

TN
A

PROPOSED TELSTRA ELEVATED
STEEL GRILLAGE (TYP)

PROPOSED TELSTRA
RRU MOUNTS

PROPOSED TELSTRA
PANEL ANTENNAS
MOUNTED ON STEEL
POLE (TYP)

PROPOSED
TELSTRA 450
WIDE CABLE
LADDER AND
RISER

PROPOSED TELSTRA
EQUIPMENT ROOM
3200 x 2400, UNDER
FIRE STAIRS. 2HR
FIRE RATED WALLS

EXISTING STAIRS

PROPOSED TELSTRA
STAIRS

PROPOSED TELSTRA
WALKWAY WITH HANDRAIL

NOTES:
1. FOR EME SIGNS NOTATED #X REFER TO 0054.86 FOR DETAILS.

PROPERTY DESCRIPTION

PART OF LOT 1 ON DP1080161
PARISH OF
COUNTY OF



SITE STRUCTURE CO-ORDINATES
SURVEY READING ACCURACY: ±1m
CENTRE OF MOUNTING FRAME

LATITUDE	-33.726592 (GDA 94)
LONGITUDE	150.997501 (GDA 94)

aurecon
Aurecon Australia Pty Ltd ABN 54 005 139 873
116 Military Road (P.O. Box 538) Telephone: +61 2 9465 5599
Neutral Bay Facsimile: +61 2 9465 5598
New South Wales 2089 Australia Email: sydney@ap.aurecongroup.com

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PROPOSED TELSTRA 900 WIDE
WALKWAY WITH HANDRAIL

EXISTING GOODS LIFT SHAFT

PROPOSED TELSTRA ACCESS
LADDER

EXISTING PIPES

EXISTING WALKWAY

PROPOSED A/C
OUTDOOR UNIT

EXISTING PLANT ROOM

SIGNAGE NOTES:

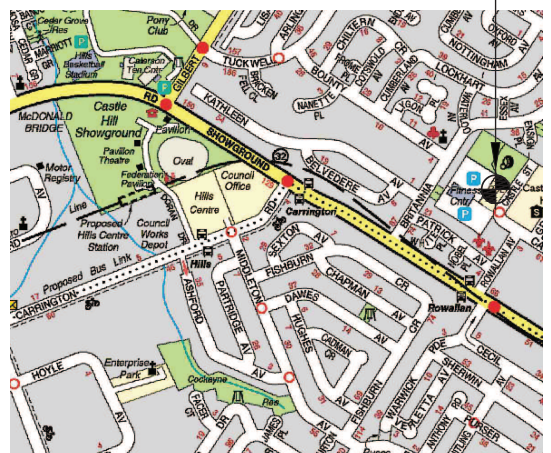
- #4 EME SIGN SECURED TO ACCESS STAIR AND ACCESS DOOR.
- #2 EME SIGN SECURED BEHIND ALL ANTENNAS.
- #7 EME SIGN SECURED TO MOUNTING POLE 1.5m ABOVE ROOF LEVEL.

SITE LAYOUT

1.5m 0 1.5m 3m 4.5m 6m 7.5m SCALE 1:150

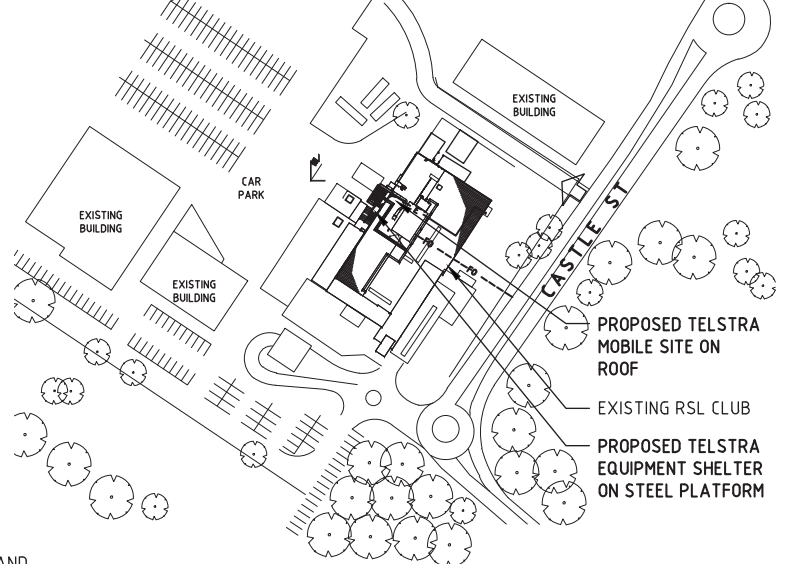
TN

RFNSA SITE No. 2154020



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LOCALITY PLAN



SITE ACCESS

SCALE 1:2000 20m 0 20m 40m 60m 80m 100m

FOR CONSTRUCTION

ORDER	DRAWN	CHKD	AMENDMENT	EXAM	APPD	DATE	ISS
NA07338	JZ	EL	ISSUED FOR APPROVAL 70902238W001A	PM	NT	23.03.12	6
NA07338	JZ	EL	ISSUED FOR APPROVAL 70902238W001A	PM	NT	01.05.12	7
NA07338	JZ	EL	ISSUED FOR APPROVAL 70902238W001A	PM	DK	18.10.12	8
NA07338	JZ	EL	ISSUED FOR APPROVAL 70902238W001A	PM	DK	25.01.13	9
NA07338.01	JZ	EL	FOR CONSTRUCTION - 70902238W004AA	PM	DK	10.07.13	10

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MOBILE NETWORK SITE 279211
CASTLE HILL 77 CASTLE ST
SITE LAYOUT AND ACCESS
77 CASTLE ST, CASTLE HILL, NSW 2154

DWG
NO.

N109422

SHT
NO. S1
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Telstra Wireless Operations Template - 01186692 Issue 9 May 2010

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D

E

F

A

B

C

D

E

F

PROPOSED TELSTRA ANTENNA
ON PROPOSED MOUNTING POLE
(TYP)

▽ E.L. 20.12m
TOP OF TELSTRA ANTENNAS / STRUCTURE

▽ E.L. 18.87m
C/L TELSTRA PANEL ANTENNAS

EXISTING PLANT ROOM (BEYOND)

HANDRAIL

PROPOSED TELSTRA MOUNTING POLE
WITH STEP - PEGS

PROPOSED A/C OUTDOOR UNIT

PROPOSED TELSTRA CABLE
LADDER AND RISER

▽ E.L. 14.38m
ROOF LEVEL (BEYOND)

▽ E.L. 12.12m
UPPER ROOF LEVEL

▽ E.L. 11.58m
ROOF LEVEL

EXISTING CHIMNEY

EXISTING RSL BUILDING

EXISTING
GOODS LIFT
SHAFT
(BEHIND)

EXISTING FIRE ESCAPE STAIR

PROPOSED TELSTRA EQUIPMENT
ROOM (BEYOND). REFER DRG S3-1
FOR DETAILS

SIGNAGE NOTES:

1. #4 EME SIGN SECURED TO ACCESS STAIR
AND ACCESS DOOR.
2. #2 EME SIGN SECURED BEHIND ALL ANTENNAS.
3. #7 EME SIGN SECURED TO MOUNTING POLE 1.5m
ABOVE ROOF LEVEL.

NOTES:-

REFER DRG S3-1 FOR NOTES AND ANTENNA CONFIGURATION TABLE.

NORTH WESTERN ELEVATION

SCALE 1:100

1m 0 1m 2m 3m 4m 5m SCALE 1:100



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NA07338.01	JZ	EL	FOR CONSTRUCTION - 70902238W004AA	PM	DK	10.07.13	10

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FOR CONSTRUCTION

Telstra

MOBILE NETWORK SITE 279211
CASTLE HILL 77 CASTLE ST
NORTH WESTERN ELEVATION
77 CASTLE ST, CASTLE HILL, NSW 2154

DWG
NO.

N109422

SHT
NO. S3
INDEX



Summary of Estimated RF EME Levels around the Proposed Wireless Base Station at 77 Castle St, CASTLE HILL NSW 2154

Introduction:

Date 10/7/2013

NSA Site No (2154020)

This report summarises the estimated maximum cumulative radiofrequency (RF) electromagnetic energy (EME) levels at ground level emitted from the existing wireless base station antennas at 77 Castle St CASTLE HILL NSW 2154. Maximum EME levels are estimated in 360° circular bands out to 500m from the base station. The procedures for making the estimates have been developed by the Australian Radiation Protection And Nuclear Safety Agency (ARPANSA)¹. These are documented in the ARPANSA Technical Report; "Radio Frequency EME Exposure Levels - Prediction Methodologies" which is available at <http://www.arpansa.gov.au>

EME Health Standard

ARPANSA, an Australian Government agency in the Health and Ageing portfolio has established a Radiation Protection Standard² specifying limits for continuous exposure of the general public to RF transmissions at frequencies used by wireless base stations. Further information can be gained from the ARPANSA web site.

The Australian Communications and Media Authority (ACMA)³ mandates exposure limits for continuous exposure of the general public to RF EME from wireless base stations. Further information can be found at the ACMA website <http://emr.acma.gov.au>

Existing Site Radio Systems There are currently no existing radio systems for this site.

Proposed Site Radio Systems

Telstra / WCDMA850 (proposed)			
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Table of Predicted EME Levels – Proposed

Distance from the antennas at 77 Castle St in 360° circular bands	Maximum Cumulative EME Level – All carriers at this site (% of ARPANSA exposure limits ²) Public exposure limit = 100%
0m to 50m	0.028%
50m to 100m	0.22%
100m to 200m	0.24%
200m to 300m	0.1%
300m to 400m	0.046%
400m to 500m	0.026%
Maximum EME level 110.16 m, from the antennas at 77 Castle St	0.24%

Note: Estimation for the maximum level of RF EME at 1.5m above the ground from the existing and proposed antennas assuming level ground. The estimated levels have been calculated on the maximum mobile phone call and data capacity anticipated for this site. This estimation does not include possible radio signal attenuation due to buildings and the general environment. The actual EME levels will generally be significantly less than predicted due to path losses and the base station automatically minimising transmitter power to only serve established phone calls and data transmissions⁵. Where applicable, particular locations of interest in the area surrounding the base station, including topographical variations, are assessed in Appendix A "Other areas of Interest" table on the last page.

Summary – Proposed Radio Systems

RF EME levels have been estimated from the existing and proposed antennas at **77 Castle St** CASTLE HILL NSW 2154. The maximum cumulative EME level at 1.5 m above ground level is estimated to be **0.24 %** of the ARPANSA public exposure limits.

Reference Notes:

1. 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).
2. 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]
3. 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/>
4. The EME predictions in this report assume a near worst-case scenario including:
 - wireless base station transmitters for mobile and broadband data operating at maximum power (no automatic power reduction)
 - simultaneous telephone calls and data transmission.
 - an unobstructed line of sight view to the antennas.In practice a worst-case scenario is rarely the case. There are often trees and buildings in the immediate vicinity, and cellular networks automatically adjust transmit power to suit the actual user traffic. The level of EME may also be affected where significant landscape features are present and predicted EME levels might not be the absolute maximum at all locations.
5. Further explanation of this report may be found in "Understanding the ARPANSA Environmental EME Report" and other documents on the ARPANSA web site, <http://www.arpansa.gov.au>

Appendix A

Table of Other Areas of Interest

Additional Locations	Height / Scan	Maximum Cumulative EME Level All Carriers at this site
	relative to location ground level	(% of ARPANSA exposure limits ²) Public exposure limit = 100%
Castle Hill High School	0m to 7m	0.17%
Fiona Childcare	0m to 6m	0.022%
The Discovery House Preschool	0m to 7m	0.021%

Note: Estimation for the maximum EME levels at selected areas of interest over a height range relative to the specific ground level at the area of interest. This table includes any existing and proposed radio systems.

Estimation Notes / Assumptions – Other Areas of Interest

Variable ground topography has been included in the assessment of the "Other Areas of Interest" as per ARPANSA methodology



Before



After



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

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							Site Number. : N109422	Photographer :		Date : 13.06.13
Rev.	Date	Created	Revision Description				Drawing title Photomontage View 5	Drawing No. : M05	Checker :	REV. A

