PLAN 2

PLANNING APPLICATION P17-307

105 GREEN RISES ROAD, CRESSY

ATTACHMENTS

A Application & plans

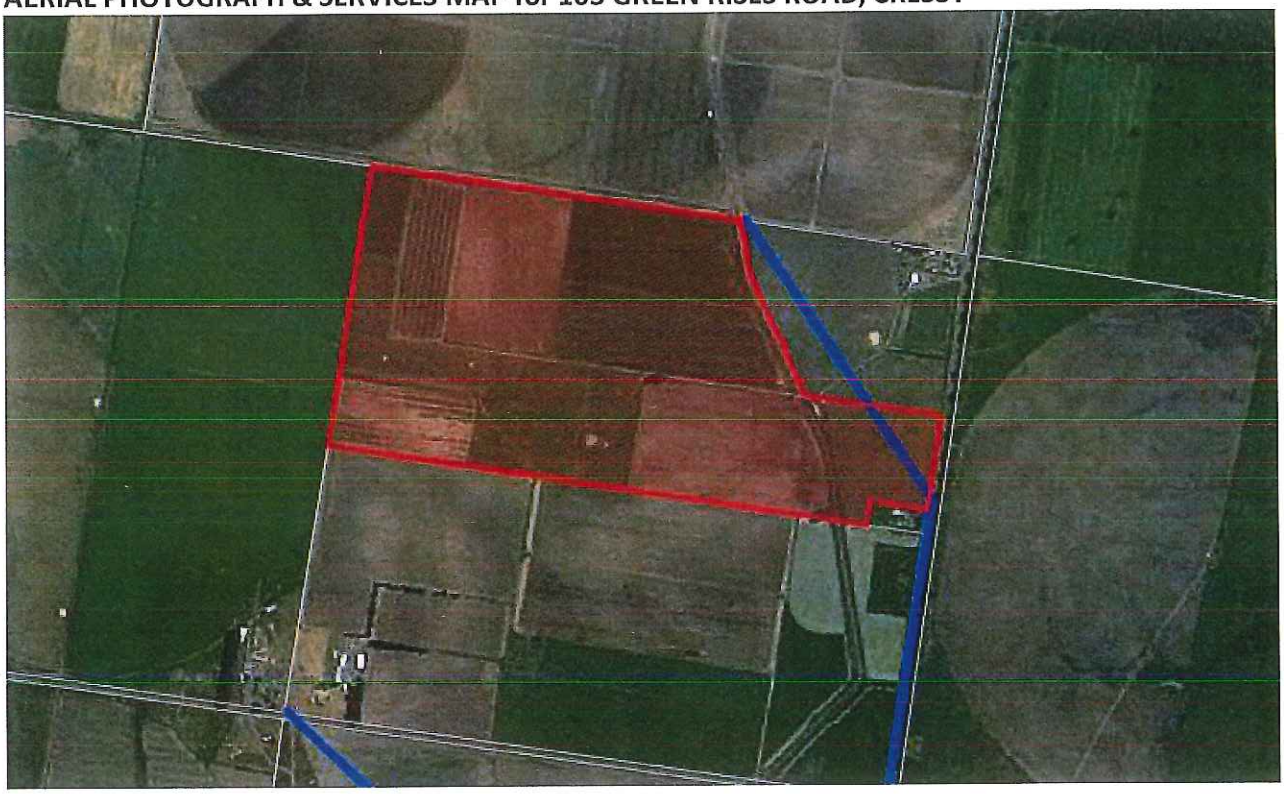
B Responses from referral agencies

C Representations & applicant's response

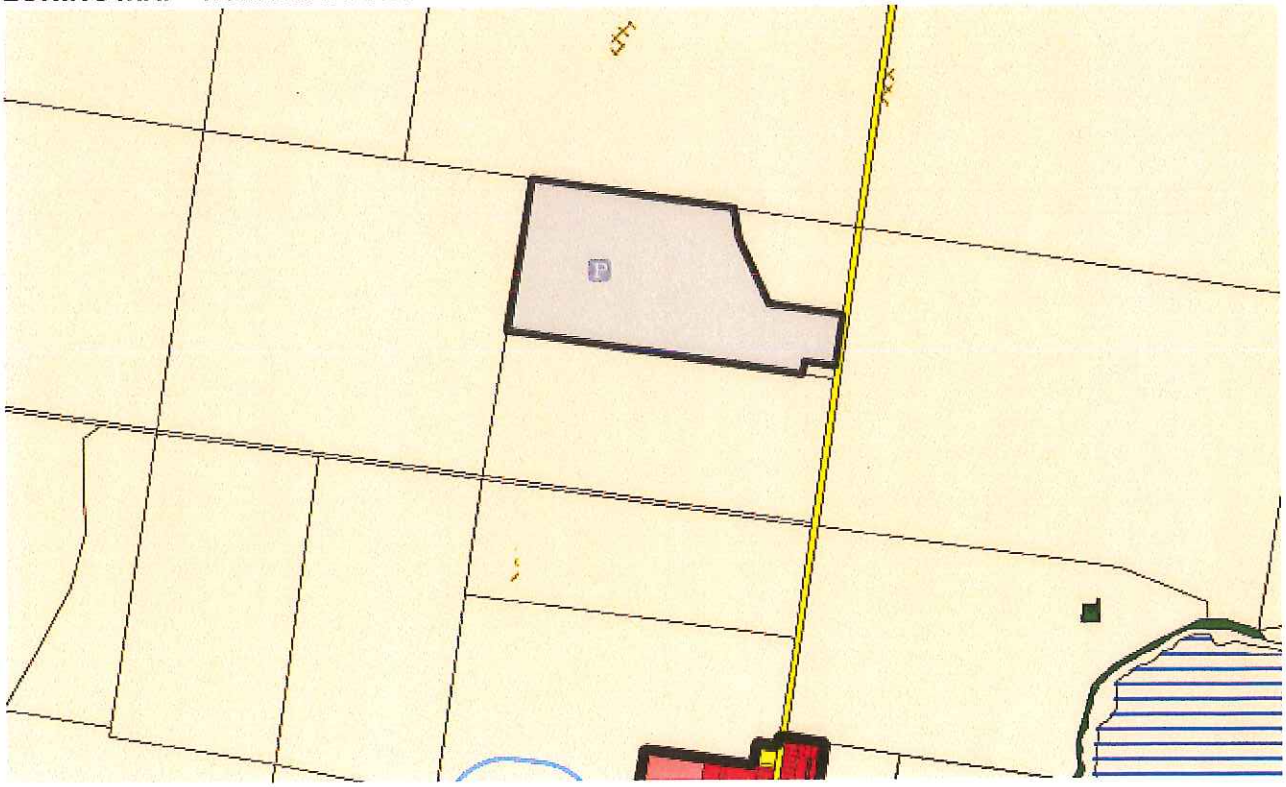
ATTACHMENT EXHIBITED

P17-307

AERIAL PHOTOGRAPH & SERVICES MAP for 105 GREEN RISES ROAD, CRESSY



ZONING MAP - RURAL RESOURCE



PLANNING APPLICATION

Proposal

Description of proposal: INSTALLATION OF A TELECOMMUNICATIONS FACILITY + ASSOCIATED INFRASTRUCTURE.

(attach additional sheets if necessary)

Site address: 105 GREEN RISES ROAD, CRESSY TAS 7302.

CT no: Vol 164931 F 2

Estimated cost of project $ 180,000 *(include cost of landscaping, car parks etc for commercial/industrial uses)*

Are there any existing buildings on this property? Yes / (No)

If yes – main building is used as .....

If variation to Planning Scheme provisions requested, justification to be provided:

N/A

(attach additional sheets if necessary)

Is any signage required? No.

(if yes, provide details)

OWNER
CRAIG RICHARD SPENCER
RHONDA LORRAINE SPENCER
FAIRBANKS PTY LTD
FOLIO REFERENCE
100586-1
246381-1; 214297-1
GRANTEE
PART of 20 000 ACRES GTD TO ROBERT KEATE, JAMES DRUMMOND, BUTLER ELPHINSTONE & STEWART MARJORIBANKS

PLAN OF SURVEY

COHEN & ASSOCIATES PTY LTD, LAUNCESTON

BY SURVEYOR: J.R. DAVEY

LOCATION **LAND DISTRICT OF WESTMORLAND**
PARISH OF CRESSY

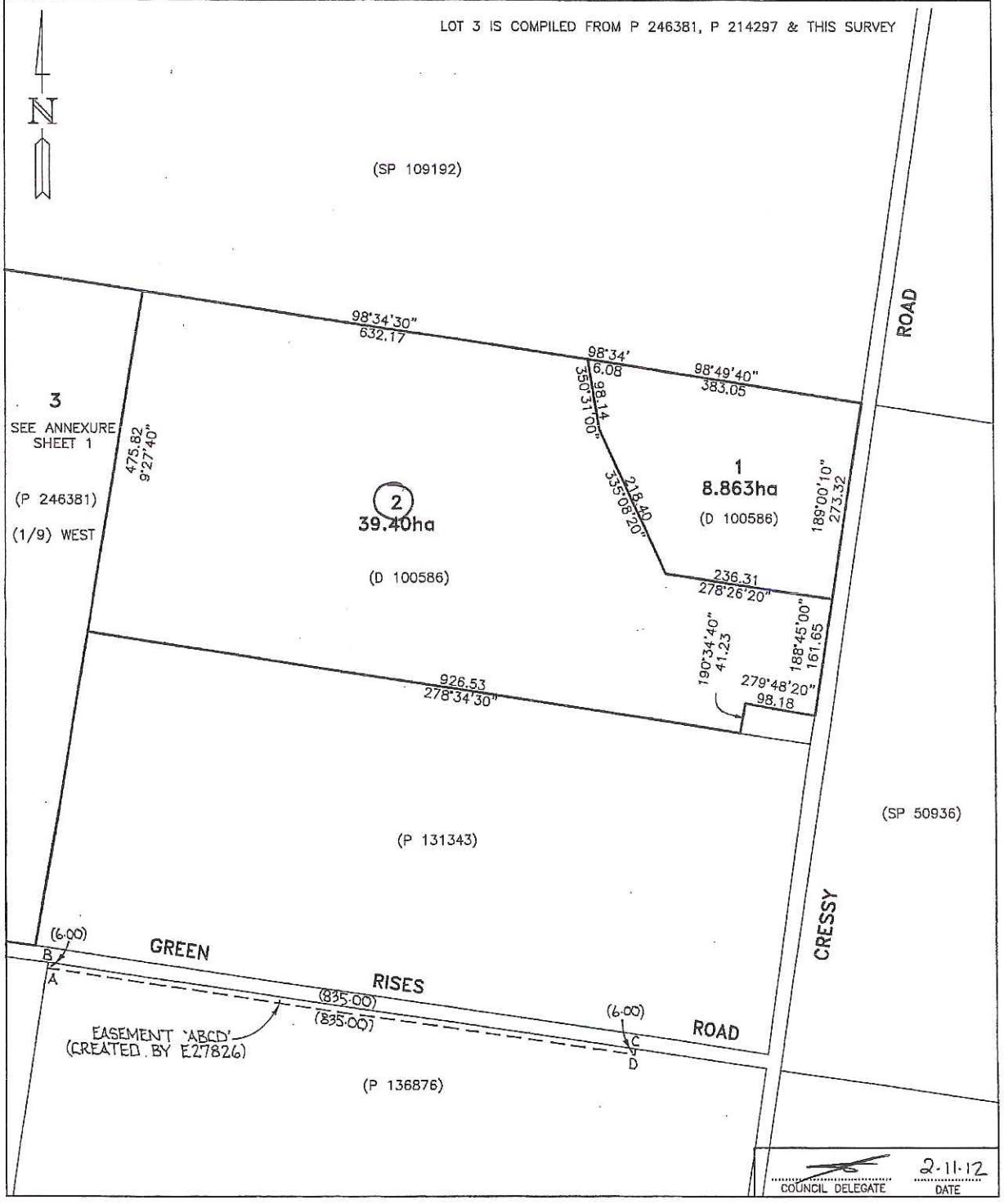
SCALE 1 : 5000 LENGTHS IN METRES

REGISTERED NUMBER
SP164931

APPROVED
EFFECTIVE FROM - 9 NOV 2012
Alice Kawa
Recorder of Titles

MAPSHEET MUNICIPAL CODE No	LAST UPI No	LAST PLAN No	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN
123 (5038)	5600428, 5600427 5600445	D 100586	

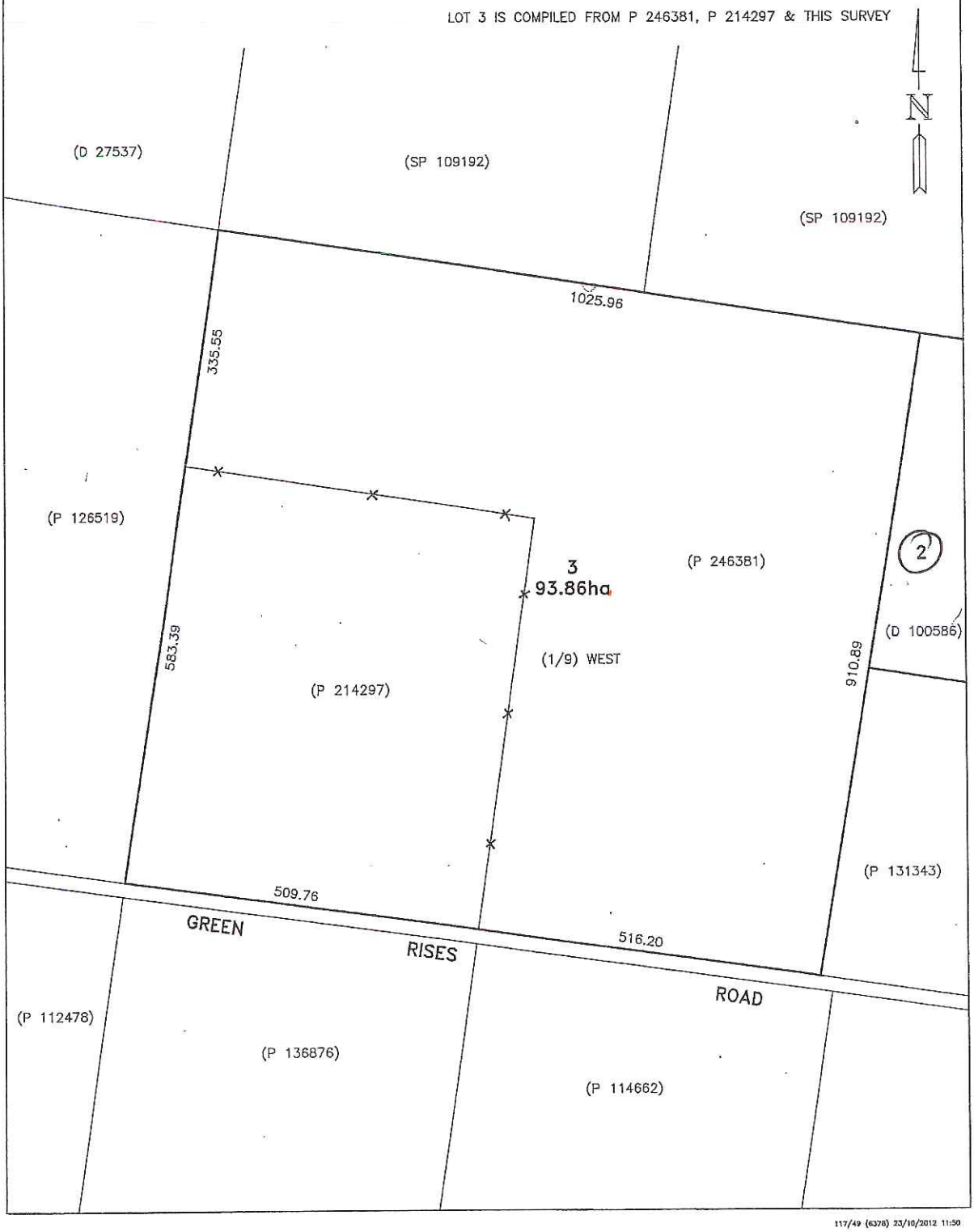
LOT 3 IS COMPILED FROM P 246381, P 214297 & THIS SURVEY



117/49 (0378) 23/10/2012 11:50

PLAN OF SURVEY ANNEXURE SHEET SHEET 1 OF 1 SHEETS	OWNER FAIRBANKS PTY LTD; C.R. & R.L. SPENCER FOLIO REFERENCE 246381-1; 214297-1; 100586-1 SCALE 1 : 5000 LENGTHS IN METRES	Registered Number SP 164931
SIGNED FOR IDENTIFICATION PURPOSES ..... Council Delegate	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET. Registered Land Surveyor ..... date 23/12/12.	APPROVED EFFECTIVE FROM ..... Recorder of Titles

LOT 3 IS COMPILED FROM P 246381, P 214297 & THIS SURVEY



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Planning Assessment Report

Development Application for a telecommunications mobile phone base station at;

105 Green Rises Road, Cressy TAS 7302

Prepared on behalf of Optus Mobile Pty Ltd by Metasite Pty Ltd

Project No. H0093

November 2017

metasite

OPTUS

Document Quality Control

This Planning Report is prepared by:

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Document Control				
Rev	Date	Status	Prepared by	Reviewed by
1.0	17/11/2017	Final	David Hodgkinson	Clinton Northey

Disclaimer

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Contents

Appendix A	Performance Critera Table
Appendix B	Proposal Plans
Appendix C	Environmental EME Report

Executive Summary

Site Address	105 Green Rises Road, Cressy TAS 7302
Real Property Description	The legal description of the property is Parish of CRESSY Land District of WESTMORLAND, Lot 2 on Sealed Plan 164931
Land Title reference	Volume 164931, Folio 2.
Site Area	Telecommunications area of irregular shape approximately 49 square metres within land area 39.40 Hectares on Lot 2 on Sealed Plan 164931.
Registered Owner	Fairbanks Pty Ltd
Proposal	Optus proposes to extend the existing telecommunications monopole at 105 Green Rises Road, Cressy TAS 7302. The facility will comprise of; • Installation of a 40 metre high telecommunications monopole with an headframe above (centre-line of antennas 41 metres) to install six (6) antennas • Nine (9) Radio Remote Units (RRU's); • 1 x 1200mm diametre radio communication dishes at 37m from ground level; • Two (2) outdoor cabinets/equipment shelters and three (3) future outdoor cabinets/equipment shelters at ground level; and • Ancillary equipment associated with the operation of the facility, including cable trays, cabling, bird proofing, earthing, electrical works and air-conditioning equipment.
Coverage Objectives	A demonstrated need has been identified for a new telecommunications facility in the area to improve voice and data services to the Cressy area.
Site Selection	The site has been identified as the most appropriate location for the new facility following an extensive site selection process.
Council/Planning Scheme	Northern Midlands Interim City Planning Scheme 2013
Use Definition	Telecommunications Facility
Zone	Rural Resource Zone
Overlays	None identified
Applicant	Optus Mobile Pty Ltd c/- Metasite Pty Ltd Contact: David Hodgkinson

	Phone: 03 9804 5324 Email: david.hodgkinson@metasite.com.au
Reference No.	Our Site Reference: H0093 Cressy North RFNSA Reference: 7302008

1.0 Introduction

1.1 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.

1.2 Benefits of mobile technology's

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 labor 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 that 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.

1.3 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 the area to supply the Cressy North area 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:

1. 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.
2. User 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 and in this instance mainly conducting business through wireless devices on the farm).

Metasite Pty Ltd has been engaged by Huawei Pty Ltd to provide Site Acquisition, Town Planning, Design & Engineering services for Huawei's national roll-out contract with Optus Mobile Pty Ltd (Optus). This development application has been prepared by Metasite, on behalf of Optus and seeks approval to allow the installation of a new telecommunications facility at 105 Green Rises Road, Cressy TAS 7302 (the site).

Optus is currently undertaking the Long Term Evolution (LTE) upgrade of their existing mobile phone infrastructure across Australia. The overall project will improve customer experience through faster and more reliable voice and data services.

Due to increasing network demands for data, Optus has identified the need to install a telecommunications facility in the area to improve voice and data services to customers in Cressy.

To provide mobile service to the surrounding area, the proposed telecommunication installation requires the installation and works outlined in the "Executive Summary" section on the previous page.

All mobile phone network operators are bound by the operational provisions of the federal *Telecommunications Act 1997* ("The Act"). This application for a planning permit is bound by the core principles and operator requirements outlined within The Act, however consent is required from the Northern Midlands Council in order to undertake the prescribed development. More information regarding the legislative framework pursuant to this proposal is located within **Section 5, 6 & 7** of this report.

2.0 Site Selection

2.1 Potential Candidates

A number of factors have been considered when selecting the appropriate site for the infrastructure. The factors include investigating opportunities to collocate on existing infrastructure, the proposal's proximity to existing sensitive land uses, planning scheme considerations, technical and coverage objectives, cost considerations, lease and land tenure, visual impact and engineering/design criteria.

Furthermore, the site selection process incorporates the mandatory Mobile Phone Base Station Deployment Code (C564:2011) activities which are undertaken in order to justify the proposed location of the subject site (specifically sections 4.1, 4.2 and 8 of the Deployment Code). Such considerations include preparation of a "traffic light model" and assessment against the Deployment Code's precautionary approach provisions.

A number of potential candidate sites are usually considered when selecting the most appropriate site for the infrastructure. In this instance two potential candidates were identified. These are detailed in Figure 1 below as Candidate C and Candidate F.

Figure 1: Potential Candidate Locations (source: Google Earth 2017)

A detailed analysis of each candidate has been undertaken in the below table to determine the most appropriate site location for the telecommunications facility. It is also worth noting there are no opportunities to co-locate Optus' equipment on an existing facility.

Candidate	Address	Opportunities / Constraints
C New monopole	974 Cressy Road Cressy TAS 7302 (Lot 1 on Sealed Plan 164931)	The proposed location was originally chosen however agreement could not be reached with the land owner.
F (1) New monopole	110 Green Rises Road, Cressy TAS 7302 (Lot 3 on Sealed Plan 164931)	The proposed location is an open field area however was situated on land used for cropping. The site was not selected due to more superior coverage available from the other locations.
F (2) New monopole	105 Green Rises Road, Cressy TAS 7302 (Lot 3 on Sealed Plan 164931)	Within the same ownership as 110 Green Rises Road, a location was chosen as it was more superior in coverage and close to available power, access from Cressy Road and the location was outside agricultural cropping areas.

Two (2) further properties were selected in the target area for consideration however were not further progressed in the investigation.

2.2 Preferred Nominated Candidates

The preferred site (Candidate F (2)) at 105 Green Rises Road, Cressy TAS 7302 was chosen as the preferred site candidate for the following reasons:

- The site is technically feasible, and can achieve Optus' coverage and capacity objectives for the area. It will provide a high quality 2G, 3G & 4G mobile and wireless broadband service, which will greatly improve access to mobile telecommunications services for the staff and customers and the business as whole at the and also improve voice coverage;
- The site is within a Rural Resource Zone land use which is considered a suitable location for the proposed telecommunications facility;
- The character of the area will not be detrimentally affected by the proposal;
- The position of the monopole mitigates visual impacts;

- The facility will not create any traffic congestion;
- The landowner is supportive of the Optus proposal and its associated benefits for increased telecommunications services in the local area;
- The site will not require the clearing of any trees;
- The site has readily available access to the electricity supply network;
- The proposed facility will not prejudice the existing or anticipated future use of the site;
- The costs associated with delivering the site and constructing the facility are considered by Optus to be reasonable;

3.0 Site and surrounds

3.1 Site details

The subject site is located in on a rural property at 105 Green Rises Road, Cressy TAS 7302. The legal description of the property is Parish of CRESSY Land District of WESTMORLAND, Lot 2 on Sealed Plan 164931. Volume 164931, Folio 2. An aerial plan demonstrating the site location and the context of the property is located within **Figure 2 & 3 below:**

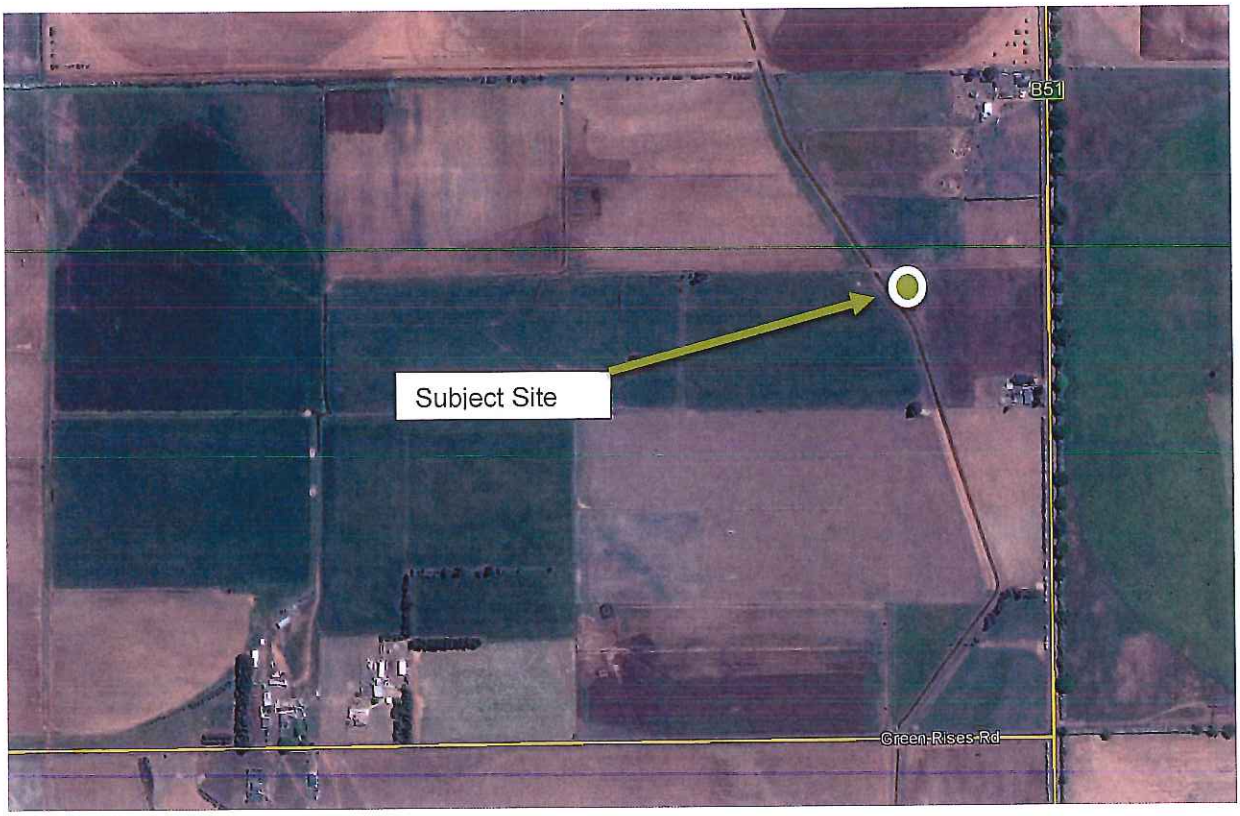
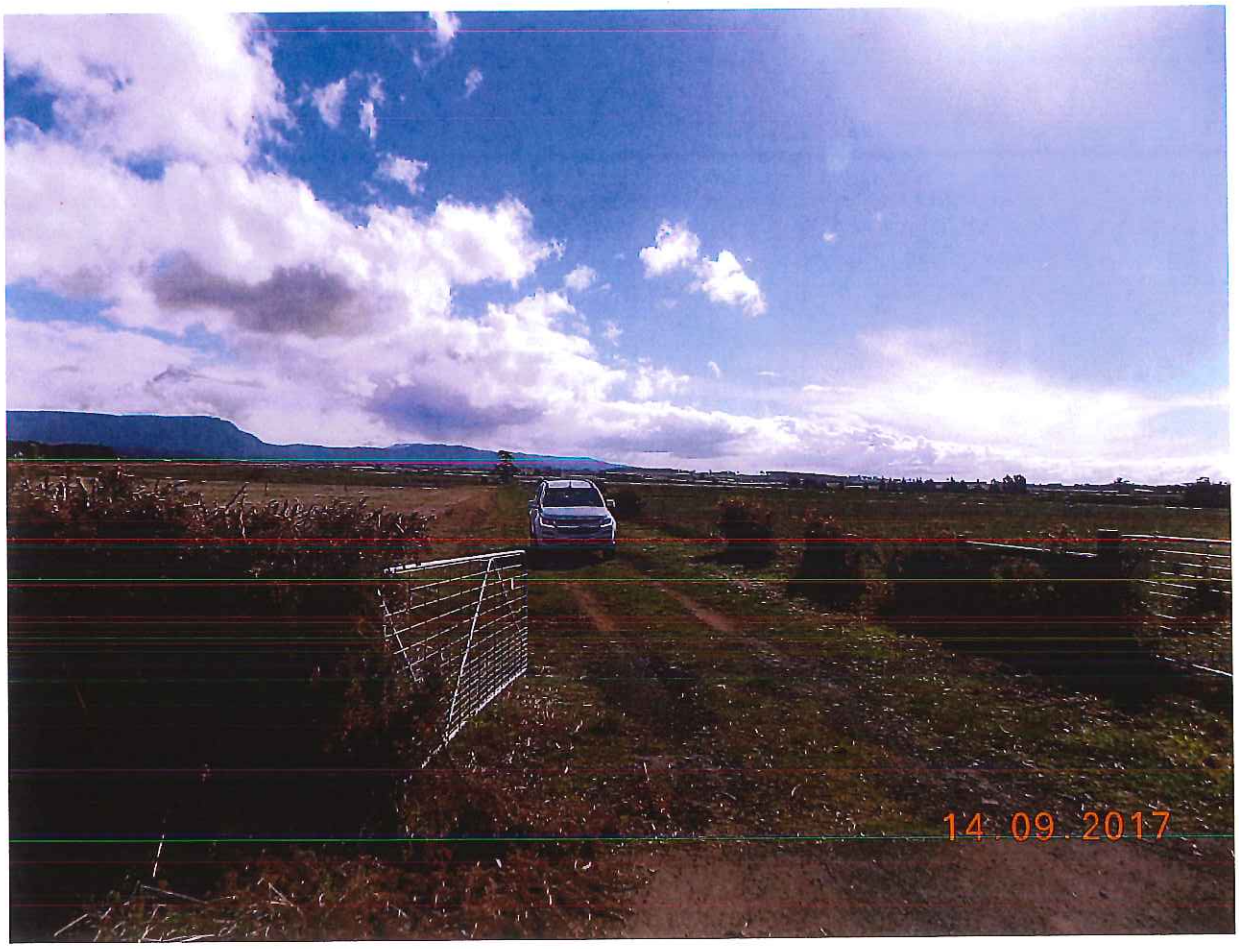


Figure 2: Subject Site (Google Earth)

Figure 3: Subject Site Boundary Lot 2 (Google Earth)

Site view from west to east

Site view from north to south



Existing access from Cressy Road

The subject site is within a Rural Resource Zone land use and is irregular in shape and is currently used for the rural purposes. The site is to be located within a paddock adjacent to the northern boundary fence and near the irrigation channel area. The topography of the land is generally flat with an irrigation channel to the west and cropping paddocks further to the west. To the east is the access way to Cressy Road.

3.2 Surrounding area

To the south and north are similar rural properties that contain animal grazing or rural agricultural pursuits. Further west are similar cropping paddocks with and irrigation pivot machines and associated irrigation channels. The land surrounding is generally with open fields and few areas of large vegetation.

4.0 Proposal

Mobile networks are like roads when traffic increases, upgrades are needed to relieve congestion and remove roadblocks. Congestion is relieved by making changes to existing base stations or adding additional base stations in areas where we may already have existing coverage. The following proposal is necessary to alleviate congestion and service issues within the Cressy locality.

4.1 Overview

The proposed telecommunication installation requires installing the equipment outlined in the "Executive Summary" section on page 4 of this report.

As previously highlighted, Optus Mobile Pty Ltd has an obligation under the Industry Code to ensure that all suitable alternatives have been explored as part of the justification behind this development application. It is believed that proposed works as outlined above will not result in any adverse visual or environmental impact to the surrounding environs within the Cressy locality.

The proposal is demonstrated through the proposal plans, attached to this submission in **Appendix A**.

4.2 Transport, access and parking

Access to the facility will be obtained via an existing access from Cressy Road to the property. An access track is available to the irrigational channel. No formal parking is proposed, given the facility will function on a continuously unmanned basis, and will typically only require infrequent maintenance. There is sufficient space onsite for a vehicle to park during these times. The location of Cressy Road shown on the proposal plans attached in **Appendix A**.

Mobile phone base stations require only infrequent maintenance visits (i.e. only two (2) to four (4) times per year). Furthermore, the site will operate on a continually unmanned basis. As such, the proposal will not be a significant generator of vehicular and/or pedestrian traffic. Therefore, the proposed informal access will provide appropriate access for the infrequent maintenance inspections.

4.3 Utilities

The final power design for the site is yet to be confirmed. The indicative power design/route for the proposed facility has been outlined within the drawing package, located within **Appendix A** of this document.

The unmanned nature of the proposed mobile base station removes the need for connection to water or sewer services. Furthermore, the proposal incorporates very minimal hard surfaces and therefore will

generate insignificant stormwater runoff from the site. As such, the proposal does not require connection to the stormwater network.

4.4 Construction schedule

The construction of the proposed mobile phone base station primarily consists of the following processes:

- Remediation – ensuring that the land is suitable for construction. This is inclusive of confirming existing structural assessments and the provisioning of cabling (if required).
- Installation of new equipment – reflective of the scope of works outlined within this Development Application; and
- Network Integration – Ensuring that the mobile phone base station can connect with both end users and other sites within the Optus network.

During the construction of the facility, a truck will be required to deliver necessary equipment to the site and a crane will be used to establish the extension of the facility. Traffic associated with the construction phase will be temporary in nature and will not affect existing traffic flows of the surrounding area. Should a road closure be required for the erection and installation of equipment, the appropriate approvals will be obtained from Council.

4.5 Acoustic

Air conditioners will be installed for each of the outdoor cabinets located within the base station, which enable the equipment to stay within normal operating temperatures. The air conditioning units will emit a small amount of noise commensurate to that of domestic air conditioning units. The operation of air conditioning units from the site will not result in any adverse impact to neighboring properties, given the low noise levels generated by the air conditioners, the remote location of the proposed facility and the separation of the facility to surrounding land uses.

4.6 Environmental

As it is an existing facility there will only be minor earth works to establish the facility. No Vegetation is proposed to be removed as part of the works other than field grass cover to establish the compound area.

4.7 Retaining structures

The topography of the site ensures that retaining structures will not be necessary for the proposed telecommunications facility.

4.8 Visual Impact

This assessment has identified the proposed telecommunications facility as having a medium level of 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 Cressy and surrounding areas.

Although the proposal will have a localised impact, the site is situated within a rural land use, and is therefore largely separated from urban and residential areas, minimising the level of visual impact. This is also lessened by the neutral colour of the facility and use of vegetation for visual 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.

4.9 EME & Health

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).

In 2003 the ACMA adopted a 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 the Australian Radiation Protection and Nuclear Safety Agency (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, this will comply with the ACMA mandated exposure limit **(See Appendix C)**. Optus complies with the public health and safety standard by a significant margin.

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.

5.0 Federal Regulatory Framework

The following information provides a summary of the Federal legislation relevant to telecommunications deployment.

5.1 Telecommunications Act 1997

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

This legislation establishes the criteria for 'low impact' telecommunication facilities. If a proposed facility satisfies the requirements of a 'low impact' facility, the development is exempt from the planning approval process.

Further clarification of the term 'low impact' is provided in the *Telecommunications Act 1997* and the *Telecommunications (Low Impact Facilities) Determination 1997*, which was gazetted subsequent to the Act. The Telecommunications (Low Impact Facilities) Determination 1997 establishes certain facilities, which cannot be considered low impact facilities.

This subject proposal is for a freestanding monopole, associated antennas and equipment. Pursuant to the *Telecommunications (Low-impact Facilities) Determination 1997* **the proposed facility cannot be considered as "low- impact."** Accordingly, the proposal is not exempt from State and Local Planning laws and therefore the provisions of the *Land Use Planning and Approvals Act 1993* and the *Northern Midlands Interim City Planning Scheme 2013* are applicable.

5.2 Telecommunications Code of Practice 1997

The Telecommunications Code of Practice 1997 (The Code) authorises a carrier to enter land, inspect land and install and maintain a facility. The Code emphasises "best practice" design, planning and installation of facilities, compliance with industry standards and minimisation of adverse impacts as much as practicable, particularly in terms of degradation of the environment and visual impact. The subject proposal is considered to comply with "best practice" given the proposal will:

- Provide improved telecommunications and wireless internet coverage to the Cressy areas;
- Be located on with a rural area and that does not hinder the available agricultural activities;
- Comprise the smallest scale configuration possible for the site to reduce the visual impact of the proposal.

6.0 State Regulatory Framework

6.1 Land Use Planning and Approvals Act 1993

The proposed telecommunications facility is not considered a low-impact facility and is therefore subject to the *Land Use Planning and Approvals Act 1993*.

The purpose of LUPA Act is to establish a framework for planning the use, development and protection of land in Tasmania in the present and long-term interests of all Tasmanians.

The proposed telecommunications facility is consistent with the key objectives of the LUPA Act and will result in the orderly and sustainable development and use of land that will have minimal impact on natural resources and ecological processes.

6.2 State Planning Policy

Tasmanian state policies address land use, land management, environmental management and environmental protection for the state. State policies include coastal protection, water quality management & protection of agricultural land.

In addition, the relevant regional land use strategy guides the state development, for this particular application the *Regional Land Use Strategy of Northern Tasmania* is applicable.

Purpose of the *Regional Land Use Strategy of Northern Tasmania* is to provide strategic foundation for land use planning which provides a perspective on planning issues of regional significance.

- The purpose of the RLUS is to create the regional strategic planning land use policy intent for the future planning directives of the development of Northern Tasmania derived from the vision for the State as outlined by **Tasmania Together**; objectives of the **Tasmanian Resource Management and Planning System (RMPS)**

The Regional Land Use Strategy refers to the growth in telecommunications in general;

'Most of the Region is covered by Next G network for voice, picture, video and wireless broadband. It is planned that by 2014, Tasmania will have the best fixed consumer broadband in the world through the current roll out of optic fibre. There is a need for greater investment in mobile and wireless infrastructure, in applications, in smart grids and other system-wide digital technologies. Five Northern regional localities will benefit in the three stage National Broadband Network rollout plan that will add value to innovation and competitive capacity in the region. The rollout includes Launceston in stage 3 following on from St Helens, George Town, Scottsdale and Deloraine.'

In addition, the *State Policy of Protection of Agricultural Land 2009* is relevant to the application as the site is within the Rural Resource Zone.

The purpose of the policy is

- *To conserve and protect agricultural land so that it remains available for the sustainable development of agriculture, recognising the particular importance of prime agricultural land.*

To enable the sustainable development of agriculture by minimising:

- *conflict with or interference from other land uses; and*
- *non-agricultural use or development on agricultural land that precludes the return of that land to agricultural use.*

The following Principles will be implemented through planning schemes and other relevant planning instruments. No one Principle should be read in isolation from the others to imply a particular action or consequence.

- *Agricultural land is a valuable resource and its use for the sustainable development of agriculture should not be unreasonably confined or restrained by non-agricultural use or development.*

- *Use or development of prime agricultural land should not result in unnecessary conversion to non-agricultural use or agricultural use not dependent on the soil as the growth medium.*

- *Use or development, other than residential, of prime agricultural land that is directly associated with, and a subservient part of, an agricultural use of that land is consistent with this Policy.*

- *The development of utilities, extractive industries and controlled environment agriculture on prime agricultural land may be allowed, having regard to criteria, including the following:*
  - *(a) minimising the amount of land alienated;*
  - *(b) minimising negative impacts on the surrounding environment; and*
  - *(c) ensuring the particular location is reasonably required for operational efficiency.*

- *Residential use of agricultural land is consistent with this Policy where it is required as part of an agricultural use or where it does not unreasonably convert agricultural land and does not confine or restrain agricultural use on or in the vicinity of that land.*

- *Proposals of significant benefit to a region that may cause prime agricultural land to be converted to non-agricultural use or agricultural use not dependent on the soil as a growth medium, and*

which are not covered by Principles 3, 4 or 5, will need to demonstrate significant benefits to the region based on an assessment of the social, environmental and economic costs and benefits.

- *The protection of non-prime agricultural land from conversion to non-agricultural use will be determined through consideration of the local and regional significance of that land for agricultural use.*
- *Provision must be made for the appropriate protection of agricultural land within irrigation districts proclaimed under Part 9 of the Water Management Act 1999 and may be made for the protection of other areas that may benefit from broad-scale irrigation development.*

- *Planning schemes must not prohibit or require a discretionary permit for an agricultural use on land zoned for rural purposes where that use depends on the soil as the growth medium, except as prescribed in the below.*

- *New plantation forestry must not be established on prime agricultural land unless a planning scheme reviewed in accordance with this Policy provides otherwise. Planning scheme provisions must take into account the operational practicalities of plantation management, the size of the areas of prime agricultural land, their location in relation to areas of non-prime agricultural land and existing plantation forestry, and any comprehensive management plans for the land.*

- *Planning schemes may require a discretionary permit for plantation forestry where it is necessary to protect, maintain and develop existing agricultural uses that are the recognised fundamental and critical components of the economy of the entire municipal area, and are essential to maintaining the sustainability of that economy.*

The land use strategy refers to recognising the need for telecommunications infrastructure to enhance technology. The proposal to development of telecommunications provides the vehicle to make available access to technologies and competitive providers to residents, visitors and business. In relation to the agricultural policy the land area of approximately 49 square metres does not interfere with any existing agricultural or rural uses and located in an area on the property that is not used for cropping purposes.

7.0 Local Government Regulatory Framework

7.1 Council Planning Scheme

As highlighted earlier in this report, the planning scheme applicable to the proposed development is the *Northern Midlands Interim City Planning Scheme 2013* (the Planning Scheme).

7.2 Northern Midlands Planning Scheme Objectives

Under the Northern Midlands Planning Scheme, the scheme identifies regional and local policies objectives. The purpose of the scheme is;

(a) To further the Objectives of the Resource Management and Planning System and of the Planning Process as set out in Parts 1 and 2 of Schedule 1 of the Act; and

(b) To achieve the planning scheme objectives set out in clause 3.0 by regulating or prohibiting the use or development of land in the planning scheme area.

Regional Land Use Strategy

Under the Northern Midlands Planning Scheme, the relevant land use strategy objectives are:

a) Primary Industries:

- Resources for primary industries make a significant contribution to the rural economy and primary industry uses are to be protected for long-term sustainability.
- The prime and non-prime agricultural land resource provides for variable and diverse agricultural and primary industry production which will be protected through individual consideration of the local context.
- Processing and services can augment the productivity of primary industries in a locality and are supported where they are related to primary industry uses and the long-term sustainability of the resource is not unduly compromised.

b) Tourism

- Tourism is an important contributor to the rural economy and can make a significant contribution to the value adding of primary industries through visitor facilities and the downstream processing of produce.

- The continued enhancement of tourism facilities with a relationship to primary production is supported where the long-term sustainability of the resource is not unduly compromised.

- The rural zone provides for important regional and local tourist routes and destinations such as through the promotion of environmental features and values, cultural heritage and landscape.

- The continued enhancement of tourism facilities that capitalise on these attributes is supported where the long-term sustainability of primary industry

c) Rural Communities

- Services to the rural locality through provision for home-based business can enhance the sustainability of rural communities. Professional and other business services that meet the needs of rural populations are supported where they accompany a residential or other established use and are located appropriately in relation to settlement activity centres and surrounding primary industries such that the integrity of the activity centre is not undermined and primary industries are not unreasonably confined or restrained.

7.3 Zoning

The site is zoned Rural Resource Zone pursuant to the Northern Midlands Planning Scheme. The purpose of the zone is

- To provide for the sustainable use or development of resources for agriculture, aquaculture, forestry, mining and other primary industries, including opportunities for resource processing.

- To provide for other use or development that does not constrain or conflict with resource development uses.

- To provide for economic development that is compatible with primary industry, environmental and landscape values.

- To provide for tourism-related use and development where the sustainable development of rural resources will not be compromised

The application for a telecommunications facility will a rural resource zone provides the appropriate location and area and not change the use or hinder the expansion of rural resource activities of the zone. The proposal meets the purpose of the zone where the zone allow uses that are not appropriate in other areas. The facility will enhance the land use strategy by improving cover to the local area for access to technology and services thereby promoting business and tourism to the Cressy area.

9.0 Conclusion

The proposed telecommunications facility at 105 Green Rises Road, Cressy TAS 7302 (Lot 2 on Sealed Plan 164931) will form a vital component of the Optus network. As previously highlighted, the proposed Optus mobile phone base station will both voice and data services to the Cressy area. Optus has identified that coverage within the specified area requires improvement to ensure ongoing service provisions to personal users and businesses who take advantage of the Optus network. The proposal will allow for the enhanced coverage and increased data speeds for end users. The proposed facility is considered appropriate on the site given:

- The site is located within a Rural Resource Zone land use which is considered a suitable location. The application demonstrates compliance with all applicable planning scheme requirements and therefore supports the intent of the planning scheme. As such, the proposal is an appropriate use on the site;
- The site is setback from Cressy Road frontage;
- The proposal will not require the clearing of any trees;
- The site is not located within an environmentally or culturally significant area;
- The site is appropriately serviced and has a readily available access to the electricity supply and existing transport network;
- The proposed facility will not prejudice the existing or anticipated future use of the site;

Based on the above, the proposed application, to install a telecommunications facility at 105 Green Rises Road, Cressy TAS 7302 (Lot 2 on Sealed Plan 164931) is considered appropriate for the site and warrants favorable consideration by Council subject to reasonable and relevant conditions. Should Council have any further queries regarding the subject application, please do not hesitate to contact the nominated representative outlined within this document.

APPENDIX A

26.0 Rural Resource Zone

26.3 Use Standard

26.3.1 Discretionary Uses if Not a Single Dwelling

Objectives

a) To provide for an appropriate mix of uses that support the Local Area Objectives and the location of discretionary uses in the rural resources zone does not unnecessarily compromise the consolidation of commercial and industrial uses to identified nodes of settlement or purpose built precincts
b) To protect the long term productive capability of prime agricultural land by minimizing conversion of the land to non-agricultural uses or uses not dependent on the soil as a growth medium, unless an overriding benefit to the region can be demonstrated
c) To minimize the conversion of non-prime land to a non-primary industry uses except where that land cannot be practically utilized for primary industry purposes.
d) Uses are located such that they do not unreasonably confine or restrain the operation of primary industry uses.
e) Uses are suitable within the context of the locality and do not create an unreasonable adverse impact on existing sensitive uses or local infrastructure
f) The visual impacts of uses are appropriately managed to integrate with the surrounding rural landscape

Acceptable Solutions	Performance Criteria	Response
A1 If for permitted or no permit required uses	P.1.1 It must be demonstrated that the use is consistent with local area objectives for the provision of non-primary industry uses in the zone, if applicable; and P1.2 Business and professional services and general retail and hire must not exceed a combined gross floor area of 250m2 over the site.	Telecommunications facility is proposed to be approximately 49m2 in area and will not change the use of the rural land nor impede the current and future capability of the rural agricultural land.

A2 If for permitted or no permit required uses	P2.1 Utilities, extractive industries and controlled environment agriculture located on prime agricultural land must demonstrate that the: 1. Amount of land alienated/converted is minimsied; and 2. Location is reasonably required for operational efficiency; and P2.2 Use other than utilities, extractive industries and controlled environment agriculture located on prime agricultural land, must demonstrate that the conversion of prime agricultural land to that use will result in a significant benefit to the region having regard to the economic, social and environmental costs and benefits.	Telecommunications facility is proposed to be approximately 49m2 in area and will not change the use of the rural land nor impede the current and future capability of the rural agricultural land. The location is upon the northern boundary of the property and will not impede the use of the existing paddock used for animal stock.
A3 If for permitted or no permit required uses	P3 The conversion of non-prime agricultural to non-agricultural use must demonstrate that: (a) The amount of land converted is minimized having regard to:	Telecommunications facility is proposed to be approximately 49m2 in area and will not change the use of the rural land nor impede the current and future capability of the rural agricultural land. The location is upon the northern boundary of the property and will

	1) Existing use and development on the land; and 2) Surrounding use and development and; 3) Topographical constraints or (b) The site is practically incapable of supporting an agricultural use or being included with other land for agricultural or other primary industry use due to factors such as: 1) Limitations created by an existing use and/or development surrounding the site; and 2) Topographical features; and 3) Poor capability of the land for primary industry; or (c) The site is practically incapable of supporting an agricultural use or being included with other land for agricultural or other primary industry use due to factors such as	not impede the use of the existing paddock used for animal stock
A4 If for permitted or no permit	P4 It must be demonstrated	There are no emissions from the telecommunications facility that

	a) Emissions are not likely to cause an environmental nuisance; and b) Primary industry uses will not be unreasonably confined or restrained from conducting normal operations; and c) The capacity of the local road network can accommodate the traffic generated by the use.	will cause environmental nuisance. The facility will not impact primary production and the only traffic generated is through construction and then only approx. 2 visits a year for maintenance.
A5 The use must: a) Be permitted or no permit required; or b) Be located in an existing building.	P5 It must be demonstrated that the visual appearance of the use is consistent with the local area having regard to: a) The impacts on skylines and ridgelines; and b) Visibility from public roads; and c) The visual impacts of storage of materials or equipment; and d) The visual impacts of vegetation clearance or retention; and e) The desired future character statements.	The telecommunication facility is of a monopole design that has less visual impact that a design of a 4 sided lattice tower. The monopole is setback from the main Cressy Highway into the property and existing vegetation and buildings will provide screening from frontage vantage points. No vegetation is proposed to be removed and no storage of materials is required.

26.3.3 Irrigation Districts

Objectives

To ensure that land within irrigation districts proclaimed under Part 9 of the Water Management Act 1999 is not converted to uses that will comprise the utilization of water resources.

Acceptable Solutions	Performance Criteria	Response
A1 Non-agricultural uses are not located within an irrigation district proclaimed under Part 9 of the Water Management Act 1999.	P.1.1 Non-agricultural uses within an irrigation district proclaimed under Part 9 of the Water Management Act 1999 must demonstrate that the current and future irrigation potential of the land is not unreasonably reduced having regard to: a) The location and amount of land to be used; and b) The operational practicalities of irrigation systems as they relate to land ; and c) Any management or conservation plan for land.	Telecommunications facility is proposed to be approximately 49m2 in area and will not impede current and future irrigation capability of the rural agricultural land. The facility will be clear of any pivot irrigation.

26.4.1 Building Location and Appearance

Objectives

To ensure that the

a) Ability to conduct extractive industries and resources development will not be constrained by conflict with sensitive uses; and
b) Development of buildings is unobtrusive and complements the character of the landscape.

Acceptable Solutions	Performance Criteria	
A1 Building height must not exceed	P.1. Building height must:	The height of the structure of 40 metres within a rural

a) 8m for dwellings; or **b)** 12m for other purposes.	a) Be unobtrusive and complement the character of the surrounding landscape; and b) Protect the amenity of adjoining uses from adverse impacts as a result of the proposal.	environment is appropriate as the facility will not impact on the amenity of the area and is not in proximity to sensitive uses. The facility requires the height to provide the coverage to the Cressy area.
A2 Buildings must be set back a minimum of a) 50m where a non-sensitive use or extension to existing sensitive use buildings is proposed; or b) 200m where a sensitive use is proposed; or c) The same as existing for replacement of an existing dwelling.	P.2 Building must be setback so that the use is not likely to constrain adjoining primary industry operations having regard to: a) The topography of the land; and b) Buffers created by natural or other features; and c) The location of development on adjoining lots; and d) The nature of existing and potential adjoining uses; and e) The ability to accommodate a lesser setback to eth road having regard to: 1. The design of the development and landscaping; and 2. The potential for future upgrading of the road; and 3. Potential traffic safety hazards; 4. Appropriate noise attenuation.	The facility will be setback approximately 200 metres from the Cressy Road frontage.

APPENDIX B

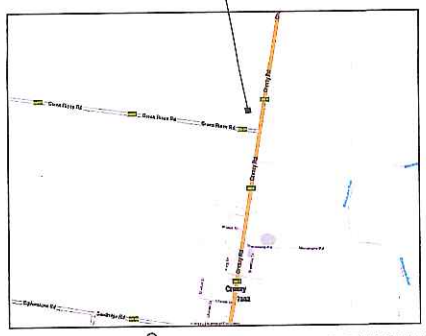
EXHIBITED

NOTE:
THIS DRAWING IS DIAGRAMMATIC ONLY AND SHOULD NOT BE SCALED. DIMENSIONS, COORDINATES, AND LEVELS SHOWN ARE NOMINAL AND SUBJECT TO CONFIRMATION BY SURVEYOR.

MGA ZONE	55
E	506 811
N	5 387 210
AT	℄ OF MONOPOLE

SITE ADDRESS:
105 GREEN RISES ROAD,
CRESSY,
TAS 7302

NOTES:
1. BASIS OF DESIGN
   - SITE INSPECTION 14/09/2017
2. PANEL ANTENNAS
   - 1-OFF PER SECTOR (EACH MAX. 2.6m LONG) AT EL 41.0m
   - SECTOR 1 – 40°, SECTOR 2 – 180°, SECTOR 3 – 300°
   - MOUNTED ON TRIANGULAR HEADFRAME
3. RRU'S & ANCILLARY EQUIPMENT
   - RRU'S 9-OFF, 3-OFF PER SECTOR
   - COMBINERS 6-OFF, 2-OFF PER SECTOR
4. TRANSMISSION
   - ⌀1200 PARABOLIC ANTENNAS (1-OFF) AT EL 37.0m
   - LINK SITE: TO BE CONFIRMED BY OPTUS
5. EQUIPMENT SHELTER/OTC
   - OPTUS ICS OTC (2-BAY AND 3-BAY FUTURE) SUPPORTED ON CONCRETE SLAB
6. STRUCTURE
   - OPTUS 40m HIGH CONCRETE MONOPOLE WITH TRIANGULAR HEADFRAME AT EL 41.0m
7. FEEDER CABLES (HYBRID TRUNK CABLES)
   - SIZE: 1 & 1/4" FIBRE TRUNK CABLE FOR ALL SECTORS (2-OFF)
   - LENGTH: 45m ALL SECTORS
   - SIZE: 1/2" (1-OFF)
   - LENGTH: 45m APPROX.
   - TO RUN IN OPTUS U/G ACO CABLE MATE & INTERNALLY IN MONOPOLE
8. SITE ACCESS
   - VIA UPGRADED EXISTING ACCESS ROUTE OFF CRESSY ROAD, TAS. CONTACT PROPERTY OWNER 1 WEEK IN ADVANCE IF VEHICLES ARE REQUIRED TO ACCESS THE PROPOSED SITE
9. ANTENNA ACCESS
   - VIA EWP
10. POWER SUPPLY
    - EXISTING CONSUMER MAINS TO BE UPGRADED APPROX. LENGTH 200m
    - NEW SITE GROUP METER ON FREE STANDING CABINET TO HOST OPTUS METER WITH RELOCATED WATER PUMP ONE
    - REINSTATE THE POWER TO WATER PUMP DISTRIBUTION BOARD ON PUMP SHED
    - FINAL DESIGN TBC AT DESIGN DETAIL STAGE
11. OTHER
    - EXISTING PUMP HOUSE IN DILAPIDATED CONDITION



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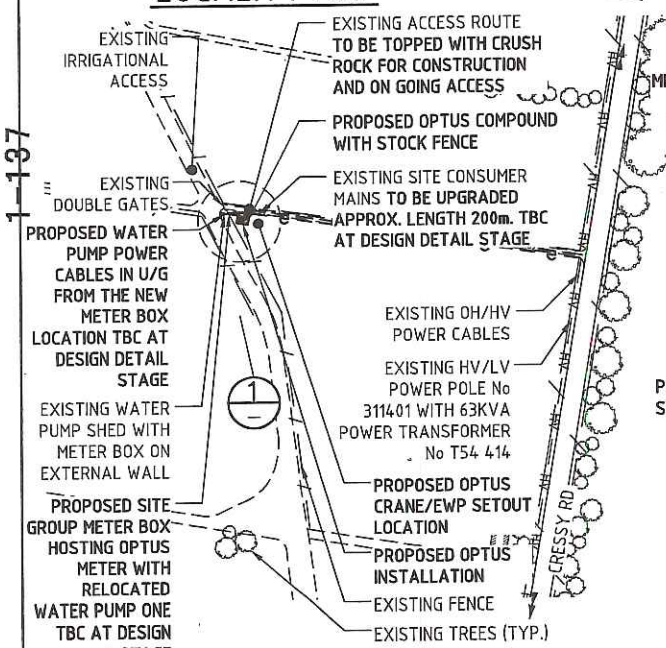
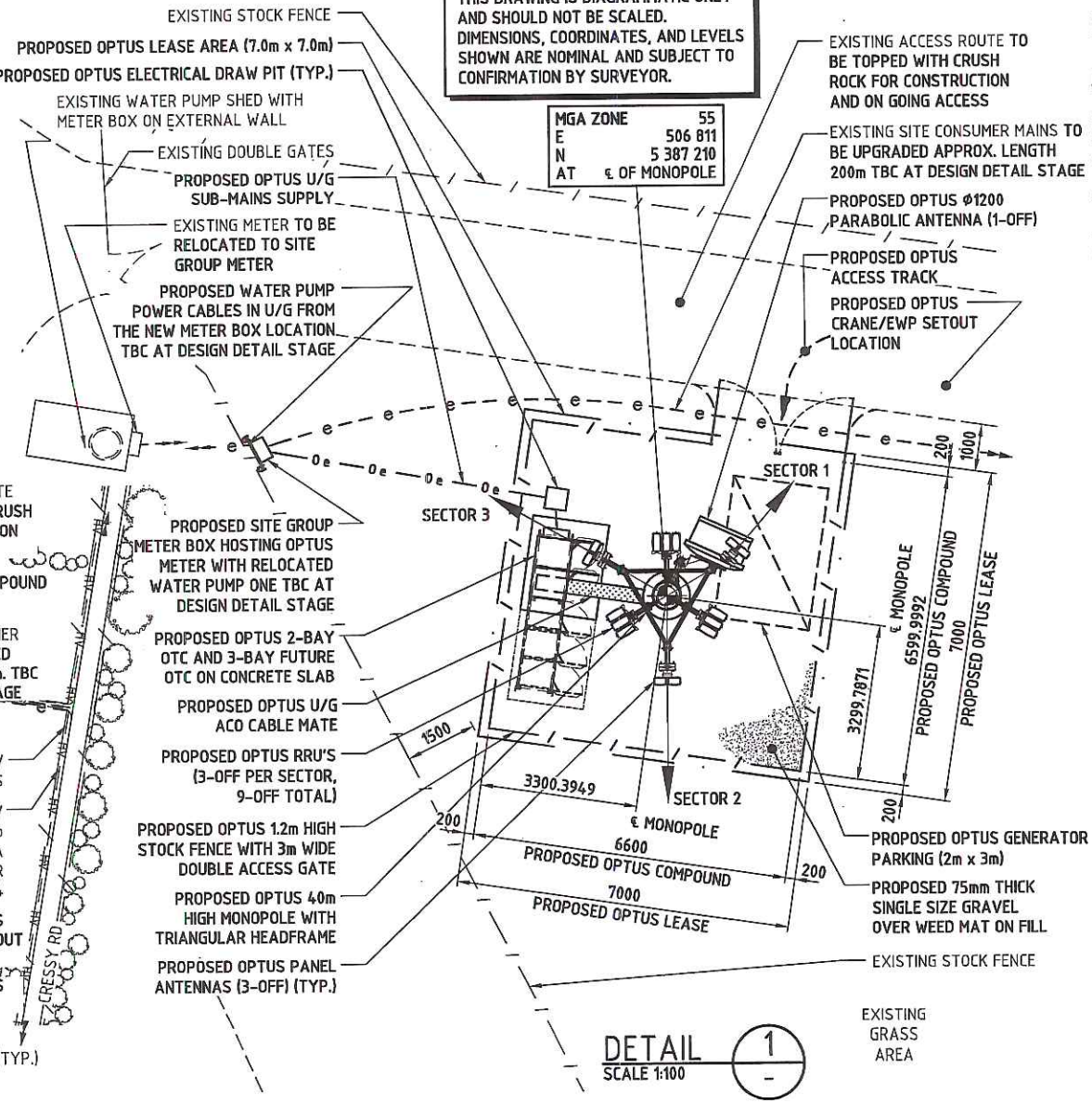
LOCALITY MAP



OVERALL SITE PLAN

NTS



DETAIL 1

SCALE 1:100

Rev	Date	Revision Details						
01	23.10.17	ISSUED FOR APPROVAL	METASITE Consultant	JM CAD	JL Designer	MB Verifier	PJ Approver

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LEVEL 24 459 COLLINS STREET MELBOURNE VIC 3000
TEL: +61 3 8610 0500 FAX: +61 3 9621 1075

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE NO:- H0093F
CRESSY NORTH
105 GREEN RISES ROAD

Drawing Title: DRAFT SITE LAYOUT

Drawing Status: FOR APPROVAL

Drawing No.: H0093F-P1

Revision: 01

20 10 0 10 20 30 40 50mm

A3

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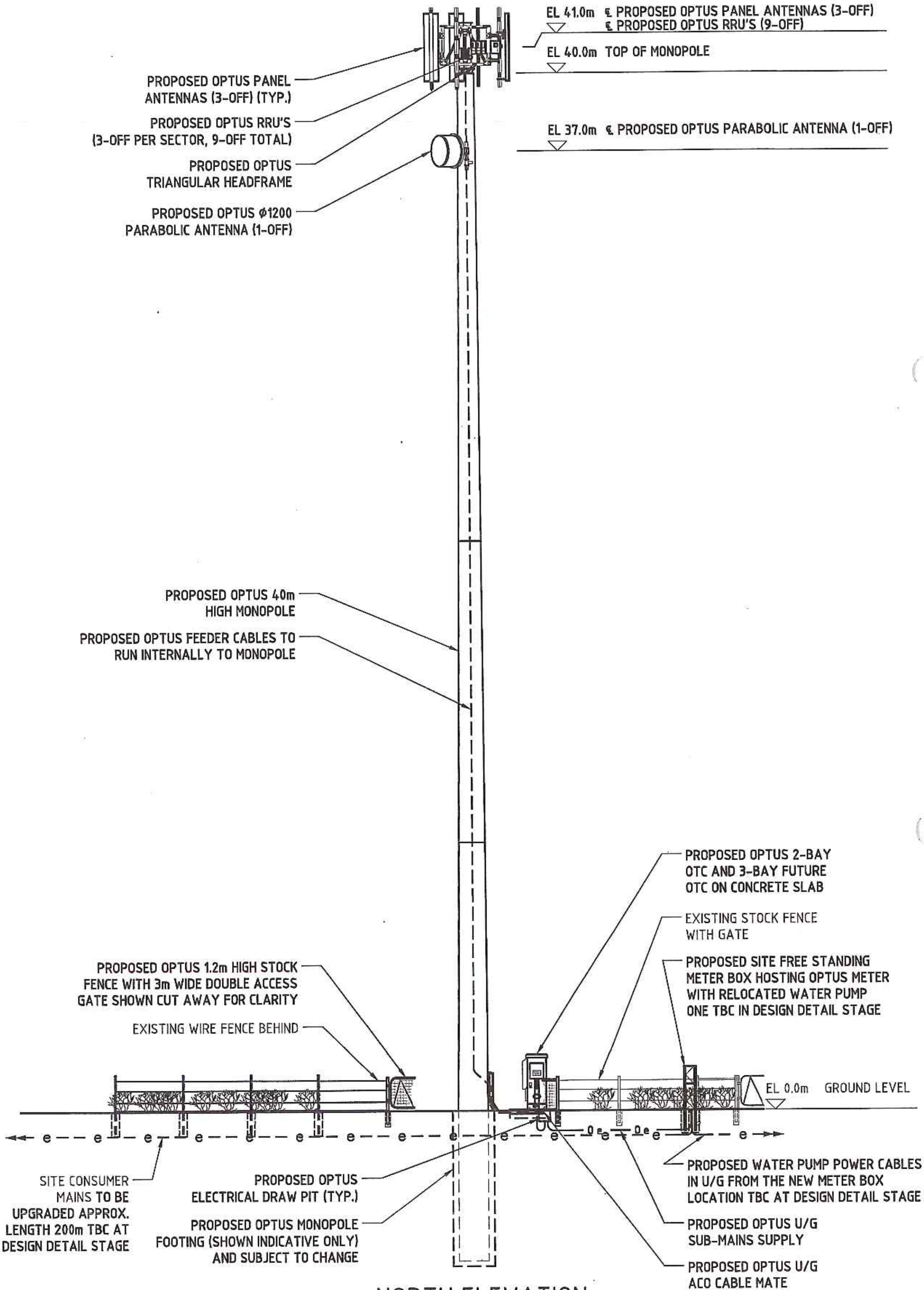
1-137

EXHIBITED

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



NORTH ELEVATION

SCALE 1:150

Rev	Date	Revision Details
01	23.10.17	ISSUED FOR APPROVAL

Consultant	CAD	Designer	Verifier	Approver
METASITE	JM	JL	MB	PJ

HUAWEI

HUAWEI TECHNOLOGIES (AU) PTY LTD
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CHATSWOOD NSW 2067
MELBOURNE
LEVEL 26, 485 COLLINS STREET
MELBOURNE VIC 3000

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE NO:- H0093F
CRESSY NORTH
105 GREEN RISES ROAD

Drawing Title: DRAFT SITE ELEVATION

Drawing Status: FOR APPROVAL

Drawing No. H0093F-P2 | Revision 01

A3

CAD File: D:\METASITE\PROJECTS\OPTUS\TAS\Optus - H0093F - Cressy North - DSL Greenfield - Drafting\H0093F_DSL.dwg Date: 20.10.2017 10:17 AM

APPENDIX C

OPTUS

Environmental EME Report
105 Green Rises Road, CRESSY TAS 7302

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

Date 17/11/2017 **RFNSA Site No. 7302008**

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 105 Green Rises Road CRESSY TAS 7302. 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 0.29% 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 2.67 V/m; equivalent to 18.89 mW/m² or 0.29% 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
Optus	LTE700 (proposed), WCDMA900 (proposed), WCDMA2100 (proposed), LTE1800 (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 105 Green Rises 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				2.097	11.66	0.16%
50m to 100m				1.8	8.64	0.11%
100m to 200m				2.099	11.69	0.19%
200m to 300m				2.67	18.89	0.29%
300m to 400m				2.56	17.35	0.26%
400m to 500m				2.01	10.72	0.16%
Maximum EME level				2.67	18.89	0.29
				249.61 m from the antennas at 105 Green Rises 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/m^2), microwatts per square centimetre ($\mu W/cm^2$) and milliwatts per square metre (mW/m^2). Note: 1 W/m^2 = 100 $\mu W/cm^2$ = 1000 mW/m^2.

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/m^2 = 375 $\mu W/cm^2$ = 3750 mW/m^2
WCDMA850	870 – 890 MHz	900 MHz	41.1 V/m = 4.50 W/m^2 = 450 $\mu W/cm^2$ = 4500 mW/m^2
GSM900, LTE900, WCDMA900	935 – 960 MHz	900 MHz	41.1 V/m = 4.50 W/m^2 = 450 $\mu W/cm^2$ = 4500 mW/m^2
GSM1800, LTE1800	1805 – 1880 MHz	1800 MHz	58.1 V/m = 9.00 W/m^2 = 900 $\mu W/cm^2$ = 9000 mW/m^2
LTE2100, WCDMA2100	2110 – 2170 MHz	2100 MHz	61.4 V/m = 10.00 W/m^2 = 1000 $\mu W/cm^2$ = 10000 mW/m^2
LTE2300	2302 – 2400 MHz	2300 MHz	61.4 V/m = 10.00 W/m^2 = 1000 $\mu W/cm^2$ = 10000 mW/m^2
LTE2600	2620 – 2690 MHz	2600 MHz	61.4 V/m = 10.00 W/m^2 = 1000 $\mu W/cm^2$ = 10000 mW/m^2
LTE3500	3425 – 3575 MHz	3500 MHz	61.4 V/m = 10.00 W/m^2 = 1000 $\mu W/cm^2$ = 10000 mW/m^2

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.

NOTE:
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MGA ZONE	55
E	506 811
N	5 387 210
AT	℄ OF MONOPOLE

SITE ADDRESS:
105 GREEN RISES ROAD,
CRESSY,
TAS 7302

NOTES:

1. **BASIS OF DESIGN**
   - SITE INSPECTION 14/09/2017
2. **PANEL ANTENNAS**
   - 1-OFF PER SECTOR (EACH MAX. 2.6m LONG) AT EL 41.0m
   - SECTOR 1 – 40°, SECTOR 2 – 180°, SECTOR 3 – 300°
   - MOUNTED ON TRIANGULAR HEADFRAME
3. **RRU'S & ANCILLARY EQUIPMENT**
   - RRU'S 9-OFF, 3-OFF PER SECTOR
   - COMBINERS 6-OFF, 2-OFF PER SECTOR
4. **TRANSMISSION**
   - Ø1200 PARABOLIC ANTENNAS (1-OFF) AT EL 37.0m
   - LINK SITE: TO BE CONFIRMED BY OPTUS
5. **EQUIPMENT SHELTER/OTC**
   - OPTUS ICS OTC (2-BAY AND 3-BAY FUTURE) SUPPORTED ON CONCRETE SLAB
6. **STRUCTURE**
   - OPTUS 40m HIGH CONCRETE MONOPOLE WITH TRIANGULAR HEADFRAME AT EL 41.0m
7. **FEEDER CABLES (HYBRID TRUNK CABLES)**
   - SIZE: 1 & 1/4" FIBRE TRUNK CABLE FOR ALL SECTORS (2-OFF)
   - LENGTH: 45m ALL SECTORS
   - SIZE: 1/2" (1-OFF)
   - LENGTH: 45m APPROX.
   - TO RUN IN OPTUS U/G ACO CABLE MATE & INTERNALLY IN MONOPOLE
8. **SITE ACCESS**
   - VIA UPGRADED EXISTING ACCESS ROUTE OFF CRESSY ROAD, TAS. CONTACT PROPERTY OWNER 1 WEEK IN ADVANCE IF VEHICLES ARE REQUIRED TO ACCESS THE PROPOSED SITE
9. **ANTENNA ACCESS**
   - VIA EWP
10. **POWER SUPPLY**
    - EXISTING CONSUMER MAINS TO BE UPGRADED APPROX. LENGTH 200m
    - NEW SITE GROUP METER ON FREE STANDING CABINET TO HOST OPTUS METER WITH RELOCATED WATER PUMP ONE
    - REINSTATE THE POWER TO WATER PUMP DISTRIBUTION BOARD ON PUMP SHED
    - FINAL DESIGN TBC AT DESIGN DETAIL STAGE
11. **OTHER**
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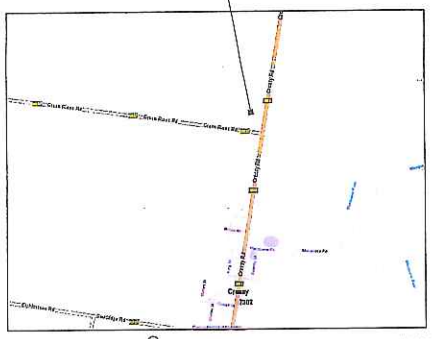
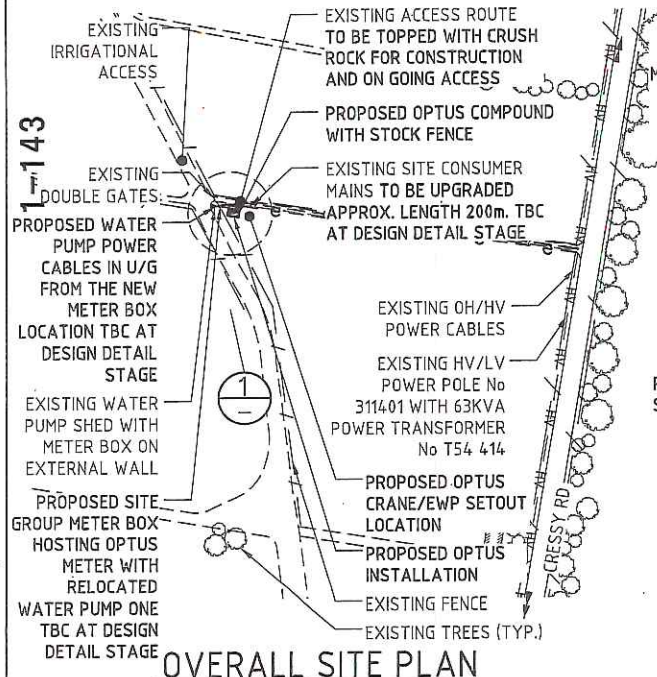
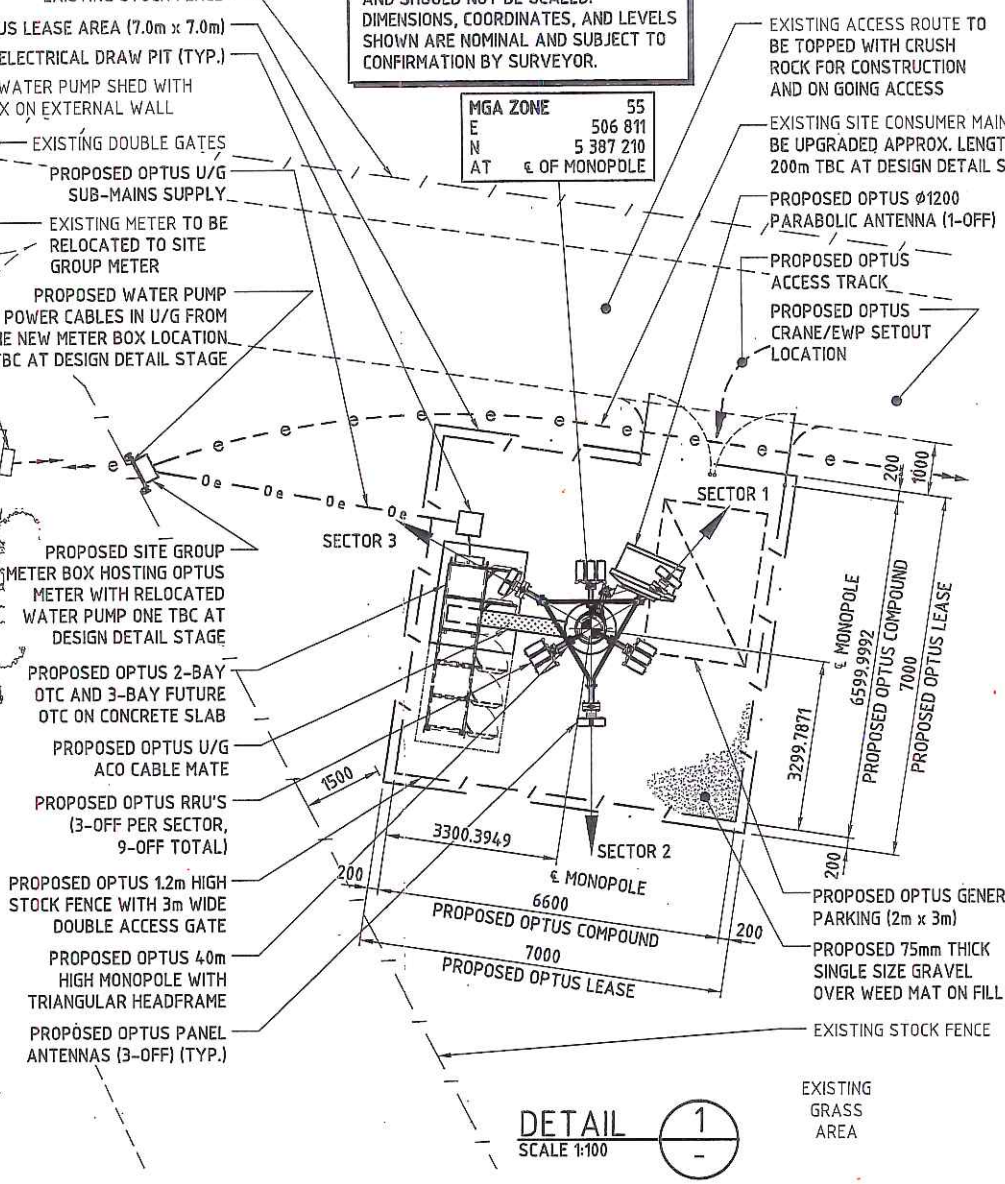


LOCALITY MAP



OVERALL SITE PLAN

NTS



DETAIL 1 / SCALE 1:100

Rev	Date	Revision Details					
01	23.10.17	ISSUED FOR APPROVAL	METASITE	JM	JL	MB	PJ
			Consultant	CAD	Designer	Verifier	Approver

HUAWEI TECHNOLOGIES (AU) PTY LTD
ABN 48 103 393 330
SYDNEY
LEVEL 6 TOWER B 700 PACIFIC HIGHWAY CHATSWOOD NSW 2067
TEL: +61 2 8020 3500 FAX: +61 2 9411 0533
MELBOURNE
LEVEL 24 459 COLLINS STREET MELBOURNE VIC 3000
TEL: +61 3 8610 0000 FAX: +61 3 9521 1575

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE NO:- H0093F
CRESSY NORTH
105 GREEN RISES ROAD

Drawing Title: DRAFT SITE LAYOUT

Drawing Status: FOR APPROVAL

Drawing No. H0093F-P1

Revision 01

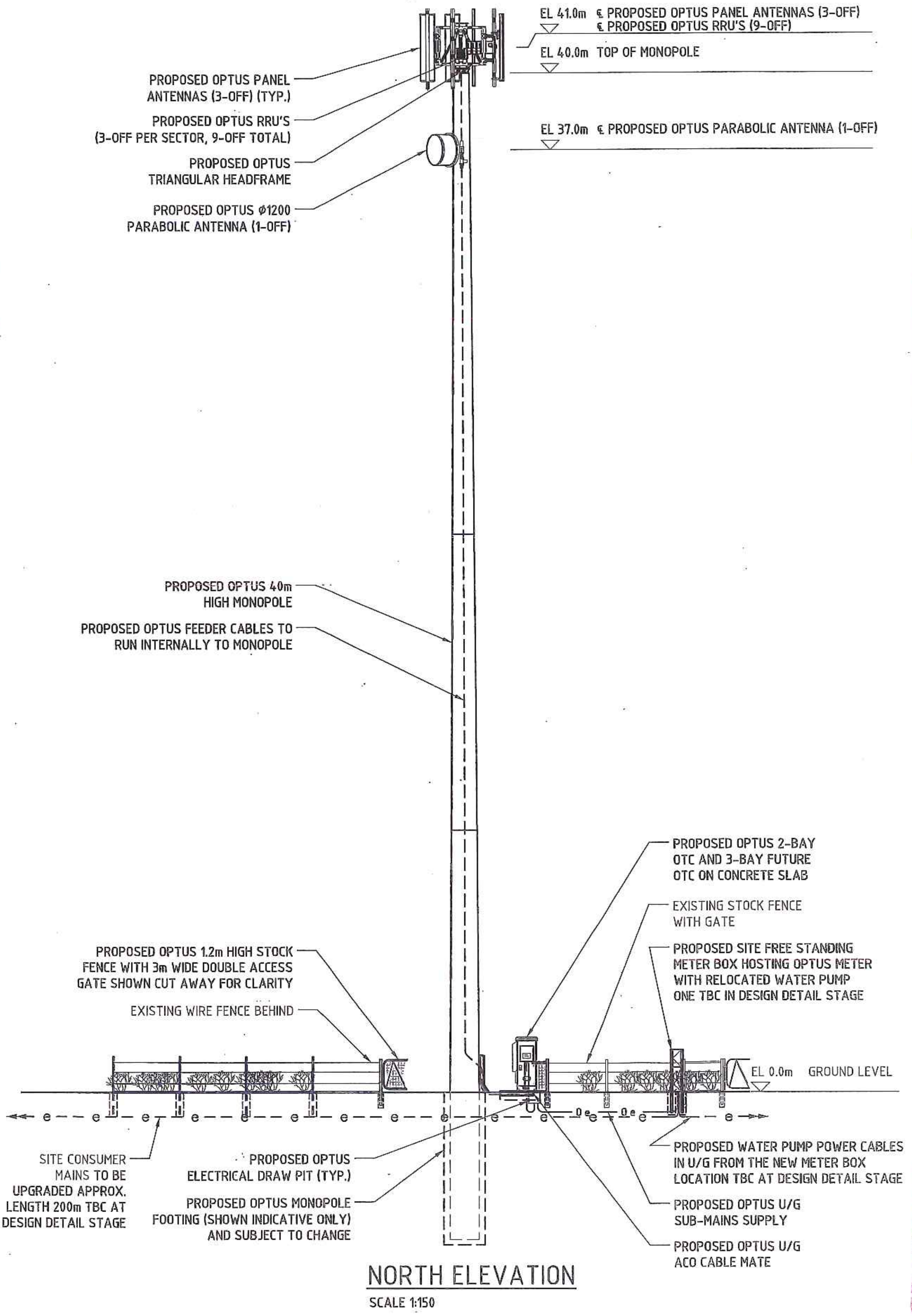
CAD File: D:\METASITE\PROJECTS\OPTUS\TAS\Optus - H0093F - Cressy North - DSL Greenfield - Drafting\H0093F_DSL.dwg Date: 20.10.2017 10:16 AM

20 10 0 10 20 30 40 50mm

A3

1-144

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



NORTH ELEVATION

SCALE 1:150

Rev	Date	Revision Details
01	23.10.17	ISSUED FOR APPROVAL

Consultant	CAD	Designer	Verifier	Approver
METASITE	JM	JL	MB	PJ

HUAWEI

HUAWEI TECHNOLOGIES (AU) PTY LTD
SYDNEY: LEVEL 6 TOWER B 799 PACIFIC HIGHWAY CHATSWOOD NSW 2067
MELBOURNE: LEVEL 24 459 COLLINS STREET MELBOURNE VIC 3000

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE NO:- H0093F
CRESSY NORTH
105 GREEN RISES ROAD

Drawing Title: DRAFT SITE ELEVATION

Drawing Status: FOR APPROVAL

Drawing No. H0093F-P2 Revision 01

A3

CAD File: D:\METASITE\PROJECTS\OPTUS\TAS\Optus - H0093F - Cressy North - DSL Greenfield - Drafting\H0093F_DSL.dwg Date: 20.10.2017 10:17 AM

EXHIBITED

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

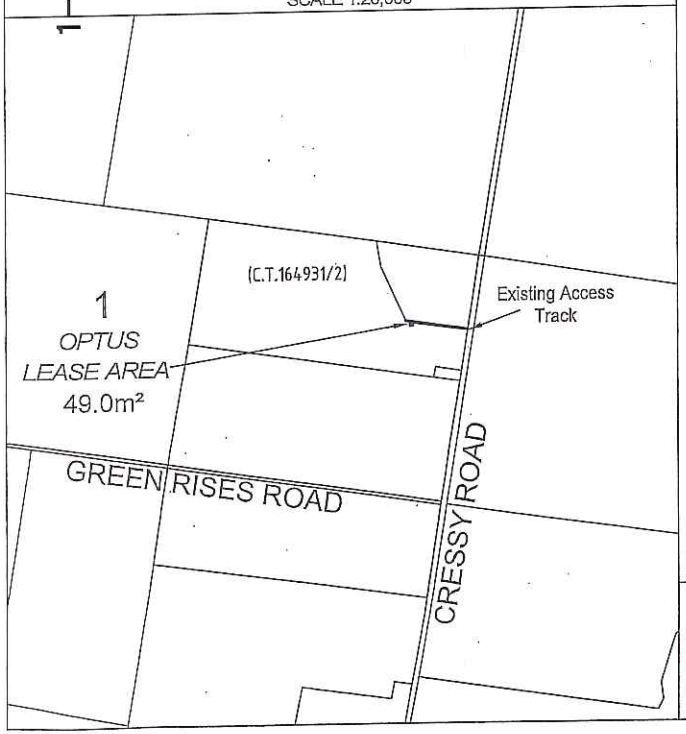
EXHIBITED

VIEW TOWARDS LEASE AREA

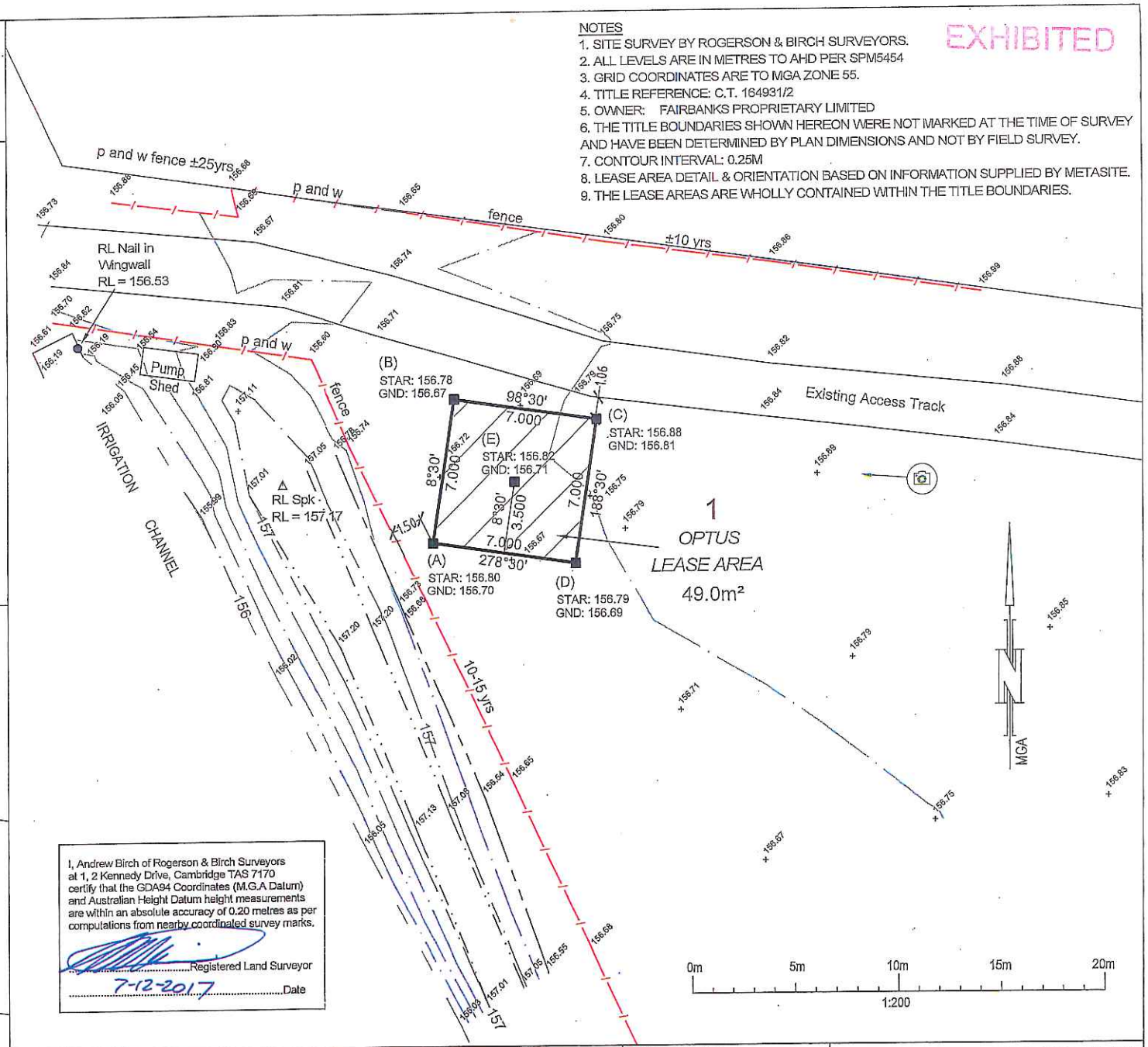
MGA COORDS

(A) CP	(C) CP	(E) MONOPOLE CP
E 506810.279	E 506818.234	E 506814.257
N 5387296.047	N 5387301.933	N 5387298.990

LOCATION DIAGRAM
SCALE 1:20,000



NOTES
1. SITE SURVEY BY ROGERSON & BIRCH SURVEYORS.
2. ALL LEVELS ARE IN METRES TO AHD PER SPM5454
3. GRID COORDINATES ARE TO MGA ZONE 55.
4. TITLE REFERENCE: C.T. 164931/2
5. OWNER: FAIRBANKS PROPRIETARY LIMITED
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 METASITE.
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

7-12-2017 .....Date

HUAWEI TECHNOLOGIES (AU) PTY LTD
SYDNEY
LEVEL 5 TOWER D 700 PACIFIC HIGHWAY GATES/GOOD JUDY 2007
TEL: +61 2 8020 5353 FAX: +61 2 8111 8533
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LEVEL 21 459 COLLINS STREET MELBOURNE VIC 3000
TEL: +61 3 8610 6000 FAX: +61 3 8621 1575

metasite
LEVEL 2, 20 CLARK STREET, CROWS NEST, NSW, 2065
T +61 2 9439 1006
WWW.METASITE.COM.AU

OPTUS yes

SITE No: H0093F CRESSY NORTH	LEASE DETAIL SURVEY PLAN	
LOCATION: 105 GREEN RISES ROAD CRESSY TAS 7302	SHEET 1 OF 1	DATE 07/12/2017
	SCALE 1:200	REF. No. METAS06 984002

OWNER FAIRBANKS PROPRIETARY LIMITED

FOLIO REFERENCE CT.164931/2

GRANTEE PART OF 20,000 ACRES GTD TO ROBERT KEATE, JAMES DRUMMOND, BUTLER ELPHINSTONE & STEWART MARJORIBANKS

PLAN OF SURVEY

BY SURVEYOR ANDREW STEPHEN BIRCH
ROGERSON & BIRCH SURVEYORS
UNIT 1 2 KENNEDY DRIVE CAMBRIDGE
PH 6248-5898 MOB. 0419-594-966

LOCATION

PARISH OF CRESSY
LAND DISTRICT OF WESTMORLAND

SCALE 1:10,000 LENGTHS IN METRES

Registered Number

SIO.174433

APPROVED
EFFECTIVE FROM .....

Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 123 (5038)

LAST UPI No.

LAST PLAN No. SP.164931

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

SURVEY FOR LEASEHOLD ESTATE ONLY

(SP109192)

(PD/3) LO

(SP164931)

(SP164931)
(D100586)

(P246381)

(D100586)

1
49.0m²

SEE ENLARGEMENT

(1/9) WEST

CRESSY ROAD

(SP50936)

CONV. 48/2018

(P131343)

GREEN RISES ROAD

(SP164931)
(D100586)

28.74
296°21'

98°30'
7.00
8°30'
7.00
1
49.0m²
7.00
188°30'
7.00
278°30'

(SP164931)

(D100586)

ENLARGEMENT
SCALE 1:200

EXHIBITED

COUNCIL DELEGATE DATE


GREEN RISES ROAD
CRESSY ROAD
Approx Setback 198m from Cressy Rd
Approx 8m setback from north boundary
49.0m²
SEE ENLARGEMENT
(P246381)
(1/9) WEST
(SP164931)
(D100586)
(P131343)
CONV. 48/2018
(SP109192)
(SP164931)
(D100586)
(SP50936)
(PD731)
B51
Green Rises Rd
Cressy Rd
© 2018 Google
Image © 2018 CNES / Airbus
Google earth

EXHIBITED

1–148

PROPOSED OPTUS FACILITY

Before

After

This is a representation only. The final installation may vary slightly in size, shape and/or colour.

Rev.	Date	Created	Revision Description
A	21.12.17	ZV	Preliminary

pixelwise
4/35 Morton St
Wollstonecraft
NSW 2065
P: +61 2 9460 2919
F: +61 2 9460 1673
www. pixelwise.com.au

metasite
Level 5
3 Bowen Crescent
Melbourne, VIC 3004
t: 03 9804 5324
www.metasite.com.au

Site Address
105 Green Rises Road
Cressy
TAS 7302

BTS Site Name : **Cressy North**
Site Number. : **H0093F**

Drawing title
Photomontage View 1

Drawing No. : **M01**

OPTUS

Approved :
Date : 21.12.17
Checker :
A

1–149

PROPOSED OPTUS FACILITY

Before

After

This is a representation only. The final installation may vary slightly in size, shape and/or colour.

Rev.	Date	Created	Revision Description
A	21.12.17	ZV	Preliminary

pixelwise
4/35 Morton St
Wollstonecraft
NSW 2065
P: +61 2 9460 2919
F: +61 2 9460 1673
www. pixelwise.com.au

metasite
Level 5
3 Bowen Crescent
Melbourne, VIC 3004
t: 03 9804 5324
www.metasite.com.au

Site Address 105 Green Rises Road Cressy TAS 7302	BTS Site Name : Cressy North	OPTUS	Approved :
	Site Number. : H0093F		Date : 21.12.17
Drawing title Photomontage View 2	Drawing No. : M02	Checker :	A

LAUNCESTON AIRPORT
In the heart of Tasmania

P.O. BOX 1220
LAUNCESTON, TASMANIA 7250
PHONE: (03) 6391 6222
FAX: (03) 6391 8580

2 Mar 2018

Erin Boer
Planning Officer
Northern Midlands Council
13 Smith Street
LONGFORD TAS 7301

Dear Erin,

RE: Planning Application P17-307 – Telecommunications Facility 105 Green Rises Road, Cressy

I refer to the above development application and after review of the proposal and prescribed airspace regulations, provide the following comments:

- The site does not lie within the ANEF contours mapped and laid out in the Launceston Airport Masterplan 2015,
- The proposed development will not infringe the Launceston Airport Obstacle Limitation Surfaces, and;
- The proposed use will not unduly attract wildlife which would have an effect on the safety of airport operations.

Therefore: Launceston Airport does not object to the development planning permit **P17-307 – Telecommunications Facility 105 Green Rises Road, Cressy.**

Please note, Launceston Airport will be referring the application to Flysafe who *may* impose obstacle lighting and painting requirements. We will notify you of this requirement should it be required.

If you or the applicant has any questions relating to the above comments, please don't hesitate in contacting me.

Yours sincerely,

Ilya Brucksch-Domanski
Manager Planning and Development
Australia Pacific Airports (Launceston) Pty. Ltd.

Erin Boer

From: Hills, Garry (StateGrowth) <Garry.Hills@stategrowth.tas.gov.au>
Sent: Monday, 12 February 2018 3:45 PM
To: NMC Planning
Subject: RE: Referral to Department of State Growth of Planning Application P17-307 - 105 Green Rises Road, CRESSY

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Sent to ECM

Our Ref: D18/33709

Rosemary, the Department have no comment to make regarding this proposal.

Cheers, Garry

Garry Hills | Senior Traffic Engineering Officer
State Roads Division | Department of State Growth
GPO Box 536, Hobart TAS 7001
Phone: (03) 6777 1940
www.stategrowth.tas.gov.au

DEPARTMENT OF STATE GROWTH COURAGE TO MAKE A DIFFERENCE THROUGH:

From: NMC Planning [mailto:planning@nmc.tas.gov.au]
Sent: Friday, 9 February 2018 9:54 AM
To: Development (StateGrowth) <Development@stategrowth.tas.gov.au>
Subject: Referral to Department of State Growth of Planning Application P17-307 - 105 Green Rises Road, CRESSY

09-Feb-2018

Department of State Growth
via email to: Development@stategrowth.tas.gov.au

Referral to Department of State Growth of Planning Application P17-307 - 105 Green Rises Road, CRESSY

The following planning application has been received under the *Northern Midlands Interim Planning Scheme* 2013.

NMC ref no:	P17-307
Site:	105 Green Rises Road, CRESSY
Proposal:	Telecommunications Facility (40m high monopole, antennas & ancillary equipment) - vary height in rural zone & within irrigation district
Applicant:	Metasite Pty Ltd (obo Optus Mobile Pty Ltd)
Use class:	Utilities
Zone:	Rural Resource,
Development status:	Discretionary

ATTACHMENT

17th February, 2018

To the General Manager

Northern Midlands Council

PO Box 156

Longford, 7301

Dear Sir

I am writing in regards to the proposed erection of a telecommunications facility at 105 Green Rises Road, Cressy. My husband and I own the property adjacent to the proposed site at 1018 Cressy Road, Cressy. We strongly object to this proposal and ask that you consider our argument before making a decision.

I have read the application and firstly I would like to say that the address of 105 Green Rises Road is misleading and many people, who will probably be affected, would not realise that this structure is actually in the paddock on Cressy Road.

The applicant makes reference several times about the level of visual impact:

(2.2) That the character of the area will not be detrimentally affected by the proposal and the position of the monopole mitigates visual impacts.

(4.1) Proposed works will not result in any adverse visual or environmental impact to the surrounding environs within the Cressy locality.

(4.8) The assessment identifies the facility as having a medium level of visual impact, depending on the viewing distance.

These points are both justified by the applicant because of the advantages gained by the public by receiving improved telecommunications services.

As a resident living in the adjacent paddock, (within the Cressy locality), I feel that this structure will have a severe visual impact for my family. It will be in full view from every window in the living areas in my house. As a point of interest, our phone and internet are with another major carrier and our service is excellent, so the argument of improved service for Optus clients is of no concern to us.

There is a point made in the application about the acoustic impact of this facility and that because of the remote location, noise will not be a factor. In relation to my property, the facility is not in a remote location. I would argue that several air conditioning units operating at once in close proximity to my property, will create an increased level of noise compared to the serenity we enjoy at the moment.

My biggest concern is for the health of my family. Although the applicant states that all Health and Safety regulations are adhered to when erecting telecommunications towers, I have researched EME exposure and the long term effects on health. It is interesting (and concerning) to note, that all the research that telecommunications companies offer when reassuring the public about EME, are carried out by the companies themselves. I have read articles where studies have been conducted over time and from health professionals, and I feel that there is a significant long term health risk to my family from this tower. As we move into the future and more of these facilities are built to satisfy the demands of technology, what will the impact be on our health? I would rather know that I minimised the risk to my family by fighting to remove any contributing factors, than find out in 20 years that my child had a terminal disease caused by exposure to radiation from a phone tower. I have attached some information which support my concerns for the health risks to my family.

In a final impact statement, the application makes reference to surrounding rural properties: that contain agricultural pursuits, cropping, pivot machines, open fields and areas of large vegetation (3.2) however, makes no mention of the two residential properties in very close proximity to the proposed site. This district is a rural farming community, however, these farms are run by people and there are people in the immediate area that will be severely impacted if this tower goes ahead, notwithstanding, the devaluation of our properties.

I understand this company believes there is a need for this facility in our community, but I implore them to consider alternative sites, further away from residential homes.

I ask that serious consideration is given before moving forward with this proposal.

Yours sincerely

Amanda Blake

EMR Australia Pty Ltd

Living more safely with electromagnetic radiation

EMR Australia PL

ABN 82 104 370 658
PO Box 347
Sylvania Southgate NSW 2224
02 9576 1772
contact@emraustralia.com.au
www.emraustralia.com.au

5 March 2012

Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600

Inquiry into the Telecommunications Amendment (Mobile Phone Towers) Bill 2011

Dear Secretary

Thank you for the opportunity to provide comment on the above Bill. I do so as a the Deputy Chair of the Communications Alliance committee revising the 'Code for the Deployment of Mobile Phone Network Infrastructure', as community representative on the ARPANSA EME Reference Group, as author of two books on electromagnetic radiation and publisher for fifteen years of the quarterly report *EMR and Health.*

There is an urgent need to revise legislation relevant to the construction of radiocommunications and telecommunications infrastructure. Existing legislation is deficient in the following regards.

1. Inconsistencies in legislation

Current legislation is convoluted and inconsistent. For example:

- The Code for the Deployment of Radiocommunications Infrastructure applies only to telecommunications carriers but not to companies constructing infrastructure that emits similar radiation-emitting infrastructure, such as broadcast equipment or radio masts for 'smart' meter technologies.
- The Telecommunications (Low-impact Facilities) Determination 1997 exempts some telecommunications equipment from local government planning, even though the radiation they emit may be equivalent to that emitted by non-Low Impact Facilities.

2. Abrogation of democratic process
Existing telecommunications legislation effectively disempowers the community. The general public has no legal rights whatsoever when it comes to the location of infrastructure within its own neighbourhood.

The ACIF Code for the Deployment of Radiocommunications Infrastructure effectively ensures that communities receive adequate notification about facilities at new sites. It does not oblige carriers to take any notice whatsoever of community feedback.

This is a violation of the community's democratic rights.

3. Radiofrequency radiation
Telecommunications and radiocommunications infrastructure emit radiofrequency radiation that was classed by the International Agency for Research on Cancer as a class 2B carcinogen in May 2011. There are studies that show adverse effects on communities living near telecommunications transmitters and some people are known to be more sensitive to this radiation than others.

Existing legislation requires that carriers merely comply with the ARPANSA Standard, the 'Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz (2002)'. However, this standard is inadequate to protect human health for the following reasons:

- It protects only against the short-term, acute, heating effects of radiofrequency radiation and not the long-term, nonheating effects that are relevant for people living or working near telecommunications transmitters.
- It addresses effects of single exposure situations – not exposures to cumulative frequencies and cumulative toxins with which the environment is replete.
- It fails to consider the effects on particularly vulnerable populations, such as those who are hypersensitive to this radiation or have cancer. (Cancer cells are more conductive than normal cells.[1])
- There are no long-term studies of the effects of radiofrequency radiation on human populations.
- Scientific studies have found adverse effects on the body, suggestive of illness, at levels of exposure thousands of times lower than the ARPANSA standard.[2]

There may be large numbers of people in Australia adversely affected by radiofrequency radiation at present. The Australian government has no information on this phenomenon because it has no mechanism for observing and recording it.

4. Role of the government
The Australian government has a duty of care to the Australian public, to future generations and to the environment that supports humanity.

---

[1] Joines WT et al, 'Microwave power absorption differences between normal and malignant tissue', *Int J Radiat Oncol Biol Phys*.1980 Jun;6(6):681-7.

[2] BioInitiative Working Group, 'BioInitiative Report', 2007, www.bioinitiative.org

However, in the matter of telecommunications infrastructure, it has demonstrated itself to be biased towards the telecommunications industry at the expense of the community, public health and the environment. For example, the telecommunications industry has been involved in:

- the Standards Australia TE7 committee
- the ARPANSA working group for the 2002 RF standard
- the NHMRC committee that allocated funding for research on the health effects of radiocommunications infrastructure
- the Australian Centre for RF Bioeffects Research (ACRBR)
- the Australian Communications Industry Forum (ACIF) Code for the Deployment of Radiocommunications Infrastructure and the Communications Alliance revision of that Code, effective from July.

The Federal government is the recipient of substantial revenue from the telecommunications industry. It is predicted to receive up to $4 billion dollars for the renewal of carrier spectrum licences and additional income is expected from the sale of spectrum in the 700 MHz band [3].

In order to demonstrate impartiality, the Senate Committee undertaking this inquiry would be advised to accept evidence from witnesses who do not directly profit from the propagation of the telecommunications network. We note that witnesses at the hearing of 17 February are all affiliated with either government agencies or the telecommunications industry. This does not encourage the public perception that the Inquiry is addressing, or interested in addressing public interest.

The witnesses invited to address the inquiry are:

- ALTHAUS, Mr Chris, Chief Executive Officer, Australian Mobile Telecommunications Association
- CHEAH, Mr Chris, Authority Member, Australian Communications and Media Authority
- COLTON, Dr Imogen, Manager, Carrier Powers and Immunities, Department of Broadband, Communications and the Digital Economy
- JOHNS, Mr Michael, Project Manager, Communications Alliance Ltd
- LARSSON, Dr Carl-Magnus, Chief Executive Officer, Australian Radiation Protection and Nuclear Safety Agency
- LONEY, Mr Mark, Acting General Manager, Communications Infrastructure Division, Australian Communications and Media Authority
- MARTIN, Dr Lindsay, Manager, Non-Ionising Radiation, Radiation Health Services, Australian Radiation Protection and Nuclear Safety Agency
- MASON, Mr Philip, Assistant Secretary, NBN Regulation Branch, NBN Infrastructure, Department of Broadband, Communications and the Digital Economy
- McKENZIE, Mr Ray, Manager, Mobile Carriers Forum, Australian Mobile Telecommunications Association
- QUINLIVAN, Mr Daryl, Deputy Secretary, Infrastructure Group, Department of Broadband, Communications and the Digital Economy
- STANTON, Mr John Leslie, Chief Executive Officer, Communications Alliance Ltd

[3] *Australian* 02.01.12; *Australian Financial Review* 10.02.12

5. Responsibility
It is incumbent on the Inquiry to address the issue of responsibility for the long-term impacts of telecommunications technology.

It is premature to presume that the radiation it emits is safe. In the event that it is a public health risk, who will bear the cost of litigation and of reconstituting Australia's communications network? Does the Australian government have insurance to cover this eventuality or does it require carriers to do so?

I suggest that the public health burden of smoking, asbestos and lead are nothing compared to burden that society will face from exposure to radiofrequency radiation should it be proven to cause or contribute to health problems.

Accordingly, there is an urgent need to address existing telecommunications legislation. I would like to congratulate Mr Wilkie for proposing amendments to this legislation, in order to help address public concerns.

We submit the following comments on the proposed amendments.

1. Extension of obligations
I support the extension of the obligations under schedule 3 of the Act to agents of carriers who install or maintain facilities.

I request a further extension of these obligations to other entities who install or maintain radiofrequency radiation-emitting infrastructure for communications, such as electricity companies who construct radio networks for the operation of smart meters.

2. Exemption from Low Impact Facilities Determination
I support the exemption for 'towers' from the Low Impact Facilities Determination.

3. Definition of 'Maintenance'
I support a definition of 'Maintenance' that excludes infrastructure that will increase the level of electromagnetic radiation emitted by a facility.

4. Ministerial Code of Practice
I support the concept of a Ministerial Code of Practice to apply to all telecommunications carriers, their agents and those bodies who construct radio communications networks such as electricity utilities.

I propose that the amended Communications Alliance 'Mobile Phone Base Station Deployment' (the revised version of the ACIF 'Code for the Deployment of Mobile Phone Network Infrastructure') be adopted for this purpose with amendments (below). The purpose for this is that the Code requires that carriers adopt a precautionary approach when designing, siting and operating infrastructure and it specifies a very high standard for notifying and engaging with communities for new sites. However, it does not apply to facilities that require council approval and requirements for establishing facilities at existing sites are less rigorous. Applying it to all facilities would ensure a high standard of notification and consistency for all infrastructure.

The proposed amendments to the Code are as follows.

a) The Consultation requirements in section six of the Code apply to new and existing sites for low impact and non-low impact facilities.

b) An independent body be created to make judgments about whether and how a facility proposal is to proceed based on the outcome of the community consultation process.

The purpose of this is that, for non-DA facilities, carriers are the arbiter on whether or not to take community feedback into account and commercial incentives generally outweigh community interests and health concerns.

5. Community-sensitive sites
The proposed bill requires that facilities cannot be located within 200 metres of community sensitive sites.

I submit that this amendment would not ensure a reduction in EMR exposure because a carrier, who locates a base station at 200 metres from a sensitive location, can simply turn up the power of the transmitter to ensure the same coverage at the sensitive location. In other words, the proposal does not ensure lower-EMR exposures at sensitive locations, which was the purpose of introducing sensitive locations in the original ACIF Code.

6. Facilities maps
I support the proposal for ACMA to provide maps of the locations of telecommunications facilities.

I propose this map is extended to include the locations of other radiofrequency radiation-emitting facilities, including smart meter tower networks, paging networks and so on.

7. Role of the ACMA
The bill proposes that the Ministerial Code of Practice allow complaints to the ACMA.

I believe it is important to establish an alternative body which will be empowered and willing to address complaints and to arbitrate in disputes,

8. Compliance with the standard
The legislation should include a provision that the ACMA, as regulator, be able to demonstrate that the emissions of all RF-radiation emitting facilities (inside and outside the home) comply with the ARPANSA RF standard in any given location. The ACMA's ability to licence radiofrequency radiation-emitting infrastructure must be contingent upon its ability to demonstrate this compliance.

The cumulative emissions of all RF-radiation emitting facilities need to be taken in to account especially, as this is not addressed in the standard.

Further, I reiterate the inadequacies of the ARPANSA standard to protect public health from the long-term, low-level, chronic exposures that occur with

telecommunications infrastructure. In the event that low-level exposures from base stations do produce carcinogenic outcomes in the long-term, I propose that the legislation requires carriers to guarantee compensation to those thus affected.

I thank you for your consideration of these comments.

Yours faithfully

Lyn McLean
Managing Director

Mobile phone towers – the price of connectivity

Mobile phone towers or antennas are a phenomenon of the age of instant connectivity and they affect us all. They emit radio-frequency radiation that affects our bodies and potentially our health, yet legislation presently gives extensive rights to the telecommunications industry at the expense of the public.

LYN McLEAN

Chances are that, wherever you live, you are being affected by the radiation from at least one mobile phone antenna. Chances are that, wherever your children go to school, preschool or playgroup, they are being affected, too. Wherever you live, work or play, if your mobile phone is receiving a signal from a mobile phone antenna, then so are you.

There are already tens of thousands of mobile phone antennas in Australia. With another 7000 expected to be built in the next two years alone, mobile phone antennas are an issue that affects every one of us, especially if we live in an urban area. What are their implications for our health, where can they be erected, and what are our rights?

Mobile phone antennas, sometimes called phone towers or base stations, are the price we pay for instant connectivity. They range from the looming scaffold-like towers that dominate the suburban skyline to arrays of panel antennas located on poles or rooftops to tiny microcells located on inner-city traffic lights, in train stations or in shopping complexes.

Each of these antennas services the mobile phones in its local area or cell (hence the description "cell phones"). These cells can be anything from metres to kilometers in diameter, depending on the power of the antenna's signal.

Each of these antennas relays signals to and from the mobile phones it services in the form of radio-frequency radiation. If these signals were visible, we would see ourselves bathed in multiple layers of radiation. Imagine a blue signal from one mobile phone antenna overlaid with a red signal from another and a yellow signal from a third.

What is the impact of this radiation? It is generally accepted that radio-frequency radiation affects our bodies. What is less certain is just how seriously.

The Australian Government and the telecommunications industry take the view that the radiation from telecommunications networks is not a health risk. 'The weight of national and international scientific opinion is that there is no substantiated evidence that RF emissions associated with living near a mobile phone base station or telecommunications tower poses a health risk.'[1]

Put simply, this means that a considerable number of studies have found that there is no evidence of risk from radio-frequency. This is hardly surprising given that much scientific research on this issue has been conducted and/or funded by the telecommunications industry itself.

Evidence of risk

Even so, many studies *have* found evidence of risk. Researchers have found that radio-frequency radiation from various sources is *associated with* brain tumours, cancer, leukemia, heart problems, reproductive problems and effects on the nervous system, learning and performance, sleep, immunity, hormones and genes.

Only a few studies have been conducted specifically on mobile phone antennas themselves. In France, Dr Roger Santini conducted a survey of people living near mobile phone antennas. He found an increased rate of unpleasant symptoms within 300 metres of the antennas. People living within 10m of an antenna experienced symptoms of nausea, loss of appetite, visual disruptions and difficulty in moving. People living within 100m of an antenna experienced symptoms of irritability, depression, concentration problems, memory loss, dizziness and reduced libido. People living 100-200m from an antenna experienced headaches, sleep problems, "feelings of discomfort" and skin problems. People living between 200 and 300m from an antenna experienced a high rate of fatigue. [2]

A study in Spain produced similar results. Dr Gerd Oberfeld and his team assessed the impact of two GSM antennas on the population of the town of Murcia. They found that exposure resulted in increased reports of fatigue, irritability, headaches, nausea, loss of appetite, sleeping disorders, depression, feelings of discomfort, difficulty in concentration, memory loss, visual disorder, dizziness and cardiovascular problems. [3]

Not surprisingly, people are beginning to report uncomfortable effects from living near mobile phone antennas. Over the years I've been contacted by people experiencing motion sickness, fatigue, concentration problems, illness and seizure-like symptoms.

In the UK communities concerned about mobile phone antennas have begun collecting data. They have found a surprising number of cancer cases in the areas of highest exposures near towers that have been in place for many years. Although this is not a scientific study, it does suggest the need for further investigation, particularly of the long-term health impacts.

The effects of radio-frequency radiation on the general population have already come to the attention of medical practitioners. On 9 October 2002 a group of German doctors expressed their concerns that this radiation was having an adverse effect on their patients in what has come to be known as the Freiburger Appeal. They wrote, 'we can see ... a clear temporal and spatial correlation between the appearance of disease and exposure to pulsed high-frequency microwave radiation (HFMR), such as installation of a mobile telephone sending station in the near vicinity [and] intensive mobile telephone use.' [4]

The standard argument

The emissions from mobile phone antennas are well within Australia's safety standard.[5] Typically, the amount of radiation you might expect to receive in the area around a base station is around 1-2 microwatts per square centimetre (W/cm2). This is around one thousandth of the standard which allows people to be exposed to around 1000 W/cm².

This would be extremely reassuring – if the standard were in fact protecting public health.

The Australian standard protects people primarily from health problems that are known to be caused when radiation heats the body by 1 degree C. And this it does admirably. However, considering only the heating effects of radiation may be like considering only the sound of a bullet being fired from a gun.

There is now a great deal of evidence that radiation is producing non-heating (athermal) effects on the body and this could explain the health problems that are being reported. There are now hundreds of studies that show adverse effects from radiofrequency radiation at non-heating levels of exposure – levels that are far below international standards. However, the standard provides no protection against any of them.

The Spanish phone antenna study mentioned above found unpleasant symptoms at levels a thousand times lower than the Australian standard. The authors wrote, 'based on the data of this study the advice would be to strive for levels [of exposure] ... equal to a power density of ... 1 W/cm².'

Some scientists have suggested mechanisms to explain how the effects at non-heating levels of exposure might occur. For example, radio-frequency radiation has been shown to lower levels of the hormone melatonin, a free-radical scavenger that protects against cancer. Exposure has been shown to result in cells releasing heat shock proteins (HSPs) which have also been associated with cancer. While none of these effects has yet been proven to cause health problems, they are certainly suggestive of risk.

Whatever the scientific and anecdotal evidence, for radio-frequency radiation to be a risk to health would be a monumental inconvenience to Australia's Government and telecommunications industry. The Federal Government has received billions of dollars from spectrum sales and licence fees and reaps lucrative income from the latter each year.

David vs Goliath

The telecommunications legislation enacted by the Federal Government gives extensive rights to the telecommunications industry and leaves precious few for the community. A 1997 Determination allows carriers to override local government and state government regulations and install what is known as "low impact" antennas without the approval of the council or local community.[6] (More on low impact facilities later.)

In fact, until two years ago, carriers could install these facilities without even notifying councils or communities and surprised neighbours would often arrive home to find an antenna being built next to their home. Subsequently a code was introduced to improve matters slightly. The Code for the Deployment of Radiocommunications Infrastructure, introduced in 2002, ensures that councils and local neighbours are notified and/or consulted about low impact facilities but does not empower them to reject the antenna.

Yet the carriers' powers extend far beyond the ability to construct low impact facilities without council or community approval.

Legislation currently allows a carrier to enter your land and build an antenna on it with or without your approval. The 1997 Telecommunications Act allows carriers to enter any land to assess it. It empowers them to build a "low impact" facility on the land without the landowner's approval. Further, it provides the option for the carrier to obtain a special permit to construct a non-low impact antenna on the land without the landowner's permission.[7]

While legislation allows carries to override state and council legislation in building these antennas, it allows the community, at best, the opportunity to submit comments about a proposed antenna to the carrier or council. Needless to say, these submissions carry no real weight and their recommendations are not always heeded. The failure of telecommunications legislation to provide democratic rights for the community has led to a plethora of impassioned anti-phone-tower protests in this and other countries.

Is it really "low impact"?

The Australian Government has exempted "low impact" facilities from state and council planning regulations in order to facilitate the rapid rollout of telecommunications networks, using the argument that they are an essential service.

However, are these facilities "low impact" and do they represent an essential service?

First, let me make it clear that so-called "low-impact" facilities are not low impact in terms of the radiation that they emit. They can emit exactly the same amount of radiation – or theoretically even more – than an antenna that is not classified as

continued on page 22

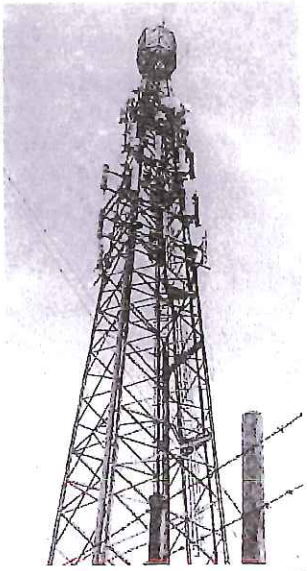

PHOTO: LYN McLEAN

continued from page 20

"low impact".

The basis for classifying antennas as "low-impact" is their appearance! Theoretically, smaller antennas fit the classification as "low-impact". Yet in reality "low impact" facilities are not low visual impact at all, for they are often to be found in clusters on rooftops or on the top of tall poles.

Many of the antennas that are currently being built, including antennas of the new 3G [third generation -Ed] networks, are classified as "low impact". Because network requirements mean that these antennas must be built more closely together (sometimes as close as 900m), they are being constructed throughout residential areas, next to homes, schools and children's playing fields.

Nor, it might be argued, are mobile phones an essential service. While the ability to make phone calls has obvious benefits for convenience and safety, newer, more novel features do not. The ability to connect to the internet, to take photos and videos, to text friends, to act as an alarm clock, to download interesting ring tones – are hardly essential services. Yet these are the features that are driving the construction of at least four 3G networks and the building of thousands of antennas in our communities.

Inasmuch as mobile phone antennas facilitate the operation of mobile phones, their construction is driven by our use of this technology. As long as we continue to use the technology often, we create demand for the antennas. As long as we continue to delight in the novel features of mobile phone technology, we create the demand for third generation – and subsequent generation – networks that that will provide us with connectivity. And it may just be connectivity from an antenna quite close to our house.

LYN McLEAN IS DIRECTOR OF EMR AUSTRALIA PL, AUTHOR OF THE BOOK "WATT'S THE BUZZ? UNDERSTANDING AND AVOIDING THE RISKS OF ELECTROMAGNETIC RADIATION" AND EDITOR OF THE QUARTERLY NEWSLETTER "EMR FOCUS".

Biography
1 ARPANSA Fact Sheet no 9, www.arpansa.gov.au
2 Santini et al, Pathol Biol 50: 369-373, 2002
3 Oberfeld, G et al, "The Microwave Syndrome – Further Aspects of a Spanish Study" soon to be published.
4 http://www.emrnetwork.org/news/IGUMED
5 "Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz"
6 Telecommunications (Low-Impact Facilities) Determination 1997 (as amended)
7 This is known as a Facilities Installation Permit and it can be obtained from the Australian Communications Authority.

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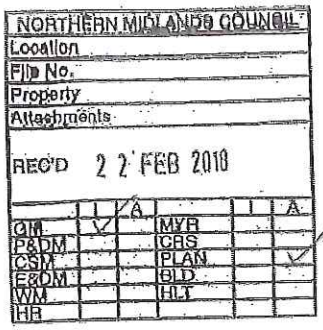

Mrs. Beverley Tubb,

7 Gatenby Street,

Cressy. 7302

The General Manager,

Northern Midlands Council

Smith Street,

Longford. 7301

For the attention of the Mayor and members of the Northern Midlands Council.

Dear Sir or Madam,

I draw your attention to the planning application P17-307 (CT 164931/2) put forward by 105 Green Rises Road, Cressy to build a telecommunications facility comprising a monopole , antennas and ancillary equipment which is due to be considered by Council shortly.

I wish to register a strong protest to this application.

I am concerned by the deceptive nature of this proposal. The address given is that of 105 Green Rises Road which is correct as far as the property owner is concerned. However, the proposed site is actually within a few hundred metres of the Cressy/Longford road with access to be gained from this roadway, and is nowhere near Green Rises Road.

My most pressing concern is the very close proximity of the proposed installation to the property at 1018 Cressy Road where my daughter, son-in-law and grandchildren reside. The proposal makes much of the benefit to tourism of an improved phone service and the minimal disruption to farming practises, but is dismissive of the impact this facility may have upon the life and welfare of the residents forced to live within such close proximity to this installation. The visual impact of the facility and the noise pollution of multiple heavy duty air conditioning units which will be necessary for the efficient running of the installation has not been addressed or received any consideration in any of the literature provided.

If the owners of the property and Optus are anxious to build this, surely with a property the size of Fairview, a more appropriate site could be considered which does not negatively impact upon the lives of residents who live so near the proposed site.

I urge the Council to carefully consider the deceptive nature of this proposal, and the likely impact on the lifestyle and possible environmental and health issues this installation may have on nearby residents now and in the future.

Yours sincerely

B M Tubb

Beverley Tubb

Former resident of 1018 Cressy Road and concerned family member

Site Reference: H0093 Cressy North

6 March 2018

Erin Boer
Planning Department
Northern Midlands Council
PO Box 156
LONGFORD TAS 7301

Dear Erin,

105 Green Rises Road, Cressy North TAS (P17-307) – Response to Representations

Thank you for providing a copy of the two (2) representations received for the above planning application. A response to the matters raised within these objections are outlined below.

Visual Impact of the Facility

Visual impact concerns has been largely covered within the submitted planning report. The structure height of 40 metres with a monopole design and headframe is a slimmer design than providing a four sided lattice tower of higher height. The submitted photomontages provided show that the facility view amongst others vertical infrastructure such as road side power lines and poles. The proposed facility is setback into the rural property near the irrigation channel and 200 metres from the southern nearest dwelling and 320 metres to a nearest northern dwelling.

Telecommunication facilities by their very nature need to be elevated above obstructions and terrain to be able to propagate the coverage signal to the intended area. The facility has been design to achieve the optimum coverage objective. Therefore, 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.

Electromagnetic Energy

Optus acknowledges some people are genuinely concerned about possible health effects of EME from mobile phone base stations and is committed to addressing these concerns responsibly.

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 consensus is that there is no substantiated scientific evidence of health effects from the EME generated by radio frequency technology, including mobile phones and their base stations, that complies with national

and international safety guidelines. Optus has strict procedures in place to ensure its mobile phones and base stations comply with these guidelines.

In Australia, the EME safety standard is set by the Australian Communications and Media Authority (ACMA) - the independent regulator of the nation's telecommunications industry. This standard is taken from the Australian Radiation Protection and Nuclear Safety Agency called the radio Communications (Electromagnetic Radiation- Human Exposure) Standard 2003. In this case, the proposed facility at 105 Green Rises Road, Cressy North, Tas has a maximum EME value of 0.29% of this standard. Therefore, the proposed site would emit EME levels which are significantly below the standards set out by Federal Legislation. Compliance with all applicable EME standards is part of Optus' responsible approach to EME and mobile phone technology.

Optus complies to their apparatus licence conditions as set by the ACMA which includes ensuring that compliance to the ARPANSA RPS3 standard is maintained. This standard is commonly known as the Radiation Protection Standard No. 3 or RPS3. This standard has been implemented by ARPANSA for the Maximum Exposure Levels to Radiofrequency Fields between 3kHz to 300GHz. ARPANSA has prescribed the format for the EME Environmental Report and the carriers are obliged to present predicted levels within that format.

Noise Concerns

The proposed cabinets have air-conditioning fans within the doors. The air-conditioning will only operate at times to keep the temperature below certain heated levels so as to keep the equipment cool. The air-conditioning units noise levels are expected to only emit levels of noise that would be the similar as a domestic household air-conditioner. The air-conditioner doors are also orientated to the west in towards the fields not directed at residential dwellings.

Devaluation of Property Values

In regards to impact on property values, research in this area indicates that there is currently no substantive evidence to suggest that telecommunication facilities cause a reduction in property prices. The presence of mobile and wireless telecommunications services generally encourages further growth and development. Having access to a reliable mobile network is an essential service for local businesses throughout the area and is a desirable asset when new businesses and potential home buyers are looking to obtain new premises. It is considered that the proposed facility will therefore be in the public interest and will outweigh any minor loss in visual amenity by providing the users of the surrounding area with access to enhanced telecommunications services.

If there are any other concerns please do not hesitate to contact me.

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Yours sincerely

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Australian Government
Australian Radiation Protection and Nuclear Safety Agency

1–166

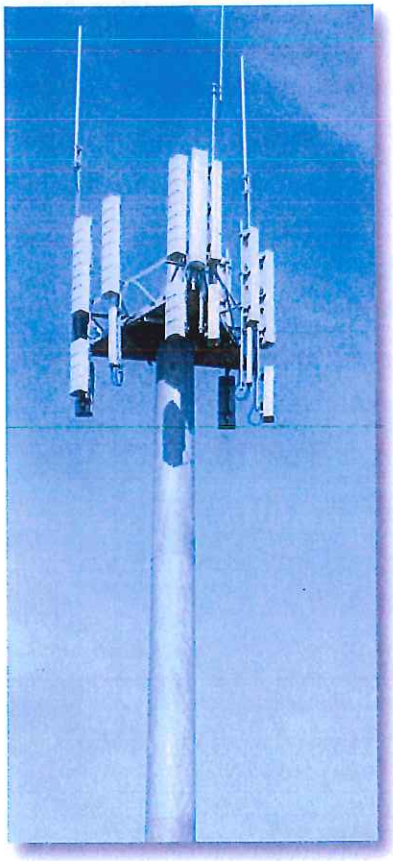
Fact Sheet

Mobile Phone Base Stations and Health

Based on current research there are no established health effects that can be attributed to the low RF EME exposure from mobile phone base station antennas.

Introduction

There are mobile phone base station antennas on towers and buildings throughout Australia's populated areas. These antennas are part of the mobile phone network and they emit low level radiofrequency (RF) electromagnetic energy (EME). This fact sheet provides information about concern of adverse health effects arising from exposure to RF EME from base station antennas.



How does the mobile phone network operate?

When a call is made from a mobile phone, RF signals are transmitted between its antenna and the antenna at a nearby base station. The phone call is then routed through the phone network to the destination phone. Base station antennas must be elevated and located clear of physical obstruction to ensure wide coverage.

In an area of increasing mobile phone use the number of additional base stations needed to maintain service quality increases, even in areas where mobile network coverage already exists. If this is not done the mobile network will not operate properly and, as a result, mobile phone users may not be able to connect to their network.

Are base stations regulated in Australia?

The RF EME emissions from mobile phone base stations and other communications installations are regulated by the Australian Communications and Media Authority (ACMA). The ACMA's regulatory arrangements require base stations to comply with the exposure limits in the ARPANSA RF Standard. The ARPANSA Standard is designed to protect people of all ages and health status against all known adverse health effects from exposure to RF EME. The ARPANSA Standard is based on scientific research that shows the levels at which harmful effects occur and it sets limits, based on international guidelines, well below these harmful levels.

The ACMA also requires base stations to comply with an industry code of practice which requires telecommunications carriers to inform and consult with the local community when planning, installing or upgrading base stations.

How much RF EME are people exposed to from base stations?

The maximum levels of exposure of RF EME from base stations may be calculated from details of the equipment installed. These calculations are made available in the ARPANSA EME reports provided by the telecommunications companies on the Radio Frequency National Site Archive website, www.rfnsa.com.au. The base station sites may be located by searching by postcode or town.

EME exposure to the public from base stations is typically hundreds of times below the limits of the ARPANSA RF Standard.

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Do base stations cause any health effects?

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

How about people who work very close to base station antennas?

Workers accessing rooftops and towers that house base station antennas must consult with building and facility management before entering the site. A guide to working safely near mobile phone base stations is available at https://www.radioworksafe.com.au/.

Conclusion

No adverse health effects are expected from continuous exposure to the RF EME emitted by the antennas on mobile phone base stations.

ARPANSA will continue to review the research into potential health effects of RF EME emissions from mobile phone base stations and other sources in order to provide accurate and up-to-date advice.

Useful Links

ARPANSA fact sheet on RF EME
www.arpansa.gov.au/RadiationProtection/basics/rf.cfm

The ARPANSA RF Standard
www.arpansa.gov.au/Publications/codes/rps3.cfm

WHO fact sheet on base stations
www.who.int/peh-emf/publications/facts/fs304/en/

AMTA information on Australian base stations
www.rfnsa.com.au
www.mobilesitesafety.com.au