# Radio Frequency Radiation Assessment

# Mirvac

## 700 Bourke Street, Docklands VIC

May 2025

RISKTECH Compliance

# Radio Frequency Radiation Assessment

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|---|---|
| **Report For** | Mirvac |
| **Address** | 700 Bourke Street, Docklands VIC |
| **Prepared By** | Rehan Akram& Hasan Iqbal<br>Consultants, RiskTech Compliance |
| **Date of Inspection** | 17 May 2025 |
| **Conferred With** | Macit Kozak<br>Assistant Facility Manager, Mirvac |

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## RiskTech Contact Details

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|---|---|
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## Document Revision Record

| File Name | Prepared By | Reviewed By | Issue No. | Issue Date |
|---|---|---|---|---|
| Mirvac RFR Assessment - 700 Bourke Street, Docklands VIC May25 | Hasan Iqbal<br>Consultant | Bernard Day<br>COO | 1 | 29/05/25 |

# Contents

# 1. Executive Summary

## Scope

RiskTech Compliance (RiskTech) were engaged by Mirvac to undertake a risk assessment of the radio frequency radiation (RFR) hazards located at 700 Bourke Street, Docklands VIC. The assessment was carried out by Hasan Iqbal, Consultant of RiskTech on 17 May 2025.

## Findings

- No radio frequency mobile phone base station antennas were observed on the roof level of the building. It is noted that the site has an In-Building Coverage/Cell (IBC), Distributed Antenna Systems (DAS) which are all names used to describe an In-building radio communications systems.
- The EME Guide states that the RF equipment on site is controlled by mobile carriers, Optus & Telstra.
- Access to the equipment on site for the IBC was secured against unauthorised access at the time of inspection (access to communications cupboards was locked).

## Site Safety Documentation

- A search of the RFNSA web site identified a Site Compliance Certificate for 700-704 Bourke Street, Docklands VIC (RFNSA Site No: 3008028), which was prepared by WaveForm Global Pty Ltd (Site Compliance Certificate No. 6 - 3008028). Refer to **Appendix 1**.
- The Site Compliance Certificate states that '*this site has been assessed and found to comply with the RF Human Exposure Limits as specified by the ACMA Licence Condition Determination (LCD) and requirements of the ARPANSA Standard (RPS3)*'.
- RiskTech Compliance sighted an old Limited EME Guide (Issue No: 04) dated 16/8/2019 for the site which is included in this report (**refer to Appendix 2**). However, the site compliance certificate references the current Radio Communications Site Management Book/EME Guide (issue No.6), however this document was not available for review. This report will include marked drawings including exclusion zones around installed equipment.
- The old EME guide includes the "In Building Coverage (IBC) Distributed Antenna System (DAS)" throughout the building. The section in the EME Guide states the following for this system:
    - There are no RF hazards associated with the In Building Coverage (IBC) Distributed Antenna System (DAS) at this site.
    - The EME exposures do not exceed the general public limits in the 'In Building Coverage (IBC) / Distributed Antenna System (DAS)' at this site.
    - No access control procedures are required at this site.
    - Transmitting power at this site is quite low that no RF Hazards exists. Even at very low levels, non-ionising radiation has the potential to adversely affect the operation of Bio-medical devices. Persons with such devices must ensure all transmitters are powered off before working in close proximity to transmitting antennas or around the building ceiling.

## Recommendation

- Obtain the current Radio Communications Site Management Book/EME Guide (issue No.6) and retain on site. Provide this document to any contractors to review prior to access being required in the area where RFR equipment is located on site.

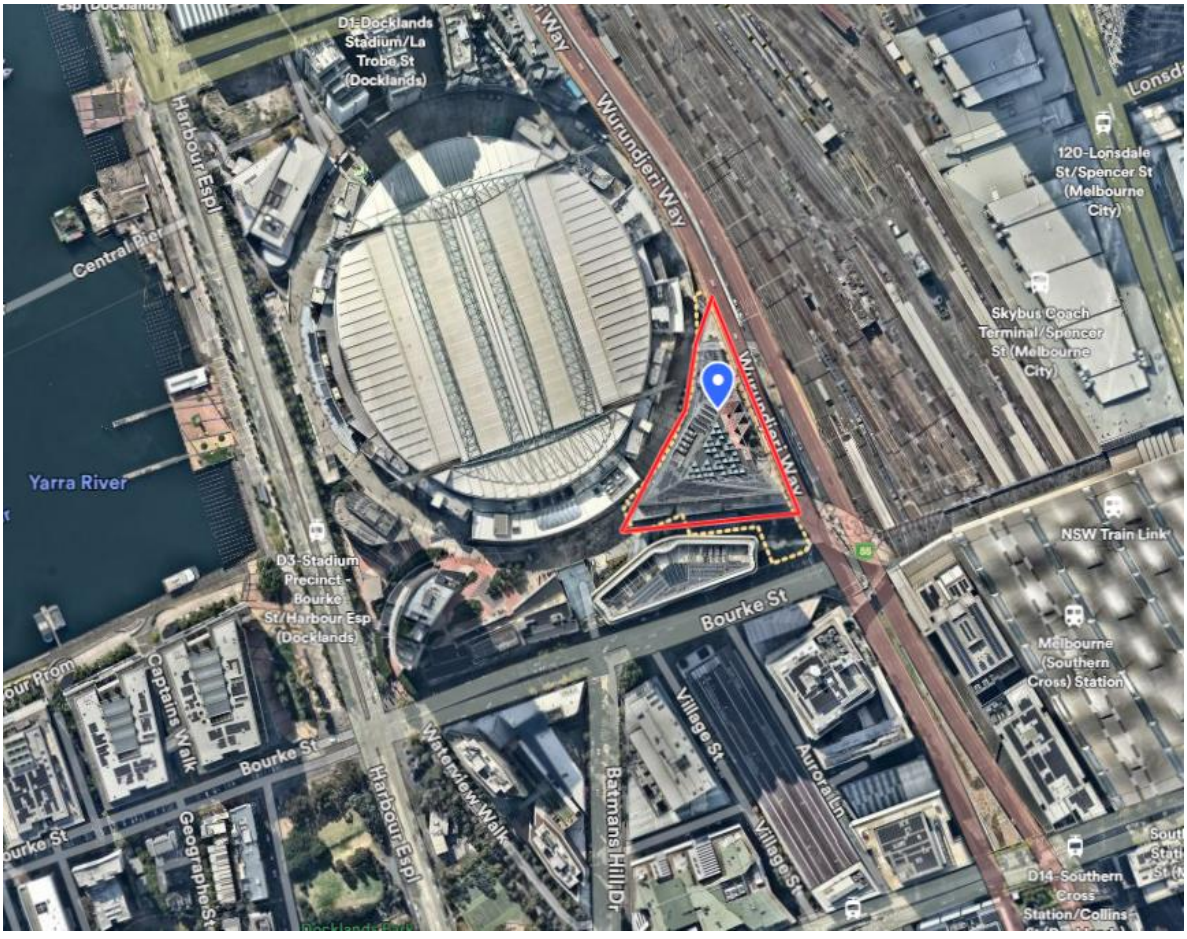
(Note: AMTA provide a login access for facility manager/owners or carrier subcontractor of antennas. **Refer to Appendix 3 RFNSA Login Access Form**. Download the current document from www.rfnsa.com.au, which is the best way to ensure you have the most up to date documentation).

# 2. Introduction

RiskTech Compliance (RiskTech) were engaged by Mirvac to undertake a risk assessment of the radio frequency radiation (RFR) hazards located at the 700 Bourke Street, Docklands VIC. The assessment was carried out by Hasan Iqbal, Consultant of RiskTech on 17 May 2025.

## 2.1 Site Description

| | |
|---|---|
| **Site Address** | 700 Bourke Street, Docklands VIC 3000 |
| **Construction Date** | 2013 |
| **Site Type** | Commercial |
| **Description** | Level 15 – Plant Rooms<br>Levels 1-14 - Offices<br>Ground and Mezzanine – NAB Branch & Cafe<br>Levels P1 and P2 – Basement Level Parking, Loading Dock and Plant Rooms<br>Access to the Loading Dock is via Wurundjeri Way and access to the car park is via Bourke Street.<br>This site covers approximately 8,977 m². |




**Site Location:** 700 Bourke Street, Docklands VIC

Image courtesy Nearmap 2025

## 2.2 Scope

The assessment was undertaken using the following methodology:

- A walk-through inspection of common areas of the site to:
  - Identify RFR equipment such as mobile phone base station antennas, radio and television broadcast transmitters and radar systems present on site;
  - Evaluate the controls in place on site;
  - Confirm if a site radiation folder(s) such as the Electromagnetic Energy (EME) Guide or Radio Communications Site Management Book (RCSMB) is present; &
  - Confirm if radiation areas are appropriately signposted and secured against unauthorised access.
- Preparation of the report including a list of observations and recommendations aimed at controlling areas of concern, or suggested improvements to the existing systems.

It is noted that this is a qualitative report only and no radiation measurements were taken. The telecommunications carriers that own and control the installations are responsible for providing detailed RFR field assessment reports.

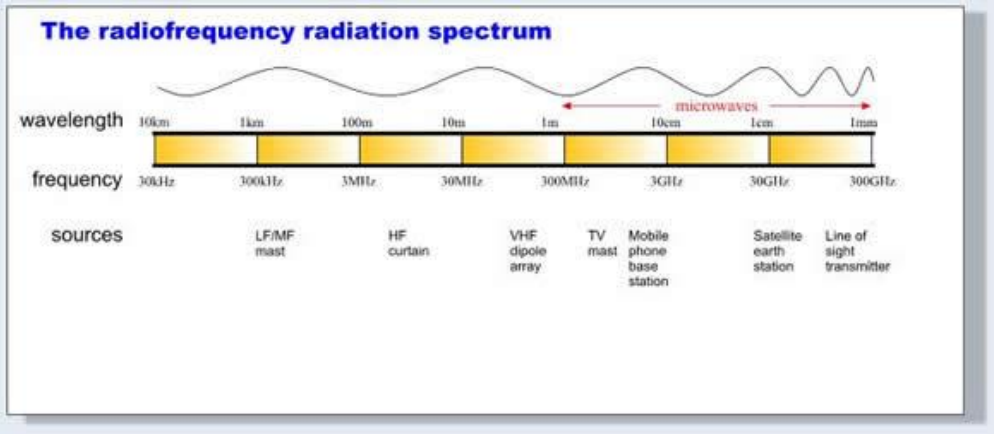
# 3. Background Information

## 3.1 Radio Frequency Radiation

### *What is Radiofrequency Radiation*

Radiofrequency (RF) electromagnetic radiation (EMR) is the transfer of energy by radio waves. RF EMR lies in the frequency range between 3 kilohertz (kHz) to 300 gigahertz (GHz). Mobile phones are low-powered radiofrequency transmitters, operating at frequencies between 450 and 2700 MHz. FM radio and television broadcasting operate at frequencies around 100 MHz and 300 to 400 MHz respectively.

RF EMR is non-ionising radiation, meaning that it has insufficient energy to break chemical bonds or remove electrons (ionisation).




### *Sources of Radiofrequency Radiation*

RF EMR is produced by both natural and artificial sources. Natural sources like the sun, the earth and the ionosphere all emit low level RF fields. Artificial sources of RF EMR are mainly used for telecommunications purposes such as mobile phone base stations. Mobile phones communicate by transmitting radio waves through a network of fixed antennas called base stations.

Radio and television broadcasting, mobile phones, pagers, cordless phones, police and fire department radios, point-to-point links and satellite communications all produce RF EMR. Other sources of RF fields include microwave ovens, radar, industrial heaters and sealers, and various medical applications.

### *Radiofrequency Radiation Exposure*

RF EMR exposures from mobile phone base stations range from 0.002% to 2% of the levels of international exposure guidelines depending on various factors such as proximity to the antenna and the surrounding environment. RF exposure from telecommunications facilities is generally less than from radio or television broadcasting transmitters.

Relatively high levels of exposure to RF fields can occur to workers in the broadcasting, transport and communications industries when they work in close proximity to RF transmitting antennas and radar systems. Some industrial processes that use RF fields to heat materials can produce high exposure to workers.

### *Health Effects of RFR Exposure from Mobile Phone Base Station Antennas*

Current research indicates that there are no established health effects from low exposure to RF EME from mobile phone base station antennas. ARPANSA concluded that "*no adverse health effects are expected from continuous exposure to the RF EME emitted by antennas on mobile phone base stations*" (ARPANSA Fact Sheet dated August 2016 – **Appendix 2**).

*RFR Exposure from Mobile Phone Base Station Antennas*

In 2002 ARPANSA published the standard: Radiation Protection Standard - Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz. The ARPANSA RF Standard sets limits for human exposure to RF EMR in the frequency range 3 kHz to 300 GHz. The Standard also includes requirements for protection of the general public and the management of risk in occupational exposure, together with additional information on measurement and assessment of compliance.

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

## 3.2 Radio Frequency National Site Archive

The Australian Mobile Telecommunications Association (AMTA) is the industry body representing Australia's mobile telecommunications industry. The AMTA host the Radio Frequency National Site Archive (RFNSA), which outlines information about selected mobile phone towers.

The AMTA Radio Frequency Safety Program (RFSP) is developed by AMTA and the Mobile Carriers to gather, record and share information so that all parties involved can have visibility of the site's compliance. The information is stored on the National Site Archive database (RFNSA) website which includes information for the management of EME compliance for any site including (but not limited to):

- National Association of Testing Authorities (NATA) accredited Independent RF Assessors;
- Standard EME Site Safety Documents:
    - Site Compliance Certificate;
    - EME Guide, which will replace the RCSMB over time;
    - EME Safe Work Information; &
    - Site Compliance Report.
- Standard Site Signage.
- All EME levels are disclosed to the site owner and/or manager for management of WHS on their sites.

## 3.3 EME Guide & RCSMB

The EME Guide and RCSMB are designed to help anyone who is required to work near radio telecommunications equipment installed on this property and to do so safely. They describe areas that should not be accessed (exclusion zones) and provides details of the equipment installed at the site and the operator of the equipment. The Facility Manager, Building Manager or carrier will provide a login to access the EME Guide or RCSMB.

## 3.4 Safety Requirements

The following safety requirements should be considered when working near antennas (source: www.MobileSiteSafety.com.au website):

- Personnel must be appropriately trained;
- Provision of safety briefing/ induction;
- Do not work directly in front of or around RF transmitter antennas;
- Observe safety signage;
- View online site safety documentation;
- Refer to Electromagnetic Energy Guide (EME Guides will replace RCSMBs over time);
- Check site EME Exclusion Zone drawings noting any exclusion zones;
- Check for site updates - see Caution Sheets for any warnings of site changes;
- Use of safe work method statement; &
- Use of a personal RF monitor.

## 3.5 Safety Signage

- Radiation Safety signage should be installed at the entrance to the areas housing the RF equipment on site.


Example RF hazard warning signage

## 3.6 Limitations/Areas Not Accessed

- The assessment is limited to those physical aspects that could be observed during the assessment of common areas of the site.
- No detailed testing or no radiation measurements were undertaken.
- We have generally used and relied upon information supplied as being regarded as authoritative and reliable. Review of reports and certification documentation is limited to those that were present on site at the time of the assessment or available in the public domain (e.g. RFNSA website).

# 4. Findings

## 4.1 Site Observation

- No radio frequency mobile phone base station antennas were observed on the roof level of the building. It is noted that the site has an In-Building Coverage/Cell (IBC), Distributed Antenna Systems (DAS) which are all names used to describe an In-building radio communications systems.
- The EME Guide states that the RF equipment on site is controlled by mobile carriers, Optus & Telstra.
- Access to the equipment on site for the IBC was secured against unauthorised access at the time of inspection (access to communications cupboards was locked).

## 4.2 EME Site Safety Documentation Search & Review

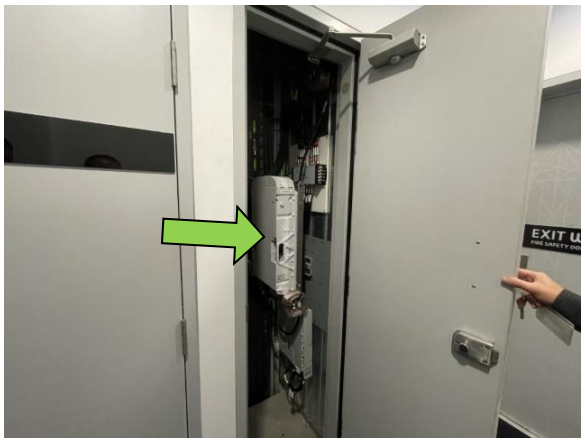
*Site Compliance Certificate*

- A search of the RFNSA web site identified a Site Compliance Certificate for 700-704 Bourke Street, Docklands VIC (RFNSA Site No: 3008028), which was prepared by WaveForm Global Pty Ltd (Site Compliance Certificate No. 6 - 3008028). Refer to **Appendix 1**.
- The Site Compliance Certificate states that '*this site has been assessed and found to comply with the RF Human Exposure Limits as specified by the ACMA Licence Condition Determination (LCD) and requirements of the ARPANSA Standard (RPS3)*'.
- Furthermore, the Site Compliance Certificate for 700 Bourke Street, Docklands VIC also states that '*access control, RF warning signage (if required) and safe work procedures are in place as detailed in the accompanying EME Guide Version 4*.

*RCSMB*

- RiskTech Compliance sighted old Limited EME Guide (Issue No: 04) dated 16/8/2019 for the site which is included in this report (**refer to Appendix 2**). However, the site compliance certificate references the current Radio Communications Site Management Book/EME Guide (issue No.6), however this document was not available for review. This report will include marked drawings including exclusion zones around installed equipment.
- The old EME guide includes the "In Building Coverage (IBC) Distributed Antenna System (DAS)" throughout the building. The section in the EME Guide states the following for this system:
    - There are no RF hazards associated with the In Building Coverage (IBC) Distributed Antenna System (DAS) at this site.
    - The EME exposures do not exceed the general public limits in the 'In Building Coverage (IBC) / Distributed Antenna System (DAS)' at this site.
    - No access control procedures are required at this site.
    - Transmitting power at this site is quite low that no RF Hazards exists. Even at very low levels, non-ionising radiation has the potential to adversely affect the operation of Bio-medical devices. Persons with such devices must ensure all transmitters are powered off before working in close proximity to transmitting antennas or around the building ceiling.

### *4.2.1 Photographs*

<table>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Communications cupboards located on levels housing the IBC system.<br>(Note: no access controls required at the site)</td><td>Communications cupboards located on levels housing the IBC system.<br>(Note: no access controls required at the site)</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">No RFR equipment was installed on the roof areas of the building</td></tr>
</table>

# 5. Recommendations

### *5.1.1 Mandatory Recommendations*

- Nil

### *5.1.2 Control Recommendations*

- Obtain the current Radio Communications Site Management Book/EME Guide (issue No.6) and retain on site. Provide this document to any contractors to review prior to access being required in the area where RFR equipment is located on site.

(Note: AMTA provide a login access for facility manager/owners or carrier subcontractor of antennas. **Refer to Appendix 3 RFNSA Login Access Form**. Download the current document from www.rfnsa.com.au, which is the best way to ensure you have the most up to date documentation).

# 6. Abbreviations and Acronyms

| | |
|---|---|
| **ACMA** | Australian Communications and Media Authority |
| **AMTA** | Australian Mobile Telecommunications Association |
| **ARPANSA** | Australian Radiation Protection and Nuclear Safety Agency |
| **CBD** | Central Business District |
| **DAS** | Distributed Antenna System |
| **EME** | Electromagnetic Energy |
| **EMR** | Electromagnetic Radiation |
| **GHz** | Gigahertz |
| **IBC** | In Building Coverage |
| **kHz** | Kilohertz |
| **LCD** | Licence Condition Determination |
| **NATA** | National Association of Testing Authorities |
| **RCSMB** | Radio Communications Site Management Book |
| **RFR** | Radio Frequency Radiation |
| **RFNSA** | Radio Frequency National Site Archive |
| **RFSP** | Radio Frequency Safety Program |
| **RF** | Radio Frequency |

# 7. References

1. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), August 2016, *ARPANSA Fact Sheet - Mobile Phone Base Stations and Health*, www.arpansa.gov.au
2. ARPANSA (2002), *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz (2002)*, http://www.arpansa.gov.au/Publications/Codes/rps3.cfm.
3. ARPANSA (nd), Mobile phone base stations and EME, http://www.arpansa.gov.au/pubs/aboutus/collaboration/js_mobilebasestations.pdf .
4. Mobile Carrier Forum (MCF), MCF Fact Sheets – Working Safely Near Antennas, https://www.mobilesitesafety.com.au/Content/MCFFactSheetWorkingSafelyatSites.pdf .
5. MCF, MCF Fact Sheets – Radio Communications Site Management Book, https://www.mobilesitesafety.com.au/Content/MCFFactSheetWorkingSafelyatSites.
6. MCF, MCF Fact Sheets – Reading the Australian Radiation Protection and Nuclear Safety Agency EME Report, https://www.mobilesitesafety.com.au/Content/ReadingARPANSAEMEReport.pdf .
7. World Health Organisation (WHO), May 2006, Fact Sheet No.304 - Electromagnetic fields and public health: Base stations and wireless technologies, http://www.who.int/mediacentre/factsheets/fs304/en.
8. WHO, October 2014, Electromagnetic fields and public health: mobile phones, Fact sheet No.193, http://www.int/mediacentre/factssheets/fs193/en.

# Appendix 1 Site Compliance Certificate

# COMPLIANCE CERTIFICATE - SITE

## RFNSA Site No: 3008028

## Site Address: 700-704 Bourke Street, DOCKLANDS, VIC 3008

Issued in accordance with the Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015.

**RF Human Exposure Limits**

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) has produced a standard for exposure to Radio Frequency (RF) transmissions – ARPANSA Radiation Protection Standard 2002 Maximum Exposure Levels to Radio Frequency Fields – 3 kHz to 300 GHz (RPS3).

The Australian Communications and Media Authority (ACMA) has made the Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015 that requires that the general public is not exposed to RF transmission levels exceeding the general public limits specified in the ARPANSA Standard (RPS3).

State and Commonwealth Occupational Health & Safety laws require compliance with the limits and obligations set out in the ARPANSA standard (RPS3).

**Compliance Statement**

This site has been assessed and found to comply with the RF Human Exposure Limits as specified by the ACMA Licence Condition Determination and requirements of the ARPANSA Standard RPS3.

**Mobile Telecommunications Equipment**

The mobile telecommunications equipment installed at this site and its configuration as a mobile base station, has been assessed in accordance with the ARPANSA RPS3 reference limits, and has been deemed to comply with the ACMA Licence Conditions (Apparatus Licence) Determination 2015.

**Other Radio Frequency Transmitting Equipment**

All identified radio communications services are included in the related compliance documents listed below.

**Access Controls, RF Warning Signs and Safe Work Procedures**

Access Control, RF warning signs (if required) and Safe Working Procedures are in place as detailed in the Related Documents listed below.

**Compliance Certificate No:** 06

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Accreditation No 19355

Accreditation for compliance with ISO/IEC 17020

**Approved Signatory**

Name: Sundar Rupakheti

Designation: EME NATA Signatory

Company: WaveForm Global Pty Ltd

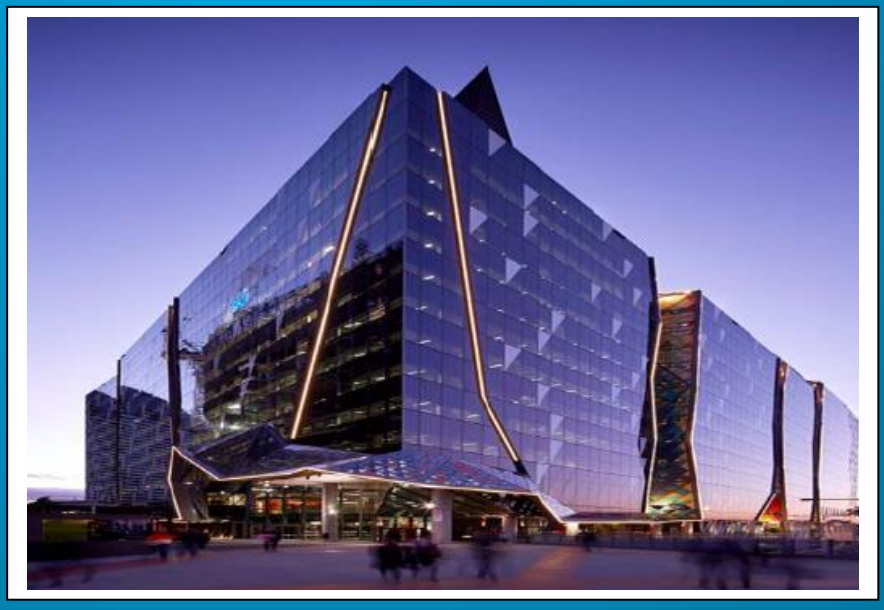
| Related Documents: | | |
|---|---|---|
| | Site Compliance Report | Ref No#: 06 |
| | EME Guide for Site Safety | Ref No#: 06 |

# Appendix 2 EME Guide for Site Safety

# EME Guide
## for Site Safety

**RFNSA Site No: 3008028**
**Document Issue No: 4**
**Document Issue Date: 16/08/2019**

**Address:**
**700-704 Bourke Street**
**DOCKLANDS VIC 3008**



*This Report was prepared by: Catalyst ONE Pty Ltd*

# An Important Message to people accessing this building or structure

There are radiocommunications antennas operating on this building or structure. The antennas on this building or structure produce a form of energy known as electromagnetic energy (EME).

You should not access Exclusion Zones, which are areas close to the antennas.

**DO NOT STAND IN FRONT OF ANTENNAS**
**and**
**DO NOT Access Red & Yellow Exclusion Zones**

This Guide is designed to help anyone who is required to work within a building with a distributed antenna system installed. This includes site owners, managers, their associates, contractors and staff.

In-Building Coverage/Cell (IBC), Distributed Antenna Systems (DAS) and Pico cells are all names used to describe In-building radiocommunications systems.

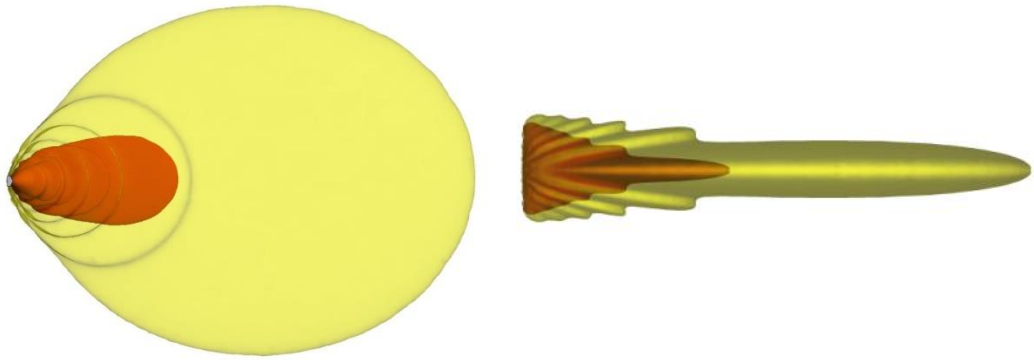
**There are no RF hazards associated with the In building Coverage (IBC) Distributed Antenna System (DAS) at this site.**

Bio Medical Devices
**The transmit powers at this site are quite low and there are no RF Hazard existing. Even at very low levels, non-ionising radiation has the potential to adversely affect the operation Bio-medical devices. Persons with such devices must ensure all transmitters are powered-off before working in close proximity to transmitting antennas or around the building ceiling**

This document will show Exclusion Zones around the antennas, don't enter these areas. The latest version of this EME Guide is accessible at www.rfnsa.com.au or from the mobile carrier or building owner.

Exclusion zones are defined by the Australian EME Standard "ARPANSA Radiation Protection Standard - Maximum Exposure Levels to Radiofrequency Fields (RPS3)."

Make sure you view all the Exclusion Zone drawings so you get a complete understanding of the site.



**Red Zone** = Exclusion Zone. No access without confirmed transmitter power reduction or transmitter shutdown.

**Yellow Zone** = Exclusion Zone. Limited access to specially trained personnel (RF Workers).

**White Zone** = General access

**Note - This EME Guide replaces the Radio Communications Site Management Book (RCSMB).**

## 1. Be aware of these access controls on site

If you need to access this site contact the site owner, manager or the Carriers and Radio Service Operators occupying the site.

**Access Control Procedures at Site**

- The EME exposures do not exceed the general public limits in the In Building Coverage (IBC) / Distributed Antenna System (DAS) at this site. No access control procedures are required at this site.

- Transmitting power at this site is quite low that no RF Hazards exists. Even at very low levels, non-ionising radiation has the potential to adversely affect the operation of Bio-medical devices. Persons with such devices must ensure all transmitters are powered-off before working in close proximity to transmitting antennas or around the building ceiling.

## 2. EME Safe Work Procedures to be followed at this site

1. Be appropriately trained
2. Receive a safety briefing from Site Manager
3. Do not stand in front of antennas
4. Observe safety signs
5. Ensure you view the current version of this EME Guide (www.rfnsa.com.au)
6. Check site drawings & antenna exclusion zones
7. Check for site updates - see caution sheets
8. Use a safe work method statement
9. Use a personal RF monitor
10. Questions - ask for help

## 3. Carriers and Radio Service Operators on site

| Carrier | Antenna | Contact No |
|---|---|---|
| Optus | Share Telstra IBC System | 1800 505 777 |
| Telstra | A.00.1 - A.00.10, A.01.1 - A.01.8, A.02.1 - A.02.8, A.03.1 - A.03.11, A.04.1 - A.04.10, A.05.1 - A.05.10, A.06.1 - A.06.10, A.07.1 - A.07.10, A.08.1 - A.08.10, A.09.1 - A.09.10, A.10.1 - A.10.10, A.11.1 - A.11.10, A.12.1 - A.12.10, A.13.1 - A.13.10, A.14.1 - A.14.10 | 0418 707 000 |

## 4. Site owner or manager contact details

| Name | Role | Company | Contact Details |
|---|---|---|---|
| SELVA THIRU | FACILITY MANAGER | AMP CAPITAL | +61 03 9034 4962<br>+61 423 290 091 |
| KYLE SWINDEN | COMMERCIAL FACILITIES MANAGER | GLOBAL OCCUPIER SERVICES | +61 414 661 611 |

**Please Note: The site owner or manager contact information is current at the Issue Date but may change without notice to the Mobile Carriers or Radio Service Operators occupying the site.**

## Important Information about this EME Guide

Site safety information including exclusion zone diagrams in this EME Guide have an “Issue date” incorporated on each page and are correct for that date.

**To ensure that you have the most current site safety information available, check the on-line version of this EME Guide using the RFNSA number reference found on the front cover.**

## On-line Site Information

**MCF National Site Archive** www.rfnsa.com.au

**Mobile Site Safety** www.mobilesitesafety.com

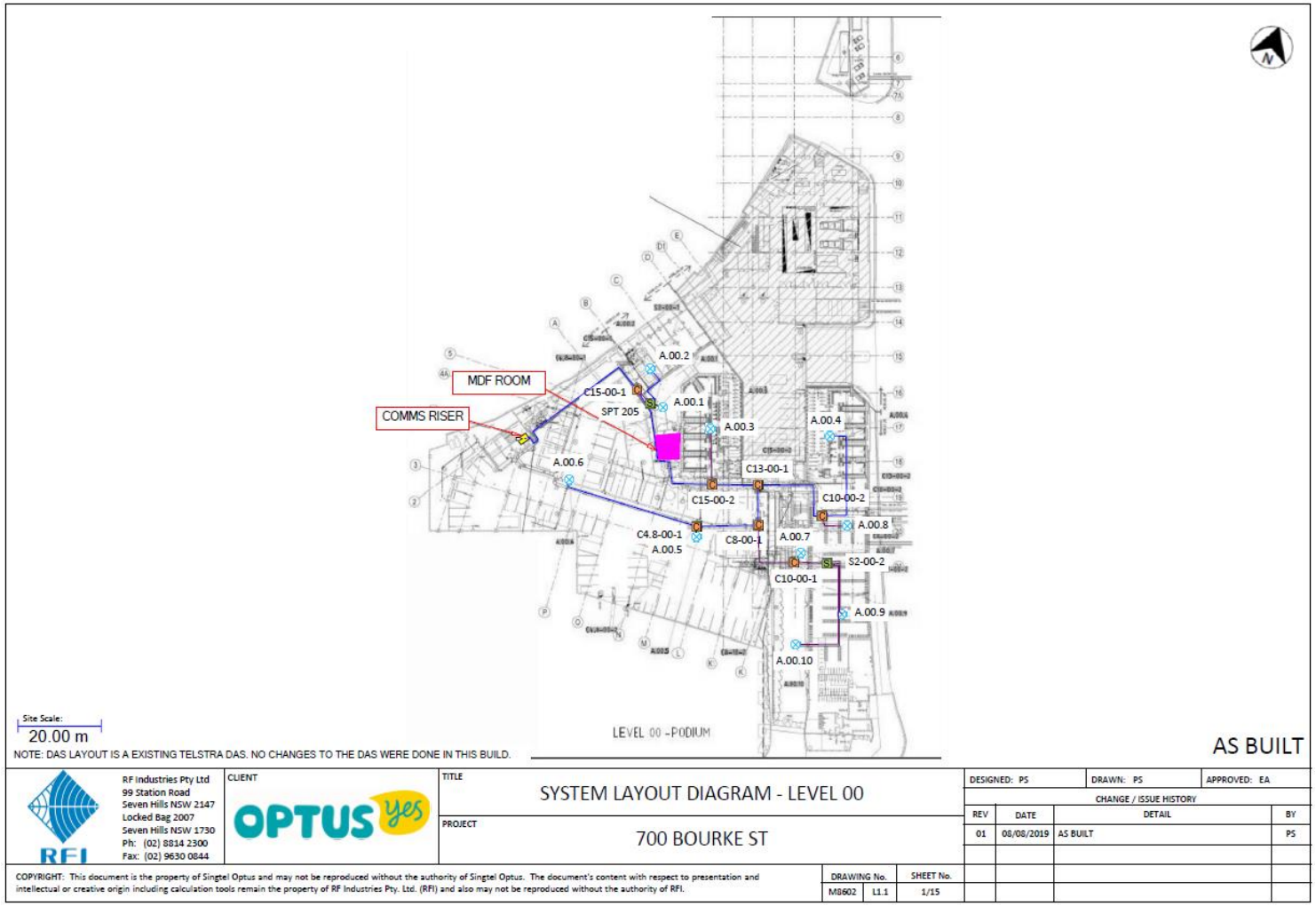
**This Document is Uncontrolled when printed. See www.rfnsa.com.au for the current issue**

## Section 1: Site Layout

# Section 2: Antenna Layout Plan
# LEVEL 00

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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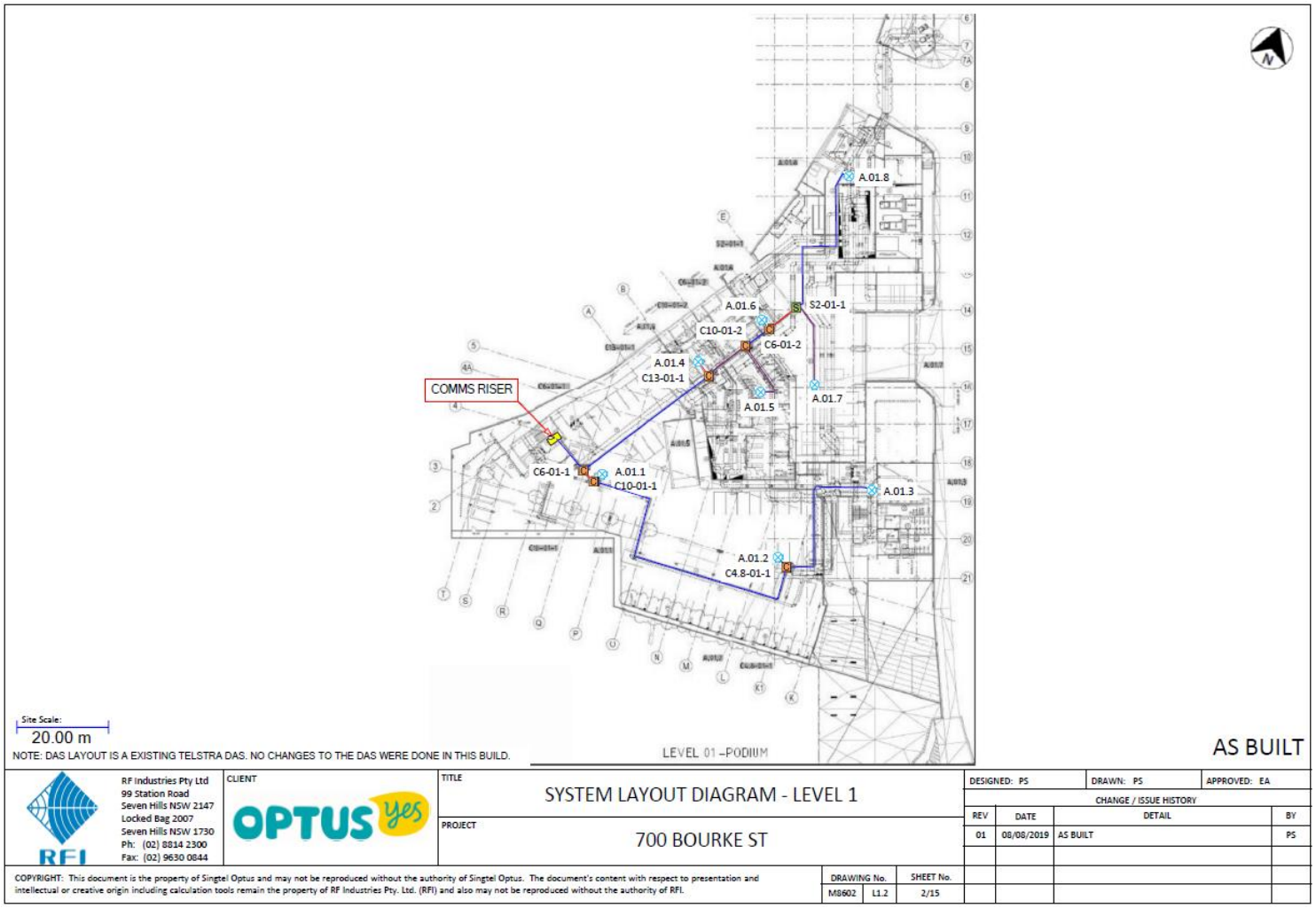
# Level 1

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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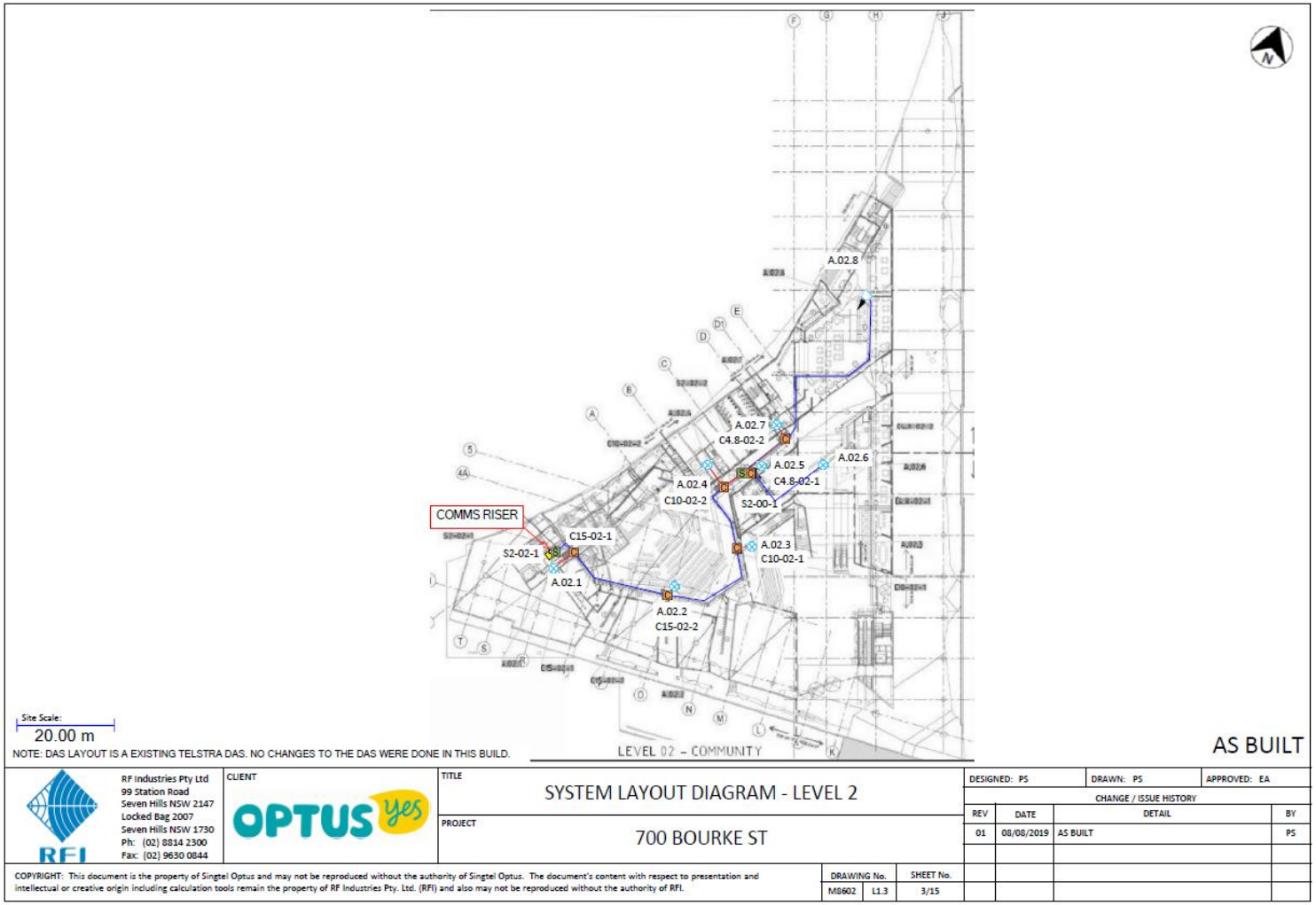
## Level 2

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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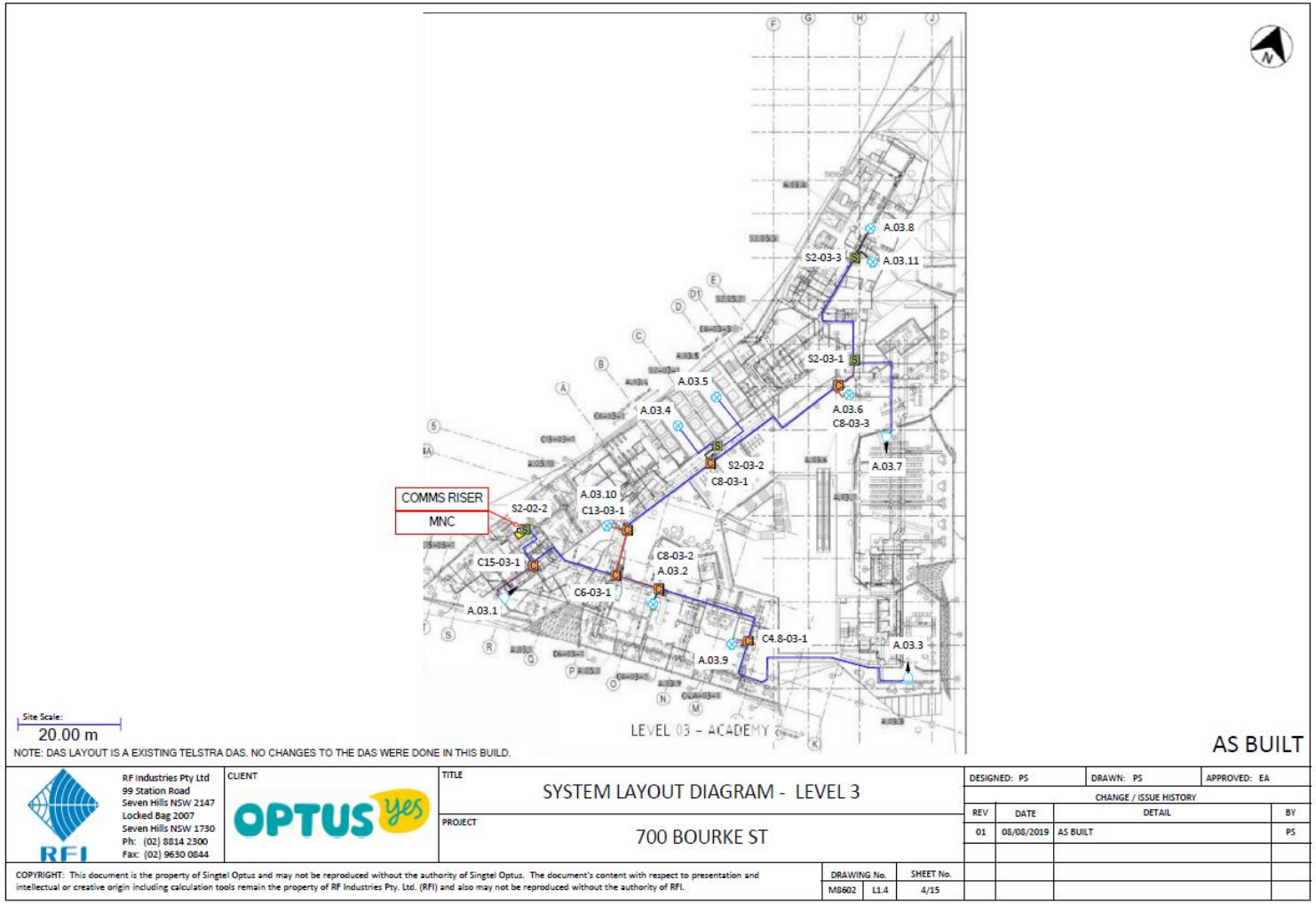
## Level 3

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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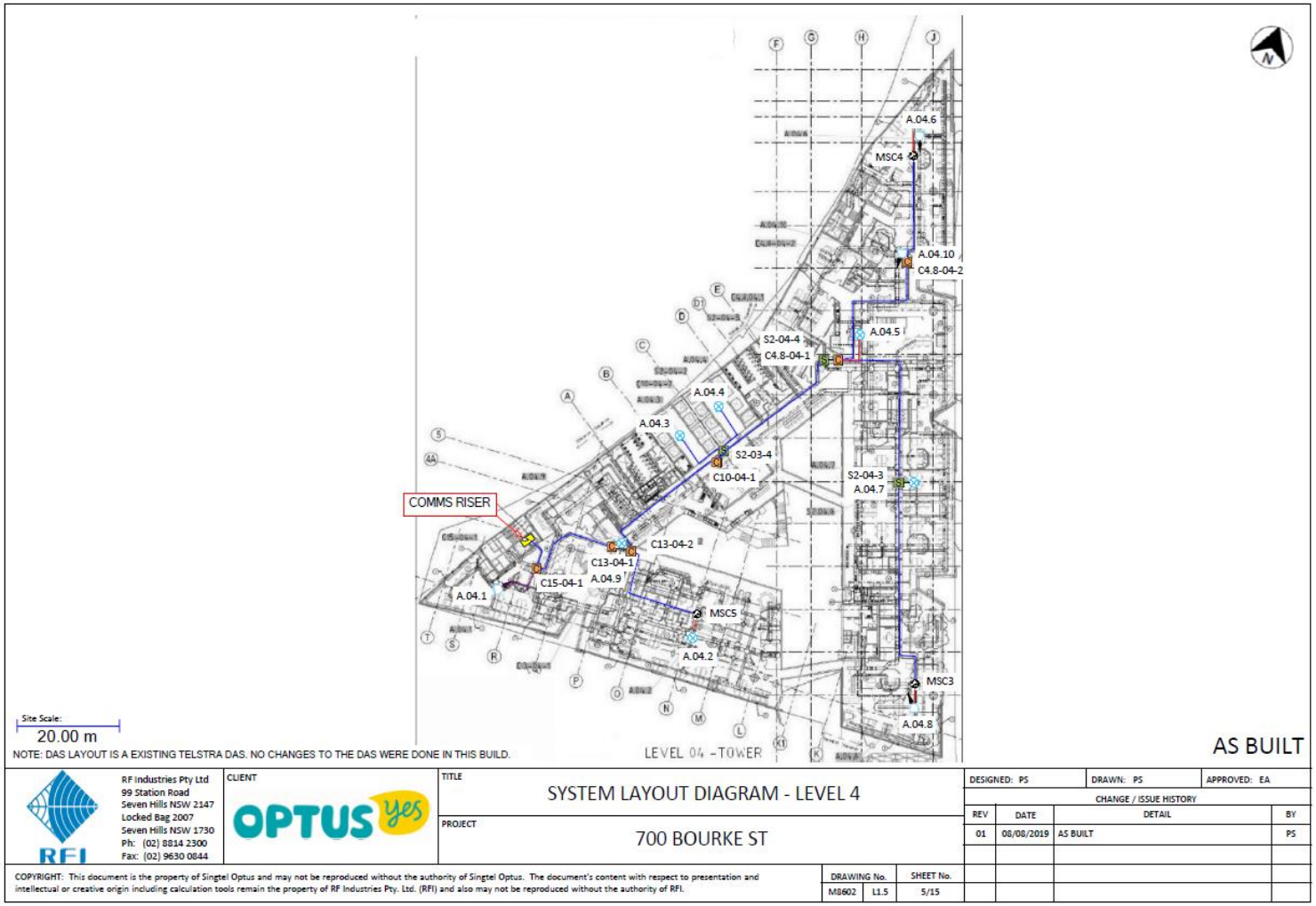
## Level 4

**Note:**

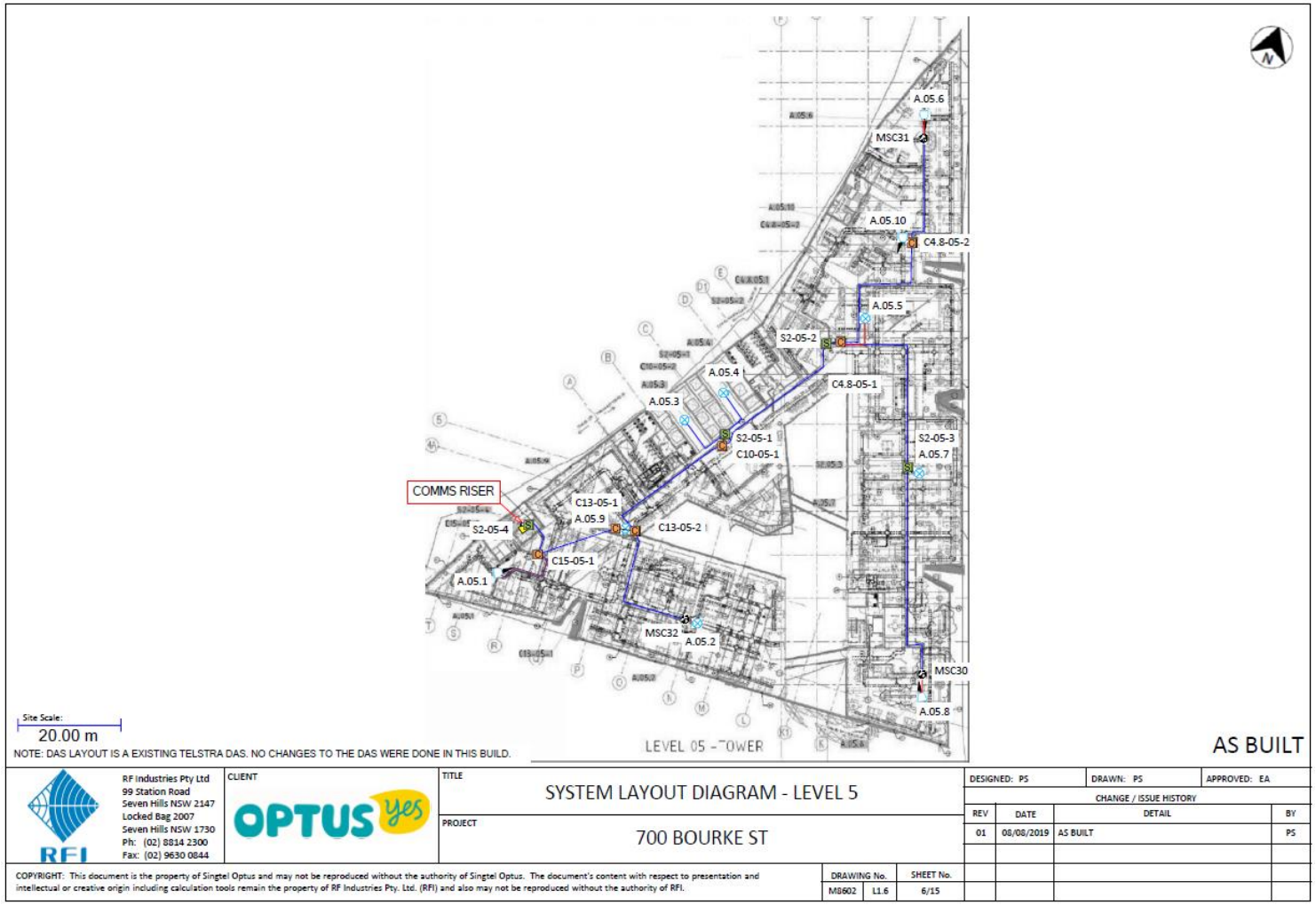
1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.



## Level 5

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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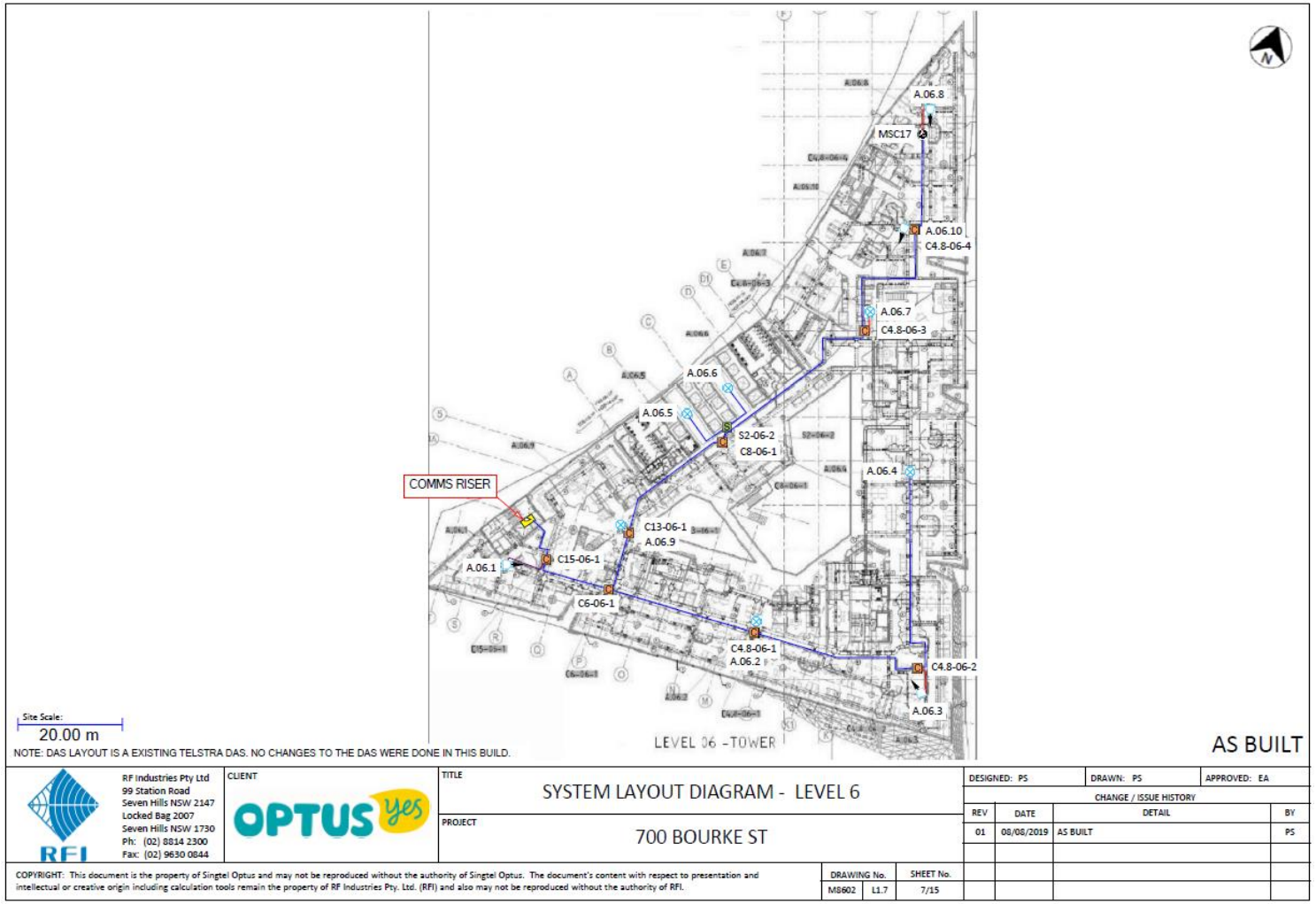
## Level 6 – 13

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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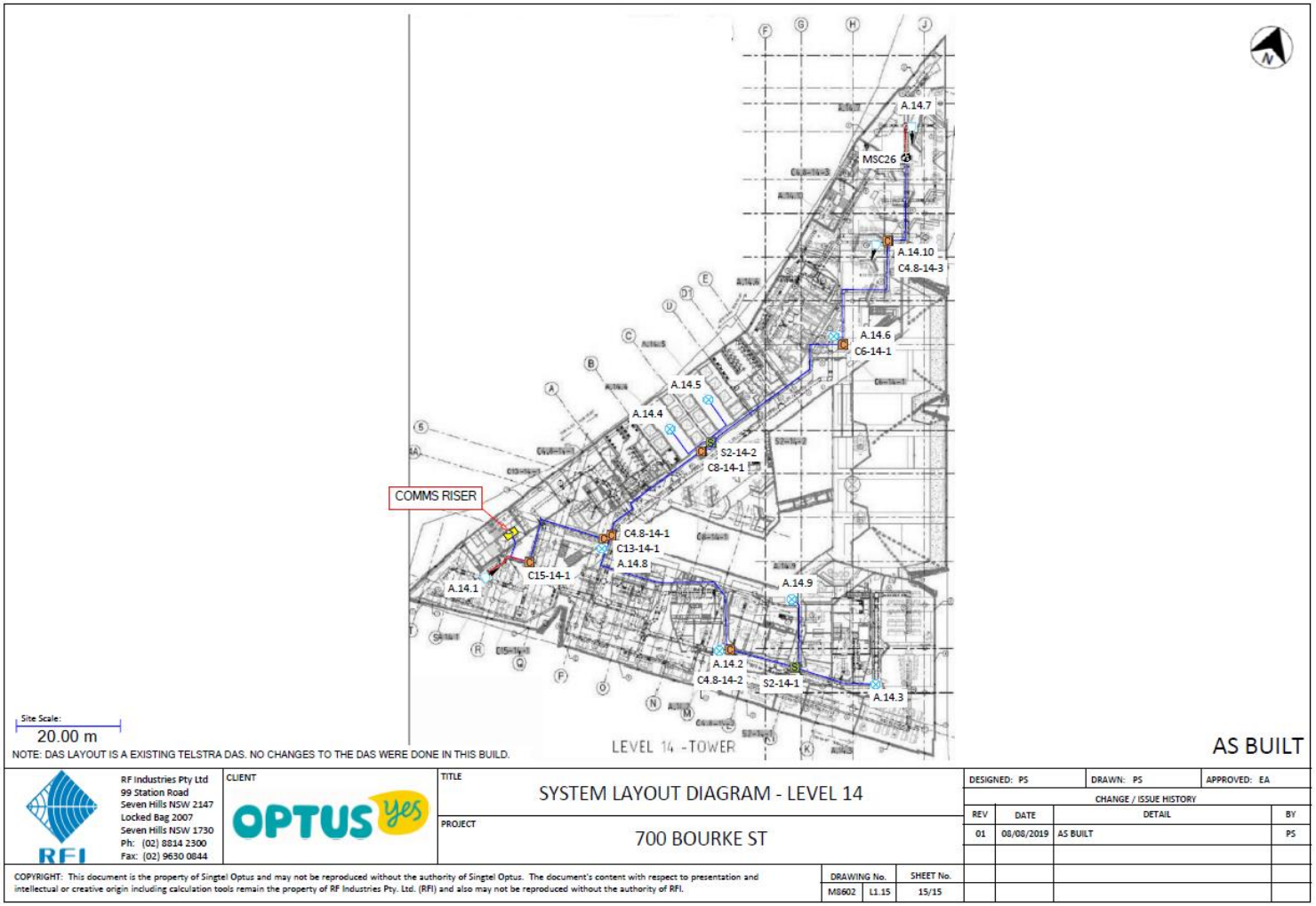
# Level 14

**Note:**

1. Labels refer to antenna reference (refer to Section 3 of EME Guide for details).
2. Use of colour on this page is for equipment identification purposed and does not represent an RF hazard. EME levels resulting from the coverage antennas do not exceed general public limit.

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## Section 3: Equipment Installed at this Site

## Equipment List

| Diagram Ref | Antenna Type/Make | Antenna Type | System/Function | Power (Watts) |
|---|---|---|---|---|
| A.00.1 - A.00.10, A.01.1 - A.01.8, A.02.1 - A.02.7, A.03.2, A.03.4 - A.03.6, A.03.8 - A.03.11, A.04.2 - A.04.5, A.04.7, A.04.9, A.05.2 - A.05.5, A.05.7, A.05.9, A.06.2, A.06.4 - A.06.7, A.06.9, A.07.2, A.07.4 - A.07.7, A.07.9, A.08.2, A.08.4 - A.08.7, A.08.9, A.09.2, A.09.4 - A.09.7, A.09.9, A.10.2, A.10.4 - A.10.7, A.10.9, A.11.2, A.11.4 - A.11.7, A.11.9, A.12.2, A.12.4 - A.12.7, A.12.9, A.13.2, A.13.4 - A.13.7, A.13.9, A.14.2 - A.14.6, A.14.8, A.14.9 | Andrew CELLMAX-O-25i | Omni | **Optus** LTE1800, LTE2100, LTE2300, LTE2600, LTE700, WCDMA2100, WCDMA900 **Telstra** LTE1800, LTE2600, WCDMA850 | 0.3 (A.00.9) |
| A.02.8, A.03.1, A.03.3, A.03.7, A.04.1, A.04.6, A.04.8, A.04.10, A.05.1, A.05.6, A.05.8, A.05.10, A.06.1, A.06.3, A.06.8, A.06.10, A.07.1, A.07.3, A.07.8, A.07.10, A.08.1, A.08.3, A.08.8, A.08.10, A.09.1, A.09.3, A.09.8, A.09.10, A.10.1, A.10.3, A.10.8, A.10.10, A.11.1, A.11.3, A.11.8, A.11.10, A.12.1, A.12.3, A.12.8, A.12.10, A.13.1, A.13.3, A.13.8, A.13.10, A.14.1, A.14.7, A.14.10 | Andrew CELLMAX-D-25i | Panel | **Optus** LTE1800, LTE2100, LTE2300, LTE2600, LTE700, WCDMA2100, WCDMA900 **Telstra** LTE1800, LTE2600, WCDMA850 | 0.18 (A.03.7) |

# Section 4: Site Specific Documents

**Antenna Connection Details for 700 BOURKE STREET**

| Antenna Number (Serial) | Antenna Type | Tower | Mtng Hgt (Calculated) | Face | Bearing True | Destination | Port | Feeder Number | Mobiles Cell | Connected Function | Seg | Pol | Power (Watts) | Function | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A1** | GENERIC PASSIVE 1 PORT DISTRIBUTED ANTENNA SYSTEM | 1 | 3 | | 0 | | 1 | F13 | NDBJEBA, NDBJLBA, NDBJMBA, NDBJABA, NDBJBBA | TX / RXM, -, TX / RX | 1 | VERTICAL | 17.22 | WCDMA850/LTE1800/LTE2600 IBC | |
| **A2** | GENERIC PASSIVE 1 PORT DISTRIBUTED ANTENNA SYSTEM | 1 | 3 | | 0 | | 1 | F14 | NDBJEBB, NDBJLBB, NDBJMBB, NDBJABB,NDBJBBB | TX / RXM, -, TX / RX | 1 | VERTICAL | 18.19 | WCDMA850/LTE1800/LTE2600 IBC | |

# Appendix 3 ARPANSA Fact Sheets

Australian Government
Australian Radiation Protection and Nuclear Safety Agency

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.



619 Lower Plenty Road, Yallambie VIC 3085
Telephone: +61 3 9433 2211
Fax: + 61 3 9432 1835

## 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

# Appendix 4 NATA Accredited RF Assessors

## AMTA RF Safety Compliance Program

### Approved Site RF Assessors List – May 2018

| Company | Address | Phone | Fax/Mobile | Contact/email/web |
|---|---|---|---|---|
| **Aurecon Australasia Pty Ltd** | Aurecon Centre<br>Level 8, 850 Collins Street<br>Docklands VIC 3008 | +61 3 9975 3221 | +61 3 9975 3444 | Ning Yu<br>eme.assessment@aurecongroup.com<br>www.aurecongroup.com |
| **Catalyst ONE Pty Ltd** | Suite 3, Level 2, 33 Herbert Street<br>St Leonards NSW 2065 | +61 2 9439 1999 | +61 2 8905 9063 | Judy Xu<br>jxu@catalystone.com.au<br>www.catalystone.com.au |
| **Corearth Australia Pty Ltd** | Level 1, 40 McDougall Street<br>Milton QLD 4064 | +61 7 3666 5333 | +61 7 3666 5366 | Craig Wrightson<br>sales@corearth.com<br>www.corearth.com |
| **EMC Technologies Pty Ltd** | 176 Harrick Road<br>Keilor Park VIC 3042 | +61 3 9365 1000 | +61 3 9331 7455 | Stephen Phillips<br>steve@emctech.com.au<br>www.emctech.com.au |
| **Huawei Technologies (Australia) Pty Ltd** | Level 6, Tower B<br>799 Pacific Highway, Chatswood NSW<br>2067 | | +61 434 039 350 | Sanaz Amiraski<br>sanaz.amiraski@huawei.com<br>www.hauwei.com |
| **Kordia Solutions Pty Ltd** | Unit 1D/400 Nudgee Road<br>Hendra QLD 4014 | +61 7 3907 1454 | +61 7 3267 7321 | Akos Jonyer<br>Akos.Jonyer@kordia.com.au<br>http://www.kordia.com.au/product/eme-compliance/ |
| **RADHAZ Consulting Pty Ltd** | 4/357 Collins Street<br>Melbourne VIC 3000 | +61 3 9937 6500 | +61 3 9937 6144 | Johnny Lim<br>jobrequest@radhaz.com.au<br>www.radhaz.com.au |
| **Telstra EME** | Telstra EME<br>Level 3, 70 Collins Street<br>Hobart TAS 7000 | +61 3 6212 8144 | | John Parker<br>! EME SFW National@team.telstra.com |
| **Total Radiation Solutions Pty Ltd** | PO Box 680<br>Claremont WA 6190 | +61 8 9381 7199 | +61 8 9381 7166 | Phill Knipe<br>phill@t-r-s.com.au<br>www.t-r-s.com.au |
| **Visionstream Pty Ltd** | 1/31 Commercial Drive<br>Shailer Park, QLD, 4128 | +61 7 3827 5700 | | David Grindrod<br>David.Grindrod@visionstream.com.au<br>www.visionstream.com.au |
| **WaveForm Global Pty Ltd** | Unit B, 106 Robinson Road<br>Virginia QLD 4014 | +61 7 3266 3783 | +61 406 176 492 | Tim Pugsley<br>tim.pugsley@waveformglobal.com.au<br>www.waveformglobal.com.au |