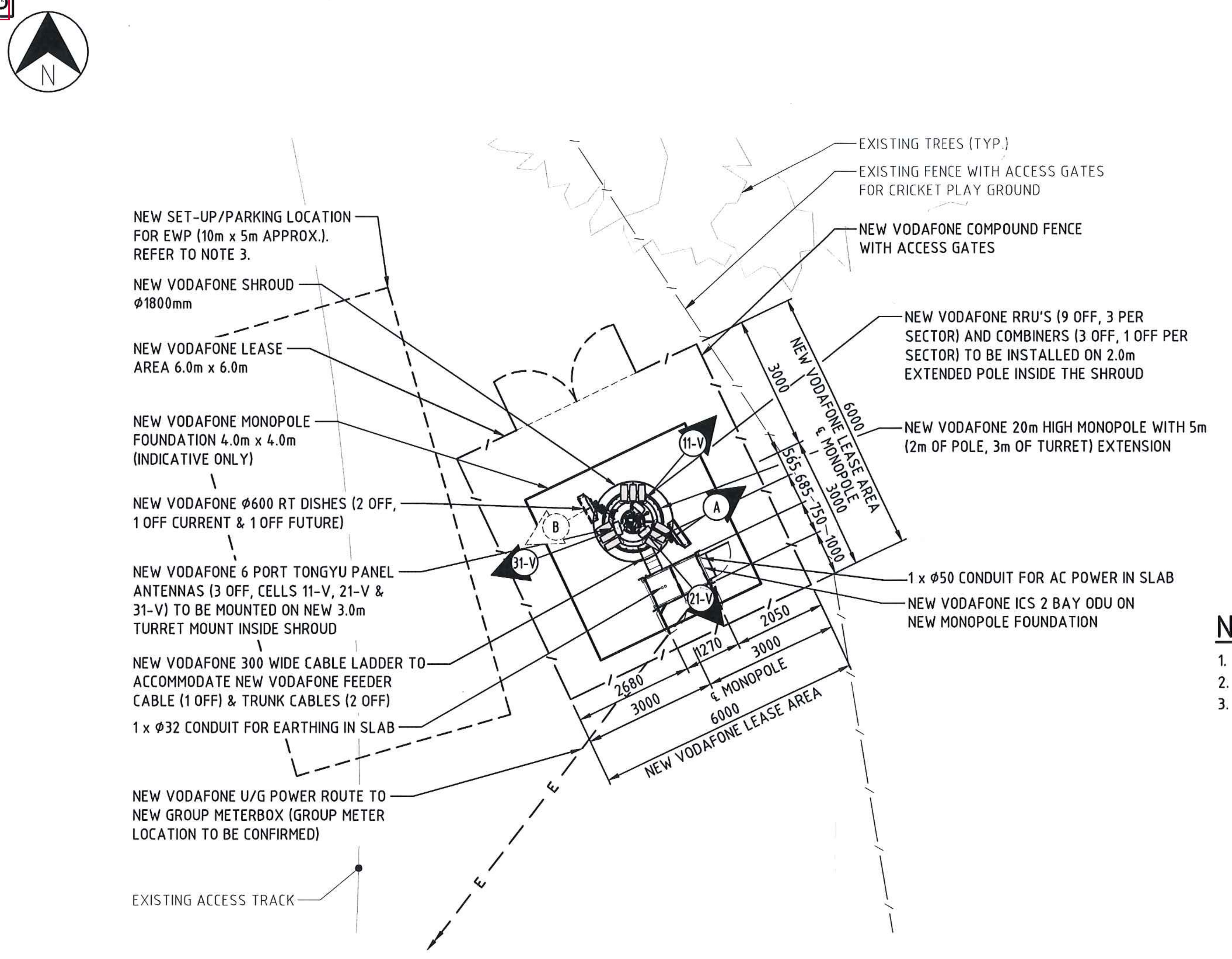
DRAWING STATUS	DRAWING No.	REV
PRELIMINARY	780033 - G1	A

A3

DATUM POINT	GDA94 COORDINATES		GROUND LEVEL
⊕	LATITUDE	-41.477157	A.H.D. RL. 107.00m EL 0.00m
	LONGITUDE	147.171101	
MGA CO-ORDIANTES	EASTING	NORTHING	ZONE
	514 285	5 408 257	55

LEGEND:

FUTURE (ID) — NEW, REPLACE, ETC (ID)



SITE SETOUT PLAN

SCALE 1:100

LEGEND

——— — — E ———	VODAFONE U/G ELECTRICITY
—/——/——/——/—	FENCE LINE

NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS STATED OTHERWISE.
2. FOR ANTENNA CONFIGURATION TABLES REFER DRAWING 780033-G4.
3. CONSTRUCTION CONTRACTOR TO CONFIRM SUITABILITY OF NEW EWP SET-UP / PARKING LOCATION ON SITE PRIOR TO WORK COMMENCING.

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
A	27.10.16	PRELIMINARY ISSUE (BLACKSPOT PROJECT)	SSMC	SM	NP	SM

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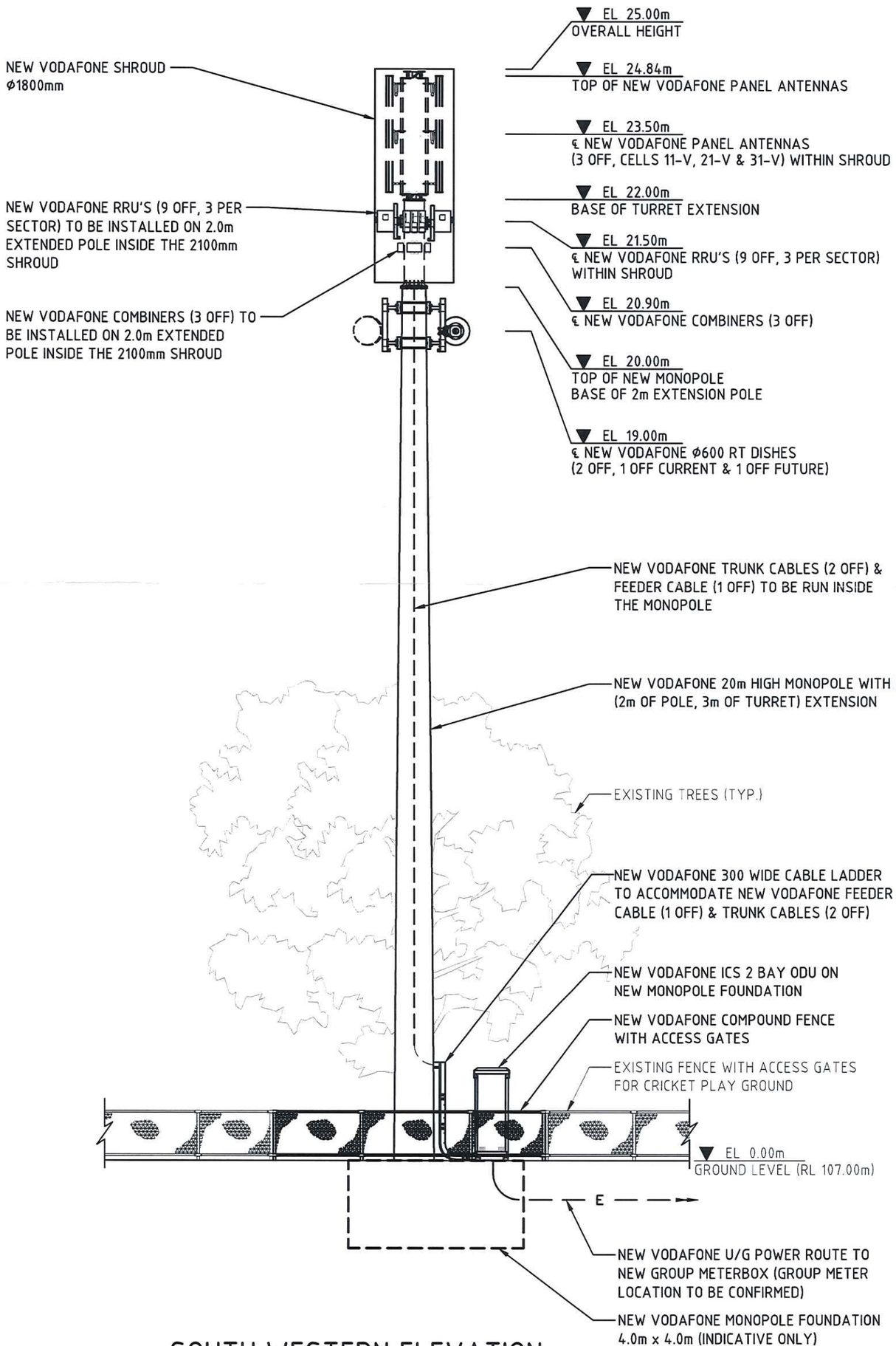
TITLE: SITE SETOUT PLAN

DRAWING STATUS	DRAWING No.	REV
PRELIMINARY	780033 - G2	A

NOTES:

1. ANTENNA ACCESS VIA EWP BY QUALIFIED RIGGER PERSONNEL ONLY.



SOUTH WESTERN ELEVATION

SCALE 1:100

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
A	27.10.16	PRELIMINARY ISSUE (BLACKSPOT PROJECT)	SSNC	SH	NP	SH

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BLACKSPOT PROJECT

TITLE: SITE ELEVATION

DRAWING STATUS: PRELIMINARY

DRAWING No.: 780033 - G3

REV: A

PLANNING EXHIBITED DOCUMENTS

Ref. No: DA 0616/2016

Date advertised: 11/02/2017

Planning Administration

ANTENNA CONFIGURATION TABLE

		11-V			21-V			31-V			TOTAL
ANTENNA	SECTOR No.	1			2			3			
	AZIMUTH	40°			140°			250°			
	HEIGHT AT CL ANTENNA	23.50m			23.50m			23.50m			
	ANTENNA TYPE	TTB-609017/172717/172717DER-60			TTB-609017/172717/172717DER-60			TTB-609017/172717/172717DER-60			
	DIMENSIONS (L x W x D)	2680 x 300 x 146			2680 x 300 x 146			2680 x 300 x 146			
	STATUS	NEW			NEW			NEW			
	OPERATOR	VODAFONE			VODAFONE			VODAFONE			
	TECHNOLOGY	U/G	L/U	L/U	U/G	L/U	L/U	U/G	L/U	L/U	
	BAND (MHz)	850/900	1800/2100	1800/2100	850/900	1800/2100	1800/2100	850/900	1800/2100	1800/2100	
	PORTS	1&2	3&4	5&6	1&2	3&4	5&6	1&2	3&4	5&6	
	ELECTRICAL TILT	4°	3°	3°	4°	3°	3°	3°	3°	3°	
	MECHANICAL TILT	0°			0°			0°			
ANCILLARIES	MHA	-			-			-			-
	RRU	2	1		2	1		2	1		9
	RET	YES			YES			YES			
	COMBINER	1	-		1	-		1	-		3
	FIBRE BREAKOUT BOX	2									2
FEEDERS	FEEDER TYPE	-			-			-			
	FEEDER LENGTH	-			-			-			
	QUANTITY	-			-			-			
	STATUS	-			-			-			
FIBRE	FIBRE TYPE	HCA-1008-20S-30-VA									
	FIBRE LENGTH	30m									
	QUANTITY	2									2
	STATUS	NEW									

ANCILLARY EQUIPMENT

PART	MODEL NO.	DIMENSIONS (H x W x D)	WEIGHT (kg)	QUANTITY
COMBINER	E11F01P56	337 x 216.6 x 142	12.5	3
RRU	RRU 3952	400 x 300 x 170	20	3
RRU	RRU 3953	400 x 300 x 150	20	3
RRU	RRU 3962	400 x 300 x 150	15	3
FBOB	TB-1008-20S-15-VA	283 x 414 x 163	6	2

NOTES:

1. INFORMATION IN THE TABLES SUPPLIED AND VERIFIED BY VODAFONE.
2. ANCILLARIES REFER TO ITEMS AT THE ANTENNA.
3. FEEDER LENGTHS ARE ESTIMATED, ROUNDED UP TO THE NEXT 5m.
4. REFER TO DRG 780033-G2 FOR G.D.A. NORTH.
5. FOR CLARIFICATION ON FEEDER DETAILS THROUGHOUT ROUTE REFER TO DRG 780033-G2.

TRANSMISSION LINKS - PARABOLIC ANTENNAS SCHEDULE

TAG	STATUS	LINK SITE NAME	SITE No.	AZIMUTH	ELEVATION	DIAMETER	MODEL	FEEDER TYPE	FEEDER LENGTH
A	NEW	LAUNCESTON EAST	3821	54.48°	19m	Ø600	UKY220 44/DC15	LDF4-50	25m

REV	DATE	REVISION DESCRIPTION	VENDOR	DRAWN	DESIGNED	APPRD
A	27.10.16	PRELIMINARY ISSUE (BLACKSPOT PROJECT)	SSMC	SM	NP	SM

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BLACKSPOT PROJECT

TITLE: ANTENNA CONFIGURATION & ANCILLARIES TABLE

DRAWING STATUS	DRAWING No.	REV
PRELIMINARY	780033 - G4	A

Environmental EME Report

Youngtown Memorial Park, 21 Highgate Street, YOUNGTOWN TAS 7249

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

Date 9/12/2016 **RFNSA Site No. 7249005**

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 Youngtown Memorial Park, 21 Highgate Street YOUNGTOWN TAS 7249. These levels have been calculated by Radhaz Consulting 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 1.27% 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 5.28 V/m; equivalent to 73.88 mW/m² or 1.27% 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	LTE850 (proposed), WCDMA900 (proposed), LTE1800 (proposed), LTE2100 (proposed), WCDMA2100 (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 Youngtown Memorial Park, 21 Highgate Street 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				3.47	31.87	0.64%
50m to 100m				3.21	27.26	0.52%
100m to 200m				5.28	73.88	1.27%
200m to 300m				4.6	56.094	0.95%
300m to 400m				3.12	25.79	0.44%
400m to 500m				2.34	14.57	0.25%
Maximum EME level				5.28	73.88	1.27
				155.96 m from the antennas at Youngtown Memorial Park, 21 Highgate Street		

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	Nearest resident, northwest direction	0m to 6m	2.026	10.89	0.2%
2	Oval stand	0m to 8m	5.34	75.62	1.28%

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.

Issue Date	**6/12/2016**	**Carrier**	**Vodafone**	**Address**	**Youngtown Memorial Park: 21 Highgate St, YOUNGTOWN, TAS, 7249**	**RFNSA No.**	**7249005**
Description of Infrastructure	**The proposal consists of the installation of one (1) new 20m telecommunications "base station" monopole with a turret headframe, the installation of three (3) new panel antennas, the installation of nine (9) new remote radio unit (RRUs), the installation of one (1) new RT dish at a height of 19m, the installation of one (1) equipment shelter to house electrical equipment associated with the facility and the installation of ancillary equipment.**						

4.1 Application of Precautionary Approach to Site Selection		
Section No.	**Industry Code C564:2011Requirement For each site the Carrier must have regard to:**	**Response**
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.	In this instance, the preferred option is a new site. A summary of all the sites considered is included in the planning assessment report and this summary is available to all members of the public on request.
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) This facility is intended to provide enhanced capacity to the mobile phone services to the Youngtown area. (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 Over the Air specifications provide for the ability for the facility to reduce the transmitting power to each user based on the radio environment. (iii) This site is a semi - residential site providing improved coverage, call quality and capacity, the proposed facility will offer enhanced service to the region, particularly during peak holiday periods.

4.1.5 (b)	Minimisation of EMR exposure to public	This facility is 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 designing and siting the site in accordance with Vodafone document to restrict public access to any areas that exceed the general public EME exposure limits.
Section No.	**Industry Code C564:2011Requirement For each site the Carrier must have regard to:**	**Response**
4.1.5 (c)	The likelihood of an area being a community sensitive location.	Vodafone seeks to avoid community sensitive locations when siting new telecommunications facilities Prior consideration of community sensitivity was undertaken when the site was selected. This proposed site is set - back from residential homes, while the eastern boundary is open land. Furthermore, the design incorporates a slim line design and matching colour scheme to minimise visual impact.
4.1.5 (d)	The objective of avoiding community sensitive locations	The structure is well distanced from nearest residences (north and south) and is well set back from nearby main road.
4.1.5 (e)	Relevant state and local government telecommunications planning policies	The proposed facility requires a planning permit pursuant to the *Launceston Planning Scheme 2015.* All relevant state and local planning policies have been considered and addressed as part of the permit submission to Council.
4.1.5 (f)	The outcomes of consultation processes with Councils and Interested and Affected parties as set out in Section 6.7	N/A

4.1.5 (g)	The heritage significance (built, cultural and natural)	Review of the heritage significance of the area has been undertaken and the site is not considered to be of Aboriginal significance. Review of the heritage significance of the area at this time has been undertaken and the heritage significance has not changed.
4.1.5 (h)	The physical characteristics of the locality including elevation and terrain	The physical characteristics of this site have been considered during the original evaluation of this facility. Factors considered included the terrain, site elevation and the height of the surrounding obstacles. Radio propagation analysis indicates that selecting appropriate antennas tilts and mounting heights will meet the service requirements for this facility
4.1.5 (i)	The availability of land and public utilities	The site is has public utilities within the area, and the predominant use of land in the area is for recreation. However, Council feedback was for a new stand alone facility. As such, a new tower is required in this area. There are no low - impact solutions.
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	Fibre transmission will be used and is available to this facility.
4.1.5 (k)	The radiofrequency interference the planned service may cause to other services	No telecommunications infrastructure exists within the township. Prescribed antennae spacing (in conjunction with appropriate tilt) and allocated frequencies have been used to meet the requirements for coverage from the facility, while minimising interference to the existing network. We understand that if any interference issues have been identified, these have been resolved to that carrier's satisfaction in accordance with Telstra's processes.
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 ensure the new facility can be integrated with the existing network while minimising the interference to the new facility.
4.1.5 (m)	Any obligations, and opportunities, to co-locate facilities	A desktop study of the area and an actual site assessment has been undertaken. All existing infrastructure were considered as part of this study. However, no suitable opportunities for colocation were identified.

4.1.5 (n)	Cost factors	Vodafone has undertaken preliminary costing of this facility and are of the opinion these costs are reasonable.

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 the capacity of mobile phone services to the local 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, so as to not interfere with existing radio signals. This location meets the objectives outlined in 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 Vodafone document to restrict public access to any areas that exceed the general public EME exposure limits.
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 is described in the section on "description of infrastructure" outlined in the Precautionary Approach Checklist.
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. 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	Vodafone has undertaken 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)	EME assessment has been made in accordance with ARPANSA has been completed and is available the RF National Site Archive.

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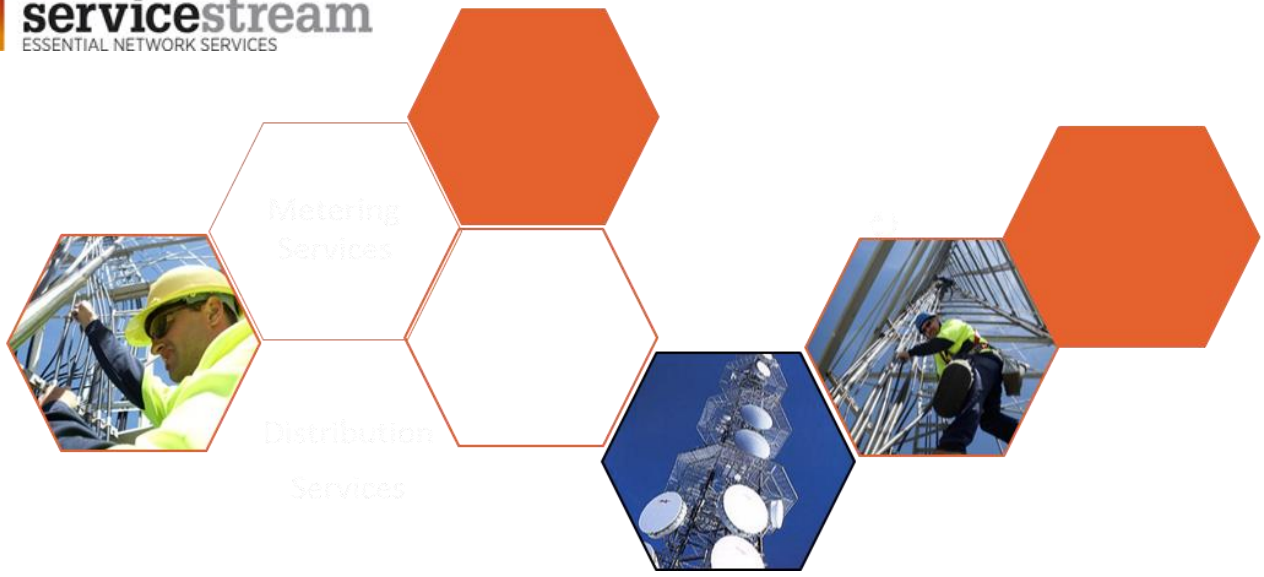
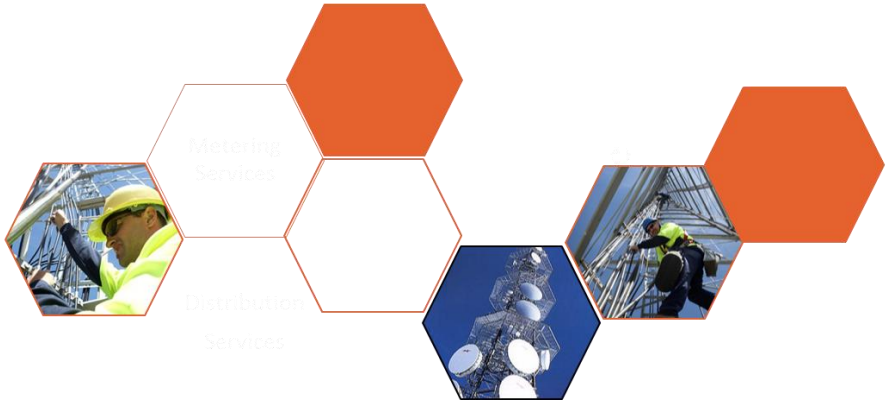


PLANNING REPORT

Proposed Vodafone Mobile Telecommunications Facility At:

21 Highgate Street, Youngtown, TAS, 7249 (Youngtown Memorial Park)



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ESSENTIAL NETWORK SERVICES

February 2017

Prepared by: Service Stream - Mobile Communications

On behalf of: Vodafone Australia

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ESSENTIAL NETWORK SERVICES

Document Control Record

Document Description	Development Application Submission		
Site No.	780033	**Site Name**	Youngtown

	Name	**Signed**	**Date**
Prepared By	Tim Heffernan		9 February 2016

File Location	J:\Design\Vodafone\Sites\Youngtown 780033\Metro Densification\SAED Documents\06 Planning
Document Status	Final

Prepared for	**Prepared by:**
Ben Raymond, Vodafone	Service Stream - Mobile Communications Contact: Tim Heffernan, Town Planner Ph: 0439 165 651 E: tim.heffernan@servicestream.com.au

This report has been prepared as a supporting document to the Development Application. The report relies upon data, surveys, measurements and results taken at or under particular times and conditions specified herein. Any findings and conclusions or recommendations only apply to the aforementioned circumstances. Service Stream does not accept any responsibility for the use of this report by any parties without its prior written permission.

Table of Contents

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ESSENTIAL NETWORK SERVICES

Executive Summary

This report has been prepared by Service Stream on behalf of Vodafone in support of a development application for a 20 metre telecommunications facility at 21 Highgate Street Youngtown, Tas 7249 (known as Youngtown Memorial Ground).

The site is legally described as Lot 1 Plan 50364.

Refer to copy of Title at Appendix A.

The proposed development of a telecommunications facility falls within the Utilities Use Class of the Planning Scheme. Utilities are a discretionary use within the Recreation Zone pursuant to Table 18.2 of the Interim Planning Scheme, therefore, an application for planning approval for the use of the land for a telecommunications facility is not required. However planning approval is required for the development.

This report outlines the purpose and demand for a telecommunications facility in this area, and addresses the planning merits of the proposal and its consistency with the relevant planning controls and policies of the Launceston Interim Planning Scheme 2015. It is supported by the accompanied plans which show the proposed layout and design of the facility.

Mobile connectivity has grown in importance as the combination of smart phones and tablets with increased mobile broadband speeds and capacity are changing the way we live and the availability of these services is often taken for granted in metropolitan locations.

The proposed development of the site represents the provision of essential telecommunications infrastructure to this metropolitan area. This proposal will ensure that customers in the suburban and commercial areas around Youngtown will have access to the best possible mobile phone and mobile broadband service. It is submitted that the proposed facility will have an acceptable impact on the amenity of the area in terms of its use of materials and siting. The facility is designed to have regard to its surrounds and represents an appropriate balance between the net community benefit from the provision of essential telecommunications services to the area and the protection of the environment from any adverse impacts.

1 Introduction

Vodafone has proposed a new telecommunications facility at Youngtown to provide the region with reliable service and access to the latest 4G technology. Vodafone have identified a need for a telecommunications facility in Youngtown area and its surrounds to cater for both the large growth in network traffic over the previous years, which has resulted in the existing sites serving this area experiencing capacity issues, and also to cater for the evolution of how Australians are using technology; increasingly for data and content.

A proposed site has been located within the Youngtown Memorial Park situated between the suburbs of Franklin Village and Kings Meadows, a developing area, south - east of the Launceston CBD.

While much of the discussion around the provision of mobile phone services has historically been in relation to 'coverage', of more importance in recent years is the issue of 'capacity'. In this regard, each base station has a finite capacity to handle the traffic generated by users of mobile devices. The number of voice calls or and text messages a base station can handle at any one time is much greater than the number of mobile connections used to access data, i.e. internet access, apps etc. The increased use of smartphones and the huge increase in the volume of data being downloaded via mobile phones is putting extreme pressure on the existing facilities providing this service, i.e. they are running out of 'capacity'. This is particularly evident in Youngtown at peak times throughout the day.

Interestingly, the ACMA Communications report 2013-14, published in December 2014 identifies the following key trends;

"While communications connectivity levels are stabilising in both the fixed and mobile markets, Australians' appetite for data and content is ever-increasing. This is evidenced in the communications report by growth in the intensity of online participation, data consumption, e-commerce activities and the streaming of content. In particular, Australians are continuing to increase their consumption of content, with huge growth in the volume of data being downloaded. More Australians are streaming video services directly using cloud-based applications, with volumes streamed now surpassing video content downloaded to devices.

While mobile service numbers remain steady, Australians are adopting higher bandwidth mobile services to support data downloads. Existing mobile phone handsets are increasingly being replaced with smartphones, with 12.07 million people using a smartphone at May 2014, an increase of eight per cent since 2013. Relatedly, this has led to an increase in mobile phone handset internet subscribers—up by five per cent in the 12 months to June 2014 to reach 20.57 million subscribers."

SOURCE: ACMA COMMUNICATIONS REPORT 2013-14

In light of the recent trends of Australians' increasing appetite for data and content, Vodafone has designed the proposed telecommunications facility at Youngtown to provide the region with access to the latest 4G technology. This 4G service brings higher speeds on compatible devices, allowing more Australians to experience more reliable connections and ultra-fast mobile internet.

Vodafone have conducted over 3,300 network upgrades to their sites in 2015, including nearby sites at Launceston and Travellers Rest. Whilst this has seen improvements to the access to 4G technology in the region, coverage does not extend sufficiently to Youngtown and surrounds, and this area is experiencing capacity issues, and at times unreliable coverage.

Without the provision of a new facility in this area it is possible that there will be significant negative impacts on customer's mobile phone and mobile data access in the area, with two major risks apparent at present:

- Customers may have difficulty connecting to the network, even for voice calls; and
- Reduced data speeds may be experienced, with longer download times and poor performance at the busiest times of the day, because existing base stations are shared across too many customers.

Vodafone are also proposing upgrades to other sites within and surrounding Launceston. These recent and proposed upgrades together with this current proposal at Youngtown forms a wider strategy to provide customers in the area and the broader region with access to the best possible mobile phone and mobile broadband service and will also ensure that there will be no impact on basic services which may be the case should no new facility be provided in the area.

2 Site Selection

2.1 Mobile Telecommunications Networks

Mobile Phone Base Stations are located in a patchwork of cells across the metropolitan and regional areas of Australia. They work by sending and receiving low power radio signals to mobile phones and other mobile devices by their antennas. They are located close to mobile phone users to ensure that users can rely on high quality, continuous coverage. The number of base stations required to provide network coverage to an area is greatly affected by the number of users in that area and other facts such as local terrain and obstructions.

Base stations can be found in just about every urban setting. They are located on apartment buildings, commercial buildings and industrial estates, on existing utility structures such as light poles and high voltage electricity towers, on hospitals, university campuses, shopping centres and corner stores, at clubs and sports complexes, and in local parks.

In general the location and height of a facility along with the size and number of antennas are balanced to ensure dedicated services to an intended geographic area. This area is largely defined by the number of customers using our network, their usage patterns (when and how they use connected devices) with a consideration for future growth. For example streaming a video to a mobile tablet device requires a lot more bandwidth than many users making a phone call or sending multiple text messages at one time. This means additional facilities are not only needed in areas where there is unreliable coverage but are also needed where there are multiple or high bandwidth users. A compromise in height or a location further away from its technically optimum position may result in service gaps and require additional or taller local facilities, to achieve the same level of service. Engineers use state of the art applications to record customer patterns of use and to predict future usage trends.

Each base station transmits and receives signals to and from mobile devices in the area. As the mobile device user moves around, their device will communicate with the nearest base station/ facility to them at all times. If they cannot pick up a signal, or the nearest base station is congested (already handling the maximum number of phone calls or maximum level of data usage) the user may not be able to place a call, experience a call “drop out” or a slowing data rate while attempting to download content.

There are three main factors that can cause the above. Firstly, you may be too far away from a facility to receive a signal, or there may be objects blocking the signal from the nearest facility; such as, hills, large trees or even trees. To ensure optimum service the radio signals transmitted between the facility antennas and mobile devices need to be unimpeded, maintaining a “line-of-sight” between them. Secondly, the facility may be handling as much data download and calls as it can handle - call drop-outs and slower data rates can occur when too many users are connected to a facility at once. Thirdly, the depth of coverage (which affects the ability to make calls inside buildings), may be insufficient in some local areas.

2.2 Site Selection Criteria

Planning for a new mobile base station is a complex process with many interconnecting disciplines working together in order to identify a suitable site that meets a wide range of criteria; including technical, legislative, environmental and cost criteria.

Working within the parameters of these criteria’s, Vodafone commences a preliminary desktop investigation assessing the technical viability of potential locations in the area through computer modelling tools that provide predictions of the coverage that can be expected from different sites and how these sites fit within the existing network’s technical requirements.

Following this preliminary technical investigation Vodafone sends a multidisciplinary team including a planning and a property consultant, a radiofrequency engineer and a construction designer to the subject area in order to identify and further assess possible locations for a facility.

In addition to further testing the likely technical performance of shortlisted sites in a search area, Vodafone also evaluates a range of other criteria to assess possible sites that may be suitable for a new facility, these include:

- The potential to co-locate on an existing telecommunications facility.
- The potential to locate on an existing building or structure.
- Visual impact and the potential to obtain relevant town planning approvals.
- Proximity to community sensitive locations and areas of environmental heritage.
- The potential to obtain tenure at the site.
- Topographical constraints affecting signal line of sight
- The cost of developing the site and the provision of utilities (e.g. power, access to the facility and transmission links).

The breadth of factors that need to be considered when selecting a suitable site can often severely restrict the number of suitable sites that can deliver the necessary technical and operational performance while also having the least possible impact on the surrounding area. In deciding upon the location of the proposed facility subject to this application, Vodafone has carefully assessed all of the above criteria.

2.3 Co-location Opportunities

As detailed above co-location on existing infrastructure and the upgrading of existing telecommunications facilities are the first options examined when new infrastructure is required. This focus on the utilisation of existing infrastructure is considered prudent by carriers as it is faster to deliver improvements, is less expensive, reduces possible impacts on the community and meets the principles for the location of new infrastructure as set out in the Telecommunications Code of the Interim Planning Scheme.

With regard to co-location opportunities in the vicinity of the current proposal Vodafone have examined the other existing telecommunications facilities in the surrounding area (including those of other carriers) and other public utilities to assess if the technical requirements for a new site can be met in this fashion. No other tall structures or rooftops sufficient for Vodafone's purposes have been identified.

Five (5) existing mobile phone base station sites have been identified within approximately 2km of the current proposal, these are shown in both grey and blue on the RFNSA aerial map below. The location of these existing facilities in relation to the current proposal, shown in red and the nature of each of the existing facilities is set out in the table below.

servicestream
ESSENTIAL NETWORK SERVICES

RFNSA	Address	Description	Distance to proposed site
7249002	252-254 Hobart Road, Youngtown, TAS, 7249	Telstra - 30m steel pole	745m west
7258002	131 Glenwood Road, Relbia, TAS, 7258	Telstra - 20m concrete pole	1.82km east
7249004	132 Hobart Road, Kings Meadows, TAS, 7249	Vodafone / WIN TV- 20m Tower (Temporary site)	1.2km north -west
7250026	Launceston Golf Club – Opossum Road, Kings Meadows, TAS, 7249	Optus 35m monopole	1.2km north
7249003	102 Hobart Road, Kings Meadows, TAS, 7249	Telstra - Shopping Centre building internal	1.49km north-west

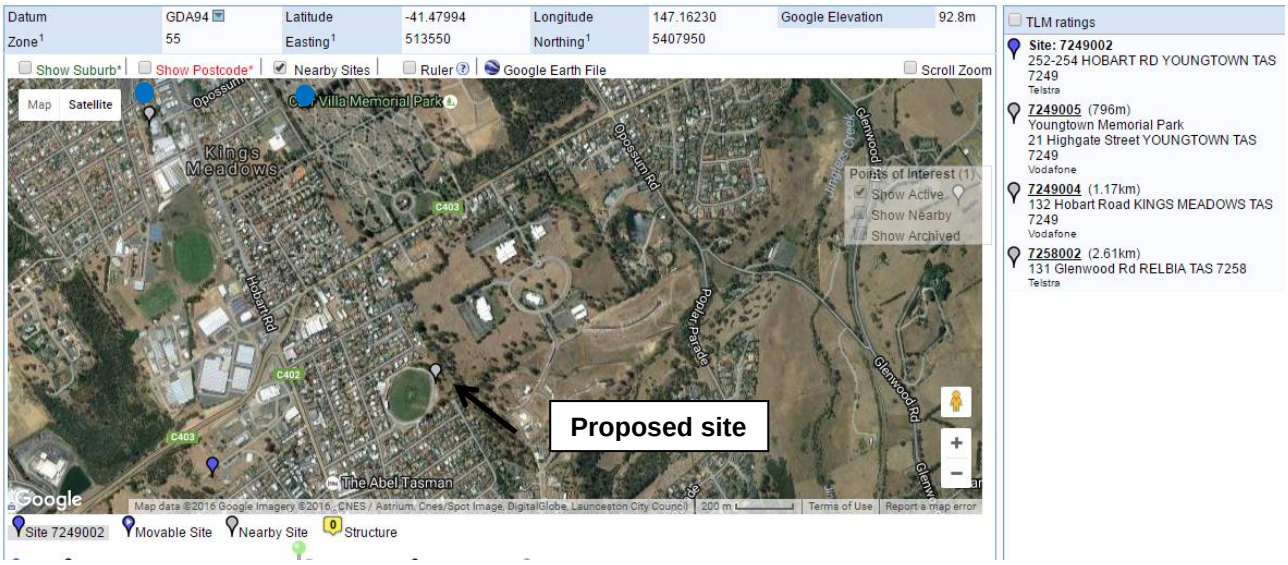

FIGURE 1 - NEAREST EXISTING TELECOMMUNICATIONS FACILITIES - SOURCE: RFNSA, www.rfnsa.com.au

The following points are noted with respect to the assessment of the existing telecommunications facilities on the subject land:

- Vodafone made initial investigations for a co-location opportunity on the Launceston Golf Club facility to ascertain what elevations were available for Vodafone to install equipment on their 35 high monopole (RFNSA 7250026). However, no suitable elevations are available on this facility which currently accommodates Optus equipment that would allow Vodafone to meet the necessary coverage objectives, or be free of interference from the existing infrastructure on the facility.
- The Hobart Road site (RFNSA 7249002) was also investigated as a potential location on existing 30m steel pole infrastructure. This site was however discounted as a feasible option due to limitations for installation of technology, and structural capacity.
- The surrounding telecommunications facilities were also investigated however due to their distance from the search area, they did not meet the coverage objectives sought by Vodafone, and were therefore dismissed.
- RFNSA sites 7249004 and 7249003 were discounted due to their structure type, being an internal building device and temporary Win TV tower, in addition to coverage objectives.

2.4 Site Selection

Vodafone has submitted this application for a new telecommunications facility at Youngtown in order to provide essential coverage and to improve mobile communications performance across the Youngtown / Franklin Villages and Kings Meadows area south-east of the Launceston CBD in accordance with the required coverage objectives for Vodafone's network.

Vodafone concluded that a new facility at Youngtown rather than co-location with one of the existing facilities or structures in the area would be the most appropriate option to pursue when all factors including: radio design, site construction and environmental issues were considered.

The site selection process considered environmental and visual constraints, existing land use, future land use characteristics, the orderly planning of the area, the design and location of the facility adjacent to existing towers. On balance, it is considered that the location and height of the facility ensures optimal service provision to the area while minimising impacts to visual and environmental amenity.

3 Proposed Development

The proposed telecommunications facility located at 21 Highgate Street, Youngtown (formally identified as Youngtown Memorial Park) Tas 7249, Lot 1 Plan 50364), comprises the following:

- Construction of a 20 metre monopole, with a turret headframe installed on top of the pole, giving a total height of 25.0 metres.
- The installation of three (3) Vodafone panel antennas on the turret headframe with a centreline height of 25.0m.
- Installation of nine (9) remote radio units (RRU's), 3 combiners on the turret headframe
- Installation of one (1) RT dish at a height of 19.0m
- Installation of a two bay outdoor unit (ODU) bolted on to the footing of the monopole, The ODU houses electrical equipment associated with the facility.
- A 450mm wide cable tray, from the ODU to the tower, to accommodate Vodafone feeder and trunk cables, these cables will then run internally up the tower.
- Power will be provided via underground conduit from the existing power pole point of supply #295113 located approx. 50m from the proposed facility.
- Vehicular access will be provided via the existing access from Highgate Street. (see Drawing Sheet 780038-G1)
- The construction of a 6.0m x 6.0m compound to house the proposed facility. This compound will be surrounded by a 2.4m high security chain wire fence with access gate.

Refer to Plans attached at Appendix C.

4 Subject Site and Locality

The proposed facility is to be situated at the Youngtown Memorial Ground, currently utilised by the South Launceston Football Club. The Memorial Ground features sports club building facilities (building stand in the north-west corner), shipping container, access track, car park (south-west corner) and established trees. The oval, measuring 165m in length, is sited in a north - east to south - westerly direction. Access to the oval is via the south - west corner Highgate Street entrance.

The site is east of Hobart Road (260m) and is surrounded by established residential development to the north, south and west. East of the site is a large block of cleared land, characterised by existing vegetation, primarily on the western lot boundary and abutting the sports oval.

The land has a minor undulation with the proposed site, falling towards Techno Park Drive which is characterised by five (5) low lying office buildings / child care centre and scattered vegetation.

FIGURE 2 - SUBJECT SITE IN THE CONTEXT OF THE SURROUNDING AREA - SOURCE: GOOGLE EARTH

FIGURE 3 - SUBJECT SITE IN THE CONTEXT OF THE IMMEDIATE SURROUNDING AREA - SOURCE: GOOGLE EARTH

The subject site for the proposed facility is bordering the existing oval light tower, located near the north-east corner of the lot, adjacent to a shipping container, within a cleared area, abutting the ovals edge (7m).

The nearest residential dwelling is approximately 100m to the north and is orientated to the north. Residential properties bordering the memorial park are orientated to the north (Medina Street) away from the proposed site. The other nearest residential properties are located to the south, approximately 90m from the proposed site, and are orientated to the south, facing Clarendon Street.

Existing access via Highgate Street will be utilised to the proposed site.

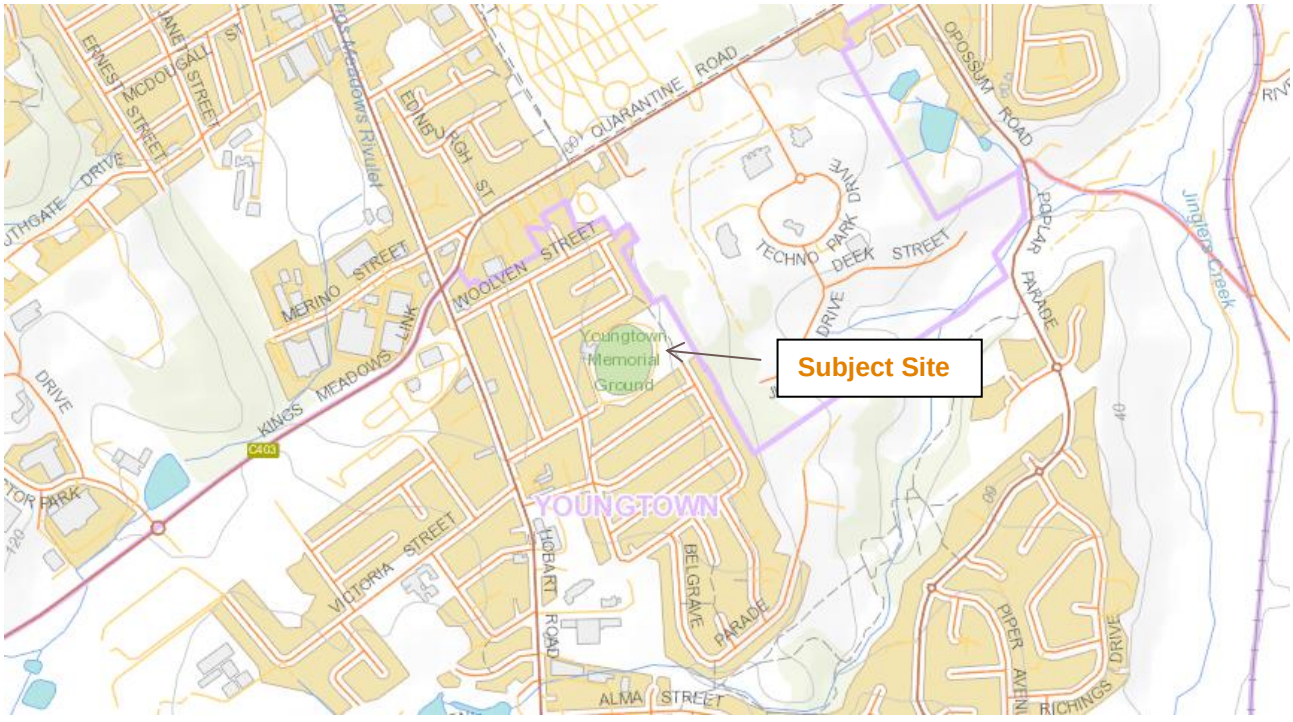

FIGURE 4 - STREET MAP OF THE SURROUNDING AREA; SOURCE - LIST MAP

FIGURE 5: VIEW FROM THE PROPOSED SITE, LOOKING TO THE NORTH EAST - SERVICE STREAM: AUGUST 2016

FIGURE 6: VIEW FROM THE PROPOSED SITE LOOKING TO THE WEST TOWARDS THE CLUB FACILITIES, SOURCE - SERVICE STREAM: AUGUST 2016.

FIGURE 7: VIEW FROM THE PROPOSED SITE LOOKING TO THE WEST TOWARDS THE CLUB FACILITIES SOURCE - SERVICE STREAM: AUGUST 2016.

FIGURE 8: VIEW FROM THE PROPOSED SITE LOOKING TO THE SOUTH. SOURCE – SERVICE STREAM: AUGUST 2016.

FIGURE 9: VIEW OF THE PROPOSED SITE LOOKING TO THE EAST. SOURCE - SERVICESTREAM: AUGUST 2016.

FIGURE 10: VIEW FROM BEHIND THE PROPOSED SITE, FACING EAST. SOURCE – SERVICE STREAM: AUGUST 2016.

FIGURE 11: VIEW FROM THE PROPOSED SITE LOOKING TO THE NORTH -WEST. SOURCE – SERVICE STREAM: AUGUST 2016.

6 Regulatory Framework and Assessment

6.1 Federal Legislation

6.1.1 Telecommunications Act 1997

The *Telecommunications Act 1997* (the Act) came into operation on 1st July 1997. The Act provides a system for regulating telecommunications and the activities of carriers and service providers.

Under the Act, telecommunications carriers are no longer exempt from State and Territory planning laws except in three limited instances:

- There are exemptions for inspection of land, maintenance of facilities, installation of "low impact facilities", subscriber connections and temporary defence facilities. "Low-impact facilities" are defined in the *Telecommunications (Low-impact Facilities) Determination 1997* (as amended) and these exceptions are subject to the Telecommunications Code of Practice 1997;
- A limited case-by-case appeals process exists to cover installation of facilities in situations of national significance; and
- There are some specific powers and immunities from the previous *Telecommunications Act 1991.*

6.1.2 Telecommunications (Low-impact Facilities) Determination 1997 (as amended)

The Telecommunications (Low-impact Facilities) Determination came into effect on 1st July 1997 and there have been a number of amendments in the interim, none of which impact consideration of this application.

The Determination defines the type of facilities that can be "low-impact", and the areas in which these facilities can be installed without the requirement for planning approval under State or Territory laws.

In this instance, the proposed facility is not considered a "low-impact facility" under the definitions contained in the Determination. Therefore, a planning application is required for the proposed facility and the provisions of the *Land Use Planning and Approvals Act 1993* and the *Launceston Interim Planning Scheme 2015* apply to this proposal.

6.1.3 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act* commenced on 16th July 2000. It introduces a new role for the Commonwealth Government in the assessment and approval of development proposals where those proposals involve actions that have a significant impact on matters of National Environmental Significance, the environment of Commonwealth owned land and actions carried out by the Commonwealth Government. This proposal is not of National Environmental Significance, as it will not impact on:

- World Heritage Areas;
- Wetlands protected by International Treaty (The RAMSAR Convention);
- Nationally listed threatened species and communities;
- Nationally listed migratory species;
- All nuclear actions; or
- The environment of Commonwealth Marine area.

Therefore, approval from the Minister for the Environment is not required in this instance. **Refer to EPBC Act Protected Matters Report at Appendix C.**

6.1.4 Telecommunications Code of Practice 1997

Section 2.11 of the Telecommunications Code of Practice 1997 requires carriers to ensure that the design, planning and installation of facilities are in accordance with industry "best practice". This is required to [2.11(3)]:

> "*...minimise the potential degradation of the environment and the visual amenity associated with the facilities".*

"Best Practice" involves the carrier complying with any relevant industry code or standard, which is registered by the ACMA under Part 6 of the Act. The planning and siting of the current proposal has taken place in accordance with Section 3 (Planning and Siting) of the Australian Standard, Siting of Radiocommunications Facilities (AS 3516.2).

6.1.5 Industry Code C564:2011

The Industry Code (Mobile Base Station Deployment) is a national Code implemented in July 2012 by licensed telecommunications Carriers. The aim of the Code is to address the concerns of the community about the risks of radiofrequency EMR exposure by allowing the community and the Councils to have greater participation in decisions made by Carriers and encouraging a more collaborative approach between carriers, local councils and the community alike to mobile base station deployment. As part of this, Carriers are required to adopt a Precautionary Approach in planning, installing and operating radio-communications infrastructure.

The Code however does not change the existing regulatory regime at Local, State or Federal level and is a supplement to existing requirements imposed on Carriers. This proposal is compliant with the Industry Code and Vodafone has applied the Precautionary Approach in the Selection and Design of the proposed site in accordance with Sections 4.1 and 4.2 of this Code.

6.1.6 Electromagnetic Energy and Health

Radio communications are a part of everyday life in today's society. All radio communications systems utilise EMF in the radiofrequency (RF) part of the electromagnetic spectrum.

Typical systems include TV, AM & FM radio broadcasting, mobile phones and their base stations, wireless broadband, paging services, cordless phones, baby monitors, emergency services (police, fire, ambulance), and rural / country communications.

There has been a lot of research conducted worldwide to investigate possible health effects of radio communications and wireless technology.

In relation to radio frequency emissions and wireless technology and health, the general conclusion from the World Health Organization (WHO) is;

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

Safety standards are based on careful analysis of the scientific literature (both thermal and non-thermal effects) and are designed to offer protection against identified health effects of EME with a large in-built safety margin.

Since 2002 Australia's safety standard has been based on the safety standard recommended by the World Health Organization (WHO).

The standard, known as the '*Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003'*, was prepared by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). A detailed review of this Standard was completed by ARPANSA in April 2014 and the suitability of the existing standard has been reaffirmed.

The picture below shows the typical power of the radio services in the community when transmitting.

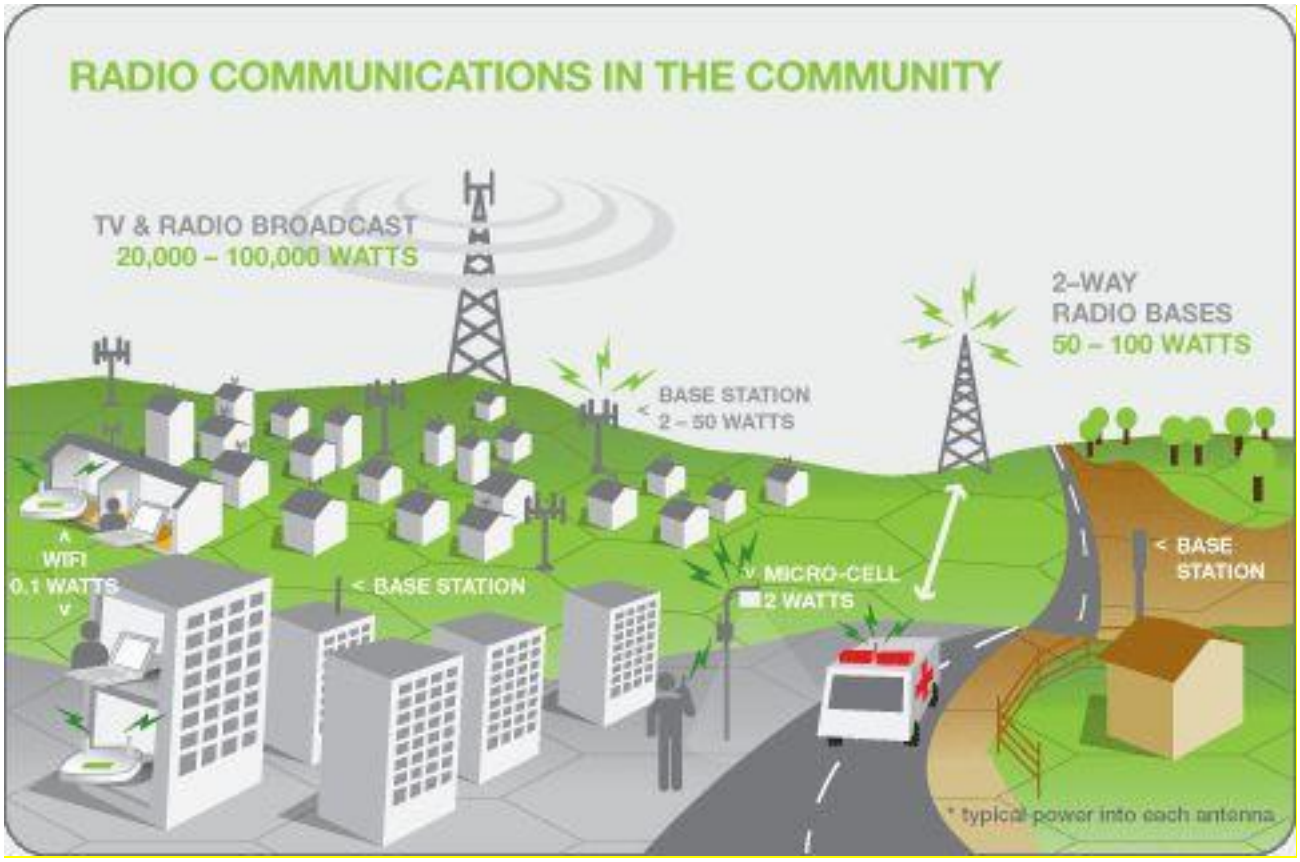

FIGURE 12; SOURCE: HTTP://WWW.EMFEXPLAINED.INFO

Radiofrequency transmitters, including mobile network base stations and commercial radio and TV broadcast towers, are regulated for their environmental EME levels. Specifically, regulations are in place to limit the strength or level of the radiofrequency signals in the environment from all radio transmitters including Vodafone's mobile network base stations. They are not based on distance, or creating "exclusion zones" for residential or other sensitive areas.

That is why from a public health perspective telecommunications facilities are permissible in any environment, including on apartment buildings and hospitals, and even within schools grounds.

The safety standard limits the network signal strength to a level low enough to protect all people, in all environments, 24-hours a day. The safety limit itself, recommended by the WHO, has a significant safety margin, or precautionary approach built into it.

Vodafone's mobile phone 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 power levels at all times.

Vodafone and all other mobile network carriers in Australia must demonstrate that they comply with national RF EME safety limits when proposing a new base station.

In order for mobile phone carriers to demonstrate compliance with the ACMA 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.

Using the ARPANSA standard methodology, Vodafone has undertaken a compliance report that predicts the maximum levels of radiofrequency EME the proposed facility. The maximum environmental EME level from the site, once it is operational, is substantially within the allowable limit under the ACMA mandated standard.

A copy of the EME Report is attached at Appendix D.

6.2 Requirement for Planning Approval

'Utilities' are a discretionary use within the Recreation zone pursuant to Table 18.2 of the Launceston Interim Planning Scheme.

Therefore, an application for planning approval for the development only of the land for a telecommunications facility is required.

With respect to determining an application for any permit Clause 8.10 of the Interim Planning Scheme states as follows:

> *"8.10.1 In determining an application for any permit the planning authority must in addition to the matters required by ss51 (2) of the Act, take into consideration:*
>
> *(a) all applicable standards and requirements in this planning scheme; and*
>
> *(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 matter is relevant to the particular discretion being exercised.*
>
> *8.10.2 In determining an application for a permit for a discretionary use the planning authority must, in addition to the matters referred to in subclause 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.*
>
> *8.10.3 In determining an application for any permit the planning authority must not take into consideration matters referred to in clauses 2.0 and 3.0 of the planning scheme.*

This application for development of a telecommunications facility at 21 Highgate Street, Youngtown, in addition to the matters required by ss51 (2) of the Act takes consideration and has regard to the following:

- The purpose of the Recreation Zone (Clause 18.1)
- The use and development standards of the Recreation Zone (Clauses 18.3.1 and 18.4.1)
- Telecommunication Code (Code 15) as part of the Launceston Interim planning Scheme (2015)

There are no applicable local area objectives, desired future character statements or specific area plan that applies to the subject site.

The Telecommunications Code included in the Interim Planning Scheme applies to all development for telecommunication facilities. The purpose of the Code against our proposal is assessed below:

6.3 Telecommunications Code - 15

The purpose of the provision is to:

a) *Encourage landowners and carriers to share telecommunications facilities or to co-locate, co-mast or co-site facilities where appropriate and practicable, in order to minimise adverse environmental and visual amenity impacts*;

With regard to co-location opportunities in the vicinity of the current proposal, Vodafone examined the other existing telecommunications facilities in the surrounding area (including those of other carriers) and other public utilities to assess if the technical requirements for a new site can be met in this fashion. A total of five (5) mobile base stations were identified, however they were discounted for various reason (as discussed in section 2.3). No other tall structures or rooftops sufficient for Vodafone's purposes, have been identified.

b) Encourage impact mitigation measures that protect community values, especially visual character values; and

The proposed facility is to be located adjacent to an existing oval light tower abutting the eastern lot boundary with vegetation acting as a backdrop. Furthermore, the proposed facility will be a slimline monopole with a turret headframe, constructed in muted non-reflective finishes to reduce visual impact to surrounding residences.

c) Encourage the adoption of best practice procedures by carriers in terms of innovative design, environmental management and work practices.

Vodafone continues to be guided by design, siting, construction and operation of telecommunication facilities principles. Vodafone undertook a diligent extensive site selection criteria.

6.4 Launceston Interim Planning Scheme 2015

6.4.1 Zoning and Overlays

The subject site is located within the Recreation zone, pursuant to Clause 18 of the Launceston Interim Planning Scheme. No overlays apply to the land. The purpose statements for this zone are as follows:

18.1.1.1 To provide for a range of active and organised recreational use or development and complementary uses that do not impact adversely on the recreation use of the land.

18.1.1.2 To provide for the amenity of residential uses on land adjoining the zone.

It is submitted that the proposed development for a telecommunications facility is compatible with the Recreation zone and will result in minimal impact upon the continued use of the land.

The proposed location for the facility is well separated from the nearest residential uses in terms of distance and there will be limited views of the facility from some distant residential areas. This facility will therefore impact minimally on residential amenity.

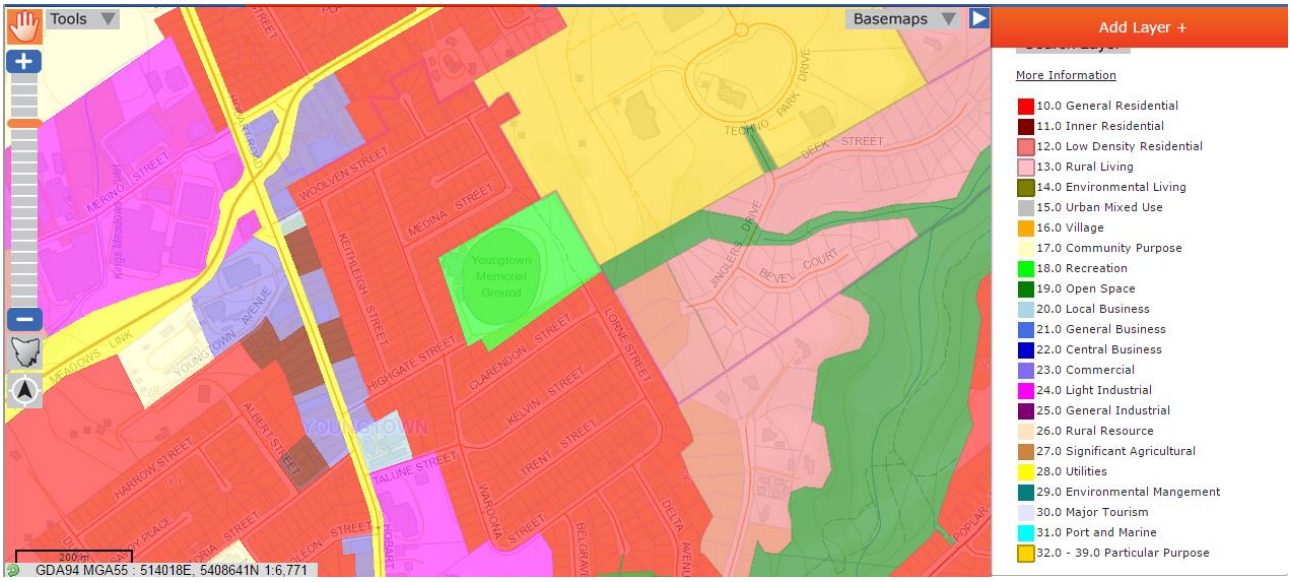

FIGURE 13 – ZONING AND OVERLAY MAP, SOURCE: LIST MAP

The tables below assess the proposed facility against the Use and Development Standards of the Zone

Table 1: Use Standards

	Objective: *To ensure that uses do not cause unreasonable loss of amenity to nearby sensitive uses.*	
Acceptable Solutions	*Performance Criteria*	*Assessment of Proposal*
A1 Operating hours, except for office and administrative task, must be between: a) 8.00am and 10.00pm adjacent to the boundary of the General Residential, Inner Residential, Low Density Residential Urban Mixed Use and Village Zones; or b) 6.00am to midnight otherwise	**P1** Users must not unreasonably impact on the amenity of nearby sensitive uses, having regard to: a) the nature and intensity of the proposed use; b) the characteristics and frequency of any emissions generated; c) the extent and timing of traffic generation; and d) the hours of delivery and despatch of goods and materials; and e) the existing levels of amenity.	The proposed new facility is to be located adjacent to an existing oval light tower abutting the eastern lot boundary with existing vegetation acting as a backdrop. The new facility will not interfere with the current use of the land and will be housed within a small 6m x 6m compound. Where not specified it is anticipated Council could apply appropriate permit conditions around finishes to the facility should a permit be issued. It is submitted that a reasonable balance has been struck between the technical requirements for a new facility in this area, the need to deliver an optimum level of service and the need to minimise visual and other environmental impacts.

Table 2: Mechanical plant and equipment

	Objective: *To ensure that the use of mechanical plant and equipment does not cause unreasonable loss of amenity to sensitive uses.*	
Acceptable Solutions	*Performance Criteria*	*Assessment of Proposal*
A1 Air conditioning, air extraction, heating or refrigeration systems or compressors must be designed, located, baffled or insulated to prevent noise, odours, fumes or vibration from being received by adjoining opposite sensitive uses.	**P1** Noise, odours, fumes or vibrations generated must not cause unreasonable loss of amenity to adjoining or immediately opposite sensitive uses, having regard to: a) the characteristics and frequency of any emissions generated; b) the nature of the proposed use; c) the topography of the site; d) the landscaping of the site; and e) any mitigation measures proposed.	N/A

Table 3: Light spill and illumination

	Objective: *To ensure that light spill and levels of illumination from external lighting does not cause unreasonable loss of amenity to sensitive uses*	
Acceptable Solutions	*Performance Criteria*	*Assessment of Proposal*
A1 The use must: a) not include permanent, fixed floodlighting where the zone adjoins the boundary of the General Residential, Inner Residential, Low Density Residential, Urban Mixed Use and Village zones; and b) contain direct light from external sources within the boundaries of the site.	**P1** Floodlighting or other external lighting used on the site must not cause an unreasonable loss of amenity to nearby sensitive uses, having regard to: a) the number of light sources and their intensity; b) the proximity of the proposed light sources to nearby sensitive uses; c) the topography of the site; d) the landscaping of the site; e) the degree of screening between the light source and the sensitive uses; and f) existing light sources nearby.	N/A

Table 4: External storage of goods

	Objective: *To ensure that external storage of goods, materials and waste does not detract from the amenity of the area*	
Acceptable Solutions	*Performance Criteria*	*Assessment of Proposal*
A1 Storage of goods and materials, other than for retails sale, or waste must not be visible from any road or public open space adjoining the site.	**P1** Storage of goods and materials, other than for retail sale, or waste must be located or screened to minimise its impact on views into the site from any roads or public open space, adjoining the site, having regard to: a)the nature of the use; b) the type of goods, materials or waste proposed to be stored; c) the topography of the site; d) the landscaping of the site; and e) any screening proposed.	N/A

Table 5: Development Standards: Building height, setback and siting

	Objective: *To ensure that the building bulk and form, and siting:* *a) accommodates port and recreation uses;* *b) is compatible with the streetscape and character of the surrounding area; and* *c) protects the amenity of adjoining lots and surrounding uses*	
Acceptable Solutions	*Performance Criteria*	*Assessment of Proposal*
A1 Building height must be no greater than 7m.	**P1** Building height must be compatible with the streetscape and character of the surrounding area, and protect the amenity of adjoining lots and surrounding uses having regard to: **a)** the topography of the site; **b)** the height of buildings on the site, adjoining lots and adjacent lots; **c)** the requirements of the proposed use; **d)** the bulk and form of existing and proposed buildings; **e)** the allowable building heights; **f)** the apparent height when viewed from roads and public places; **g)** sunlight to private open space and windows of habitable rooms on adjoining lots; **h)** the privacy to adjoining private open space and windows of habitable rooms on adjoining lots; **i)** any existing screening or the ability to implement screening; and **j)** any overshadowing of adjacent lots or public places.	The VHA structure will be located near the eastern lot boundary with existing vegetation providing a backdrop to this facility when viewed from surrounding roads and residences. Furthermore, the proposed facility has been designed to a height which will achieve VHA's required coverage objectives for the area. The new facility will be a slimline monopole with a turret headframe, constructed in muted non-reflective finishes to reduce visual impact to surrounding residences. As the facility will be setback at least 90m from the nearest neighbouring dwelling and will be slimline structure, overshadowing and overlooking issues are not relevant.
A2 Setback from all boundaries must be no less than 10m.	**P2** Buildings must be sited so that there is no unreasonable loss of amenity to the occupiers of adjacent lots, having regard to: **a)** the topography of the site; **b)** the size, shape and orientation of the site; **c)** the requirements of the proposed use; **d)** the setbacks of surrounding buildings **e)** the height, bulk and form of existing and proposed buildings; **f)** the privacy to private open space and windows of habitable rooms on adjoining lots; **g)** sunlight to private open space and windows of habitable rooms on adjoining lots; **h)** any existing screening or the ability to implement screening; and **i)** the character of the surrounding area.	Not applicable to the current proposal. The proposed site is located on the eastern side of a memorial park. The facility will be setback from the nearest neighbouring dwelling approximately 90m.

6.4.2 Visual and Environmental Amenity

In order to perform their service function, telecommunications facilities will be by their nature and required use, visible infrastructure. Any assessed visual impact must be balanced against the general policy support within the Interim Planning Scheme for the widespread provision of quality, modern telecommunications infrastructure and the wider community benefit from the development of a comprehensive telecommunications network.

Figure 14 below demonstrates how the facility will sit comfortably in its immediate environment.

In regard to visual and environmental amenity the following points are considered important to note:

- It is submitted that the proposed development is compatible with the recreational use of the land and will impact minimally upon the continued use. The proposed location for the facility is reasonably separated from the nearest residential uses, in terms of distance and furthermore, there will be limited views of the top of the facility from some distant residential areas to the north and south, however, there will be minimal impact on residential amenity.
- The proposed monopole will be sited bordering the current light tower, with well-established vegetation (eastern lot boundary) in close proximity, acting as a backdrop. Therefore it is proposed will result in minimal visual change to the area.
- The construction and operation of the proposed facility will not require the removal of any trees or the disturbance of any areas of significant vegetation.
- The development of the proposed facility will not impact on any watercourses, water quality or result in any loss of significant habitat.
- The proposed development requires a 36sq.m compound containing a 25m monopole and ODU at ground level within the compound. It is submitted that in the overall context that such a small area of development will impact minimally on the natural environment of the area.
- In terms of clear, unimpeded near field views of the proposed facility, these will be limited to views from surrounding residential properties. However these residences are orientated away from the proposal.

Other near field and most long distance views will be mitigated by intervening infrastructure, trees and other vegetation as well as the undulating topography of the surrounding lands.

- While it is acknowledged that the proposal will represent a new visible piece of infrastructure in this area, there will be no interruption to any significant views identified in the Interim Planning Scheme or other documents.

Overall, it is submitted that the proposed facility has been appropriately sited and designed to minimise visibility and amenity impacts on the surrounding environment as much as possible. A reasonable balance has been struck between the technical requirements for a new facility in this area and the need to minimise visual and other environmental impacts.

6.4.3 Other Planning Considerations

Built and Cultural Heritage

In order to ascertain if any cultural or natural heritage values of local, state or national significance apply to the site, a search was conducted of the relevant databases and heritage registers. The subject site is not listed on the Tasmanian Heritage Register nor or there any Matters of National Environmental Significance associated with the site.

No additional approvals or consideration is considered necessary on these matters.

Aboriginal Heritage

Aboriginal cultural heritage must be considered as part of all planning applications. This proposal has been referred to Aboriginal Heritage Tasmania (AHT) to assess if there were any matters of Aboriginal cultural heritage which need to be further investigated. Once AHT has completed a search of the Tasmanian Aboriginal Site Index (TASI) and advised us of the results we will forward their advice to Council.

Flora and Fauna

In order to determine any possible impacts to flora and fauna of significance associated with the site, a search of the EPBC Protected Matters Search Tool was conducted - see **Appendix C** as referred to above. Due to the limited nature of the proposed works in terms of ground disturbance and duration it is submitted that there is no undue threat to flora and fauna in the area. No vegetation is to be removed as part of the current proposals.

State Policy on the Protection of Agricultural Land 2009

Prime Agricultural Land means agricultural land classified as Class 1, 2 or 3 in the Land Capability Handbook, referred to in the State Policy on the Protection of Agricultural Land 2009. The proposed development does not impact on prime agricultural land.

Construction and Operation Impacts

Construction activity will comply with state environmental protection policies and best practice environmental management guidelines at the construction stage.

Construction activities on site will be limited to installation, typically approximately 8 weeks in total and intermittent maintenance. There will be limited excavation and formwork required to install the tower and associated ground level equipment and some boring will be necessary for the power run. Once the facility is operational and integrated with the Vodafone network, the facility requires minimal maintenance, with maintenance inspections typically carried out every six months.

7 Conclusion

The proposal will ensure that customers in the suburban areas around Youngtown, Franklin Village and Kings Meadow will have access to the best possible mobile phone and mobile broadband service.

Vodafone, together with Service Stream have undertaken an assessment of the relevant matters as required by the *Telecommunications Act 1997*, the *EPBC Act*, the *Land Use Planning and Approvals Act 1993* and the *Launceston Interim Planning Scheme 2015*. The proposal is considered appropriate in light of the relevant legislative, environmental, technical, radio coverage and public safety.

This assessment of the proposed development for a telecommunications facility indicates that the proposal is a suitable form of development on the site. The proposed facility is considered suitable in this location for the following reasons:

The facility is located specifically to provide reliable mobile phone service for Youngtown, Franklin Village and Kings Meadow.

- The facility will be able to accommodate further technological upgrades in to the future.
- The proposal is consistent with the relevant provisions of the Launceston Interim Planning Scheme 2015.
- It is submitted that the proposed facility has been appropriately sited and designed to minimise visibility and amenity impacts on the surrounding environment as much as possible, being located within a utility corridor. A reasonable balance has been struck between the technical requirements for a new facility in this area and the need to minimise visual and other environmental impacts.
- Emissions from the proposed facility will be significantly below the Australian Communications and Media Authority standard.
- Vodafone has applied the Precautionary Approach in the Selection and Design of the proposed site in accordance with Sections 4.1. and 4.2 of the *Industry Code C564:2011 – Mobile Phone Base Station Deployment* - refer to **Appendix E**.

This assessment demonstrates that the proposal achieves a reasonable balance between the provision of essential telecommunication services and the need to protect the environment from adverse impacts from such development. It is respectively requested that approval is granted for this planning application.

We look forward to your decision in due course and will be pleased to assist further on 0439 165 651 or by email at Tim.Heffernan@servicestream.com.au, should you require anything further.