



# Landowner Book

**Sitename:** [Massey University](#)

**Address:** [Massey University, VET Tower, Campus Road, Palmerston North, NZ](#)

**Site Code:** [64040507](#)

**Issue No:** [1](#)



**vodafone**



## Important Information about this book

The Landowner Book has been compiled by Vodafone New Zealand to act as an important management tool for Landowners where mobile telecommunications or radio transmitting equipment is installed. The Landowner Book is designed to assist anyone who is required to work near the radio telecommunications equipment installed on this property and to do so safely. This includes site owners, managers, their associates, contractors and staff.

Details of relevant site information including radio frequency (RF) electro-magnetic emission (EME) diagrams, access restriction controls & RF warning signage in this book have a "valid at date" incorporated on each page and are correct for that date.

This book includes information on:

### 1. Site Contact Details

- Site RF Assessor and telecommunications carrier(s) or Radio Service Operator (RSO)
- Who to contact for updated or further information

### 2. Site RF EME Diagrams

- Detailed drawings that display emission patterns from the transmitting equipment

### 3. Site Access Control

- Access control procedures
- RF hazard warning signs installed
- Special requirements and site rules & regulations

### 4. Equipment Installed at this Site

- Summary of physical equipment Installed

### 5. Site Specific Documents

- a) Compliance Certificate
- b) Site Photographs

### 6. Safe Work Procedures

### 7. Additional Information

## Section 1. Site Contact Details

This Section shows the contact details for all individuals or organisations with which this site is associated

### Site Information Contacts

<b>Site Owner</b>		<b>Phone</b>	
		<b>Mobile</b>	
		<b>Email</b>	
The Site Owner is the individual or organisation that is responsible for the stated building(s) or structure(s) at this site			
<b>Site Contact</b>		<b>Phone</b>	
		<b>Mobile</b>	
		<b>Email</b>	
The Site Manager is the individual or organisation that is responsible for managing access and maintenance on the stated building(s) or structure(s) at this site			
<b>Site RF Assessor</b>	<b>Radhaz Consulting Pty Ltd Unit E15, Hallmarc Business Park Corner Westall and Centre Roads Springvale, Victoria 3171</b>	<b>Phone</b>	<b>61 - 3 - 9541 3700</b>
		<b>Mobile</b>	-
		<b>Email</b>	<a href="mailto:Sitemanager@radhaz.com.au">Sitemanager@radhaz.com.au</a>
The Site RF Assessor is the individual or organisation that is responsible for assessing the extent of RF emissions at the site, as well as well as certifying the sites compliance with relevant EME standards			
<b>Vodafone</b>	<b>Vodafone Property Manager</b>	<b>Phone</b>	<b>64-9- 355 2000</b>
		<b>Mobile</b>	-
		<b>Email</b>	-

	<b>Site Owner</b>	<b>Site Manager</b>	<b>Site RF Assessor</b>	<b>Vodafone NZ</b>
<b>Who to contact in the following situations</b>				
Latest RF safety Information for the site			✓	✓
Access to restricted or controlled areas		✓		✓
Mains power outages that may affect communications equipment	✓			✓
Building renovations, servicing or general maintenance activities that may involve operations near communications antennas	✓	✓		
Site access changes	✓	✓	✓	
Damaged communications infrastructure		✓		✓
Updates or changes to communications equipment		✓		✓

## Section 2. Site RF EME Diagrams

### How to read the RF EME Diagrams – see example below

Plan and elevation view, RF EME Diagrams display horizontal and vertical cross-sections of the emission patterns from transmitting antenna.

Persons viewing these Diagrams should ensure all Diagrams provided are viewed as a collective whole rather than any one in isolation. This will provide maximum understanding of the site as detailed

**Important - View All Plan & Elevation Drawings - individual drawings may not show all hazard details.**

### What do the zones mean?

<u>Red &amp; Yellow Zone</u>	= no access to public or building maintenance personnel
<u>Yellow Zone</u>	= limited access to specially trained carrier personnel (RF Workers)
<u>White Zone</u>	= general access



**Important – Ensure General Public, Maintenance Personnel and any staff not specifically trained in EME awareness do not enter red or yellow zones.**

**Vodafone Site No.  
64040507**



# Massey University

Massey University, VET Tower, Campus Road  
PALMERSTON NORTH  
NEW ZEALAND

Cover Page	Page 1
Plan View 1 - Site Layout	Page 2
Plan View 2 - 36m Level	Page 3
Elevation - 60° TN	Page 4
Elevation - 330° TN	Page 5
Elevation - 240° TN	Page 6

DATUM                    GDA94  
ZONE                     31  
EASTING                166022  
NORTHING              0  
LATITUDE              0  
LONGITUDE             0

REF NO  
REVISION NO            1  
DATE OF ISSUE           4 August 2009

Modelling of exclusion zones complies with the ARPANSA standard



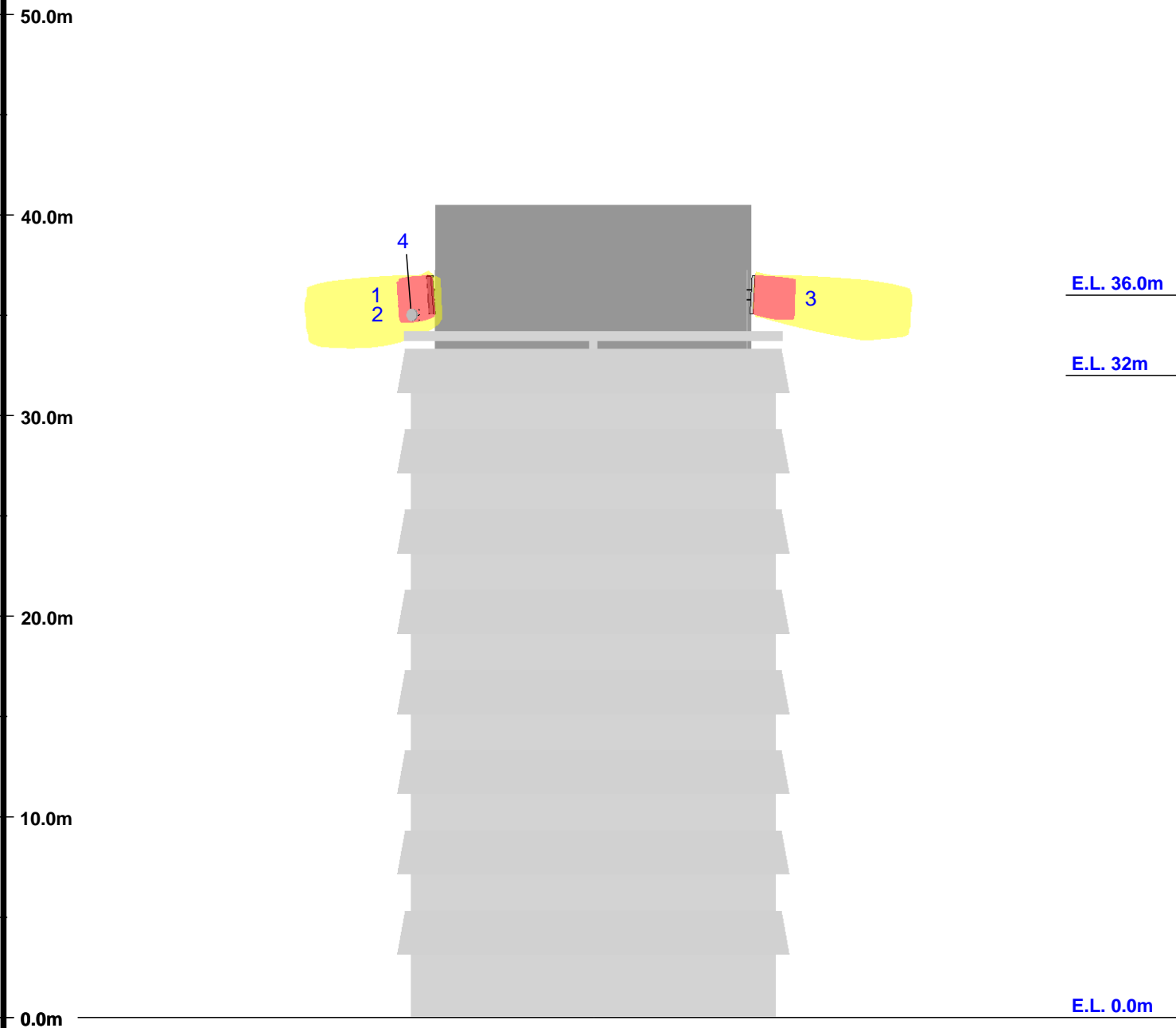






Note:

1. Labels refer to antenna reference (refer to Section 4 of Landowner Book for details).




**NORTHWEST ELEVATION**

10.0m

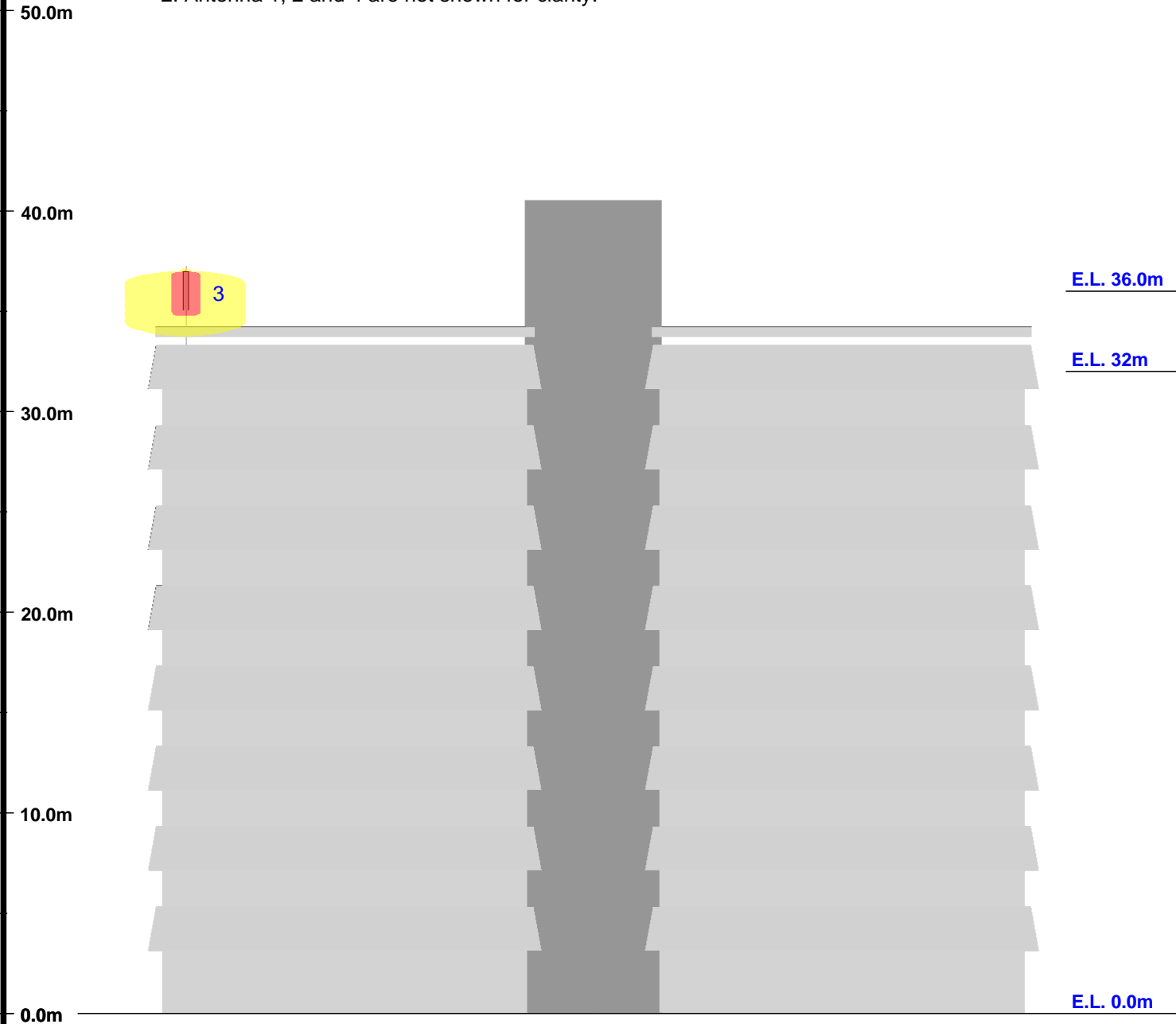
Power Density Legend (100% of ARPANSA limits)

- Occupational Limit - No Access
- RF-Workers Only - Limited Access

		20.0m	10.0m	0.0m	10.0m	20.0m
Drawn	Accepted	Amendment		Date	Issue	Scale
NY	BDS	New Vodafone Installation		4/08/2009	1	1:300
						Ref No:
						Elevation - 330° TN
						Vodafone Site No. 64040507
						<b>Massey University</b>
						
						Page 5/6

Note:


1. Labels refer to antenna reference (refer to Section 4 of Landowner Book for details).
2. Antenna 1, 2 and 4 are not shown for clarity.



**SOUTHWEST ELEVATION**

10.0m

Power Density Legend (100% of ARPANSA limits)	
	Occupational Limit - No Access
	RF-Workers Only - Limited Access

		20.0m	10.0m	0.0m	10.0m	20.0m
Drawn	Accepted	Amendment		Date	Issue	Scale
NY	BDS	New Vodafone Installation		4/08/2009	1	1:300
						Ref No:
						DESIGNED USING PROX5 EME
						Elevation - 240° TN
						Vodafone Site No. 64040507
						Massey University
						
						Page 6/6

### Section 3. Site Access Control

This section details the specific access control procedures in place at the site and the RF hazard warning signs used to control potential hazards posed by RF EME. Information for this section has been gathered from Vodafone records and the results of physical site inspections undertaken by Vodafone or its representatives.

<b>Control procedures to restrict access to RF hazards</b>
- Locked rooftop access door

<b>RF hazard warning sign details</b>
- "Warning: Radio Frequency Transmitting Equipment in Operation" and "RF Hazard Area Beyond This Point" signs mounted on the rooftop access door
- "Warning: Radio Frequency Transmitting Equipment in Operation" signs mounted on the wall next to the antennas

<b>Special requirements (Local Rules)</b>
- N/A

## Section 4.

## Equipment Installed at this site

### Vodafone New Zealand

Ant. Ref.	Antenna Type	Antenna Make/Model	Antenna Height (m)	Bearing (Degrees)	Equipment System/Function	Power Level (W)
1	Panel	KATHREIN 742 265	36	10	GSM900 Tx/Rx CDMA2100 Tx/Rx	57W 40W
2	Panel	KATHREIN 742 265	36	110	GSM900 Tx/Rx CDMA2100 Tx/Rx	57W 40W
3	Panel	KATHREIN 742 265	36	240	GSM900 Tx/Rx CDMA2100 Tx/Rx	57W 40W
4	600mm M/W	600mm M/W	35	5	Vodafone Link	0.05W

Antenna Height refers to distance from ground to the centreline of the antenna.

**Section 5.**

**Site specific documents**



a)

**Site Compliance Certificate**

**MASSEY UNIVERSITY (64040507)**


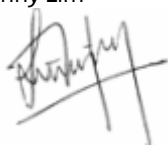
**RF Human Exposure Limits**

NZS 2772:Part 1:1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz (the Standard) establishes exposure reference levels derived from basic restrictions for the categories of occupational and general public. The guidelines and subsequent Standard have established levels of exposure to radiofrequency fields below which adverse effects are thought to be non-existent or negligible. Operation of equipment that complies with the Standard is therefore deemed to have no significant environmental effect in respect of health, safety or wellbeing of the community.

Compliance with the Standard requires that protection is provided for the general public to ensure they are not exposed to levels exceeding the general public limit and for those exposed to levels exceeding the general public limit as a result of their employment, protection is provided to ensure they are not exposed to levels exceeding the occupational limit.

**Compliance Statement**

This site has been assessed to ensure compliance with NZS 2772: Part 1:1999 and Vodafone group policies in regard to RF EME.

 <p><b>NATA</b> ACCREDITED FOR <b>TECHNICAL COMPETENCE</b></p> <p>NATA License Number: 15500 This document is issued in accordance with NATA's accreditation requirements.</p> <p>Accredited for compliance with ISO/IEC 17020</p>	<p>Qualified NATA EME Signatory:</p> <p>Name: Johnny Lim</p> <p>Signature: </p> <p>Company: Radhaz Consulting Pty Ltd</p> <p>Designation: Principal EME Consultant</p> <p>Site Assessment Report No: NZ10367-01    Issue Date: 04/08/2009</p> <p>Landowner Book Issue No: 1    Issue Date: 04/08/2009</p>
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Access control, RF warning signs and safe working procedures are in place as detailed in relevant section of this Landowners book.

**Valid at 04/08/2009**

b)

## Site photographs

Photos are provided by Vodafone for site assessment.



## Section 6. Safe Work Procedures

The following steps are a summary of safety procedures that should be adopted for work on radio frequency transmitter sites.

- Locate & read the Landowner Book
- Identify restricted access & RF hazard areas
- Verify safety procedures in Landowner Book with all personnel
- Contact Site Manager or RF Assessor for any questions
- Do not enter restricted areas with out power down
- Use personal RF monitor to verify safe working conditions at all times

Always confirm site and company safety procedures.



## **Section 7. Additional Information**

### **What is RF EME?**

Electromagnetic energy (EME) is the energy stored in an electromagnetic field. Radiofrequency (RF) EME refers to EME generated by radio waves. RF EME is a factor of everyday life. It is emitted by natural sources like the sun and the earth, and by man-made sources operating on radio waves such as TV and radio broadcasts, baby monitors, model planes as well as mobile phone base stations and radio communications facilities.

### **EME Safety Standard**

The International Commission on Non-Ionising Radiation (ICNIRP) has established a range of limits for continuous exposure of the general public and occupational workers to radio frequency transmissions. These limits are included in the New Zealand Standard 2772.1(1999).

### **Radio Communications Safety**

ICNIRP, the World Health Organisation (WHO), and other internationally recognised health authorities have made an overall assessment of the safety and health impacts connected with EME.

There is a consensus among these organisations that there is no substantiated scientific evidence of health effects from the low levels of EME generated by radio communications facilities that comply with national and international safety guidelines.