DATE OF IS	SOLIE	28.11.05	04.11.11	20.07.12	25.10.13	12.12.13	07.05.14	30.04.18	24.05.22	
	PACKAGE VERSION	<u> </u>	2	_ 7 _ 3	7	← 5	6	⊥ <u>m</u> ⊥ 7	8	
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GENER/	AL									
S0314-G1	SITE SPECIFICATIONS	AB	Α	AB1	AB1	AB1	AB1	A	В	I
S0314-G2	OVERALL SITE PLAN	-	Α	AB	-		-	Α	В	
S0314-G3	SITE LAYOUT AND SETOUT PLAN	AB	_ A	AB1		_ C	1	E	F	
S0314-G4	SITE ELEVATION	AB	_ A	AB1	В	_ C	D	E	F	
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ANTENN	NAS & TRANSMISSION									
S0314-A1	PANEL ANTENNA SYSTEM CONFIGURATION	ı -	_ A	AB	В	_ C	D	E	F	ı
S0314-A2	RF PLUMBING DIAGRAM	-	_ A	AB	В	В	C	D	E	
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S0314-S1 S0314-S2	RRU MOUNTS DETAILS - SHEET 1 ANTENNA MOUNTS DETAILS - SHEET 1		_		-		_	A	⊥ B ⊢ B	
30314-32	ANTENNA MOUNTS DETAILS - SHEET T				-			_ A	D	
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	EQUIPMENT SHELTER LAYOUT PLAN	AB	A	AB1	В	B	_	D L	<u>E</u>	
	EQUIPMENT SHELTER LAYOUT PLAN	AB	A	AB1	В	B	C	_ D	E	
EME EX	EQUIPMENT SHELTER LAYOUT PLAN CLUSION ZONES	AB	A	AB1	В	B	_ C	<u>D</u>	<u>E</u>	L L
EME EX	EQUIPMENT SHELTER LAYOUT PLAN	AB	A	AB1	В	B	_	D	E	<u> </u>
EME EX	EQUIPMENT SHELTER LAYOUT PLAN CLUSION ZONES	AB	A	AB1	В	B		D	E	
EME EX	EQUIPMENT SHELTER LAYOUT PLAN CLUSION ZONES	AB	A	AB1	В	B	C	D	E	
EME EX	EQUIPMENT SHELTER LAYOUT PLAN CCLUSION ZONES L L L L L L L L L L L L L L L L L L	AB	A	AB1	В	B	C		⊥ E	
EME EX LEASE / REFERE 0SD-100	EQUIPMENT SHELTER LAYOUT PLAN CCLUSION ZONES L LICENCE ENCE DOCUMENTS	AB	A	AB1	B	B	C	D		
EME EX LEASE / REFERE 0SD-100 0SD-180	EQUIPMENT SHELTER LAYOUT PLAN CCLUSION ZONES LICENCE ENCE DOCUMENTS STANDARD CONSTRUCTION NOTES	AB	A	AB1	B	B	C	B	В	
EME EX LEASE / REFERE 0SD-100 0SD-180	EQUIPMENT SHELTER LAYOUT PLAN CCLUSION ZONES LICENCE ENCE DOCUMENTS STANDARD CONSTRUCTION NOTES SITE SIGNAGE TYPICAL ROOFTOP SITE	AB	A	AB1	B	B		B	B A	
EME EX LEASE / REFERE 0SD-100 0SD-180	EQUIPMENT SHELTER LAYOUT PLAN CCLUSION ZONES LICENCE ENCE DOCUMENTS STANDARD CONSTRUCTION NOTES SITE SIGNAGE TYPICAL ROOFTOP SITE	AB		AB1	B	B		B	B A	
EME EX	EQUIPMENT SHELTER LAYOUT PLAN CCLUSION ZONES LICENCE ENCE DOCUMENTS STANDARD CONSTRUCTION NOTES SITE SIGNAGE TYPICAL ROOFTOP SITE	AB	A	AB1	B	B		B	B A	
EME EX LEASE / REFERE 0SD-100 0SD-180 0SD-191	CLUSION ZONES LICENCE STANDARD CONSTRUCTION NOTES SITE SIGNAGE TYPICAL ROOFTOP SITE OPTUS EME SAFETY SIGNAGE REQUIREMENTS	AB	A	AB1	B	B		B	B A	
EME EX LEASE / REFERE 0SD-100 0SD-180 0SD-191 DISTRIE	CLUSION ZONES LICENCE STANDARD CONSTRUCTION NOTES SITE SIGNAGE TYPICAL ROOFTOP SITE OPTUS EME SAFETY SIGNAGE REQUIREMENTS	AB	A	AB1	B	B		B	B A A	
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EME EX LEASE / REFERE 0SD-100 0SD-180 0SD-191 DISTRIE	CLUSION ZONES LICENCE STANDARD CONSTRUCTION NOTES SITE SIGNAGE TYPICAL ROOFTOP SITE OPTUS EME SAFETY SIGNAGE REQUIREMENTS RICHARD YOUNG	AB	A	AB1	B	B		B	B A A	

OPTUS

OPTUS SITE - S0314
GLEBE ISLAND

GLEBE ISLAND WHEAT SILOS

JAMES CRAIG RD GLEBE ISLAND

ROZELLE NSW 2039

UPGRADE 5G (OO)



FOR CONSTRUCTION

Drawing No.

S0314 - 00

1								
	SITE LOCATION DATA							
	SOURCE: GOOGLE MAPS							
	DATUM: MGA (GDA94)	ZONE : 56						
	REF LOCATION: € OF ROOFTOP							
	EASTING	331 890						
	NORTHING	6 251 142						
	LATITUDE	-33.86666						
	LONGITUDE	151.18255						
	WGS84 DATUM (USED BY GO							
	AND GPS DEVICES) CAN BE CO	NSIDERED SAME						

AS GDA94 (SOURCE: "GEOCENTRIC DATUM OF

AUSTRALIA TECHNICAL MANUAL" VERSION 2.3)

TOPOGRAPHIC MAP ... COPYRIGHT © GOOGLE MAPS

EXISTING ROOFTOP

- NEW MOUNTING POLES ON EXISTING PEDESTAL MOUNTS ON LOWER AND UPPER ROOFS. EXISTING 3 x CNNPX310R AND 3 x KATHREIN 742 215 PANEL ANTENNAS TO BE RECOVERED.
- 2. NEW OPTUS ANTENNAS AND ANCILLARIES TO BE INSTALLED ON NEW OPTUS MOUNTS FIXED TO EXISTING MOUNTS, REFER TO DRAWINGS \$0314-\$2 FOR DETAILS.
- 3. NEW OPTUS RRUS TO BE INSTALLED ON NEW MOUNTS REFER TO DWG. S0314-S1 FOR DETAILS.
- EXISTING FEEDERS AND NEW TRUNK CABLES TO RUN INSIDE EXISTING CABLE LADDERS.
- ANTENNA MAINTENANCE ACCESS VIA STEP PEGS AND LAD-SAF BY QUALIFIED PERSONNEL ONLY.
- 6. STRUCTURAL ADEQUACY OF EXISTING AND NEW ANTENNA AND RRU MOUNTS ARE CONFIRMED BY SERVICESTREAM. REFER TO S0314 GLEBE ISLAND STRUCTURAL CERTIFICATE.

EQUIPMENT SHELTER

 EXISTING OPTUS (JAMES HARDIE) PHASE 6 (5309) SANDWICH PANEL EQUIPMENT SHELTER COLOURED COLORBOND CREAM (BEIGE) REFER TO DRAWING S0314-F1 FOR DETAILS.

SITE HAZARDS

- I. EXISTING EME TRANSMITTING ANTENNAS
- 2. MANUAL HANDLING
- 3. WORKING AT HEIGHTS
- 4. SLIP, TRIP AND FALLS
- 5. ELECTRICAL HAZARDS
- 6. WEATHER / LIGHTNING
- SUN EXPOSURE
 WILDLIFE / INSECTS

TRANSMISSION

THIS SITE IS LINKED TO THE NETWORK VIA EXISTING OPTIC FIBRE.

CONSTRUCTION SITE ACCESS

ACCESS IS VIA SOMMERVILLE ROAD AS INDICATED ON DRAWING S0314-G2

ACCESS NOTES:

FOR SITE INSPECTION YOU NEED TO CONTACT SYDNEY PORTS SCOTT DONELLY PROPERTY MANAGER SYDNEY PORTS CORPORATION, EMAIL: SDONELLY@SUGARAUSTRALIA.COM.AU T: 61 2 8572 7628 M: 61 400 433 136
AS THEY HAVE TEMP RESTRICTED ROOF TOP ACCESS. YOU MAY ONLY BE PERMITTED ACCESS TO WORK ON FAULTS AND NOT UPGRADES / PROVISIONING.

DESCRIPTION

OPTUS EQUIPMENT SHELTER WITH 3 SECTOR OF ANTENNAS ON ROOFTOP.

DIRECTION

ACCESS IS VIA FIRST SIGNING IN AT THE DISPATCH OFFICE, AT THE SOUTH WEST CORNER OF THE COMPLEX, LOOK FOR THE SIGNS. AS TEMP ACCESS, YOU WILL BE ESCORTED THROUGH THE COMPLEX AND AROUND TO THE LIFT. TAKE THE LIFT UP TO THE TOP FLOOR, THAN UP THE STAIRS AND OUT ONTO THE ROOF TOP. ONCE WE HAVE THE CARDS, YOU CAN SIGN IN AT THE ABOVE OFFICE, THAN WALK AROUND THE BUILDING CLOCKWISE, LOCATE THE DOOR AT THE APPROX. NORTH EAST CORNER OF THE COMPLEX, USE THE ACCESS CARD TO OPEN IT, YOU CAN THAN TAKE THE LIFE DIRECT TO THE ROOFTOP.

SECURITY

SPECIAL KEY CARD AND GENERAL OPTUS KEY ARE REQUIRED.

SITE SIGNAGE

SITE SIGNAGE SHALL BE IN ACCORDANCE WITH OSD-180 AND OSD-191.

EME EXCLUSION ZONES

 REFER TO RADIO COMMUNICATIONS SITE MANAGEMENT BOOK (RCSMB) FOR LATEST EME EXCLUSION ZONES FOR EXISTING AND PROPOSED ANTENNAS AT THIS SITE.

ELECTRICAL INSTALLATION

EXISTING POWER SUPPLY IS 63AMP 3PHASE AND SUFFICIENT FOR THIS UPGRADING WORKS.

SITE EARTHING

NEW OPTUS EQUIPMENT TO BE EARTHED TO CURRENT OPTUS EARTHING SPECIFICATIONS.

B	24.05.22	FOR CONSTRUCTION (UPGRADE 5G (00))	SSNC	AB	MA	MA	SA
A	30.04.18	FOR CONSTRUCTION	MYD	DA	DA	AA	PM
AB1	20.07.12	AS BUILT (METRO U800 UPGRADE)	DALY	MT	MM	DI	CT
A	04.11.11	FOR CONSTRUCTION	DALY	CPC	MM	DI	CT
Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver

ServiceStream

OPTUS

MOBILE NETWORK
AUSTRALIA
SITE No:- S0314
GLEBE ISLAND
GLEBE ISLAND WHEAT SILOS

Drawing Title:

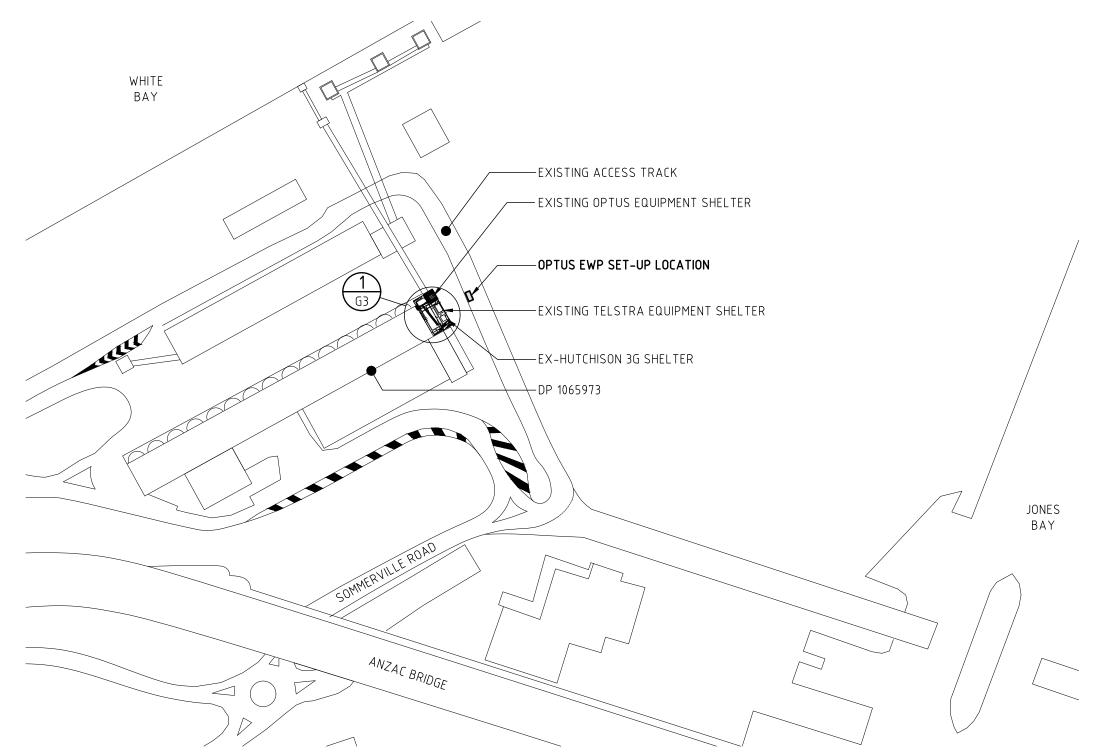
SITE SPECIFICATIONS

Drawing Status:
FOR CONSTRUCTION

Drawing No. Revision S0314-G1 B

10 0 10 20 30 40





- 1. ALL INFORMATION TO BE CHECKED ON SITE PRIOR TO FABRICATION AND CONSTRUCTION.
- 2. DRAWINGS BASED ON INFORMATION PROVIDED BY OTHERS.
- 3. CONSTRUCTION CONTRACTOR TO **CONFIRM SUITABILITY OF PROPOSED EWP** SET UP/PACKING LOCATION ON SITE PRIOR TO WORK COMMENCING.
- 4. SERVICES INFORMATION CONTAINED ON THIS DRAWING IS INDICATIVE ONLY AND REFERENCE SHOULD BE MADE TO THE **AUTHORITIES DRAWINGS TO CONFIRM** ACCURACY AND COMPLETENESS. WHERE INFORMATION IS AVAILABLE, THE SUB-SURFACE SERVICES INSTALLED BY AGENTS OTHER THAN THE AUTHORITIES HAVE BEEN SHOWN, BUT ADDITIONAL UNDOCUMENTED SERVICES MAY BE PRESENT. SHOULD THE CONTRACTOR BELIEVE THAT SUB-SURFACE SERVICES ARE AT RISK OF DAMAGE DURING CONSTRUCTION, THE CONTRACTOR SHOULD NOTIFY THE RELEVANT **AUTHORITIES AND ESTABLISH THE EXACT** LOCATION OF THE SERVICES.

LEGEND

PROPERTY BOUNDARY

- 0 e - 0 e - EXISTING OPTUS U/G POWER LINE

- Ofe - Ofe - Ofe - EXISTING OPTUS FIBER LINE

OVERALL SITE PLAN

1:2000

В	24.05.22	FOR CONSTRUCTION (UPGRADE 5G (00))	SSNC	AB	MA	MA	SA
Α	30.04.18	FOR CONSTRUCTION	MYD	DA	DA	AA	PM
AB1	20.07.12	AS BUILT (METRO U800 UPGRADE)	DALY	MT	MM	DI	СТ
Α	04.11.11	FOR CONSTRUCTION	DALY	CPC	MM	DI	СТ
Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver

ServiceStream

OPTUS

MOBILE NETWORK **AUSTRALIA** SITE No:- S0314 **GLEBE ISLAND GLEBE ISLAND WHEAT SILOS**

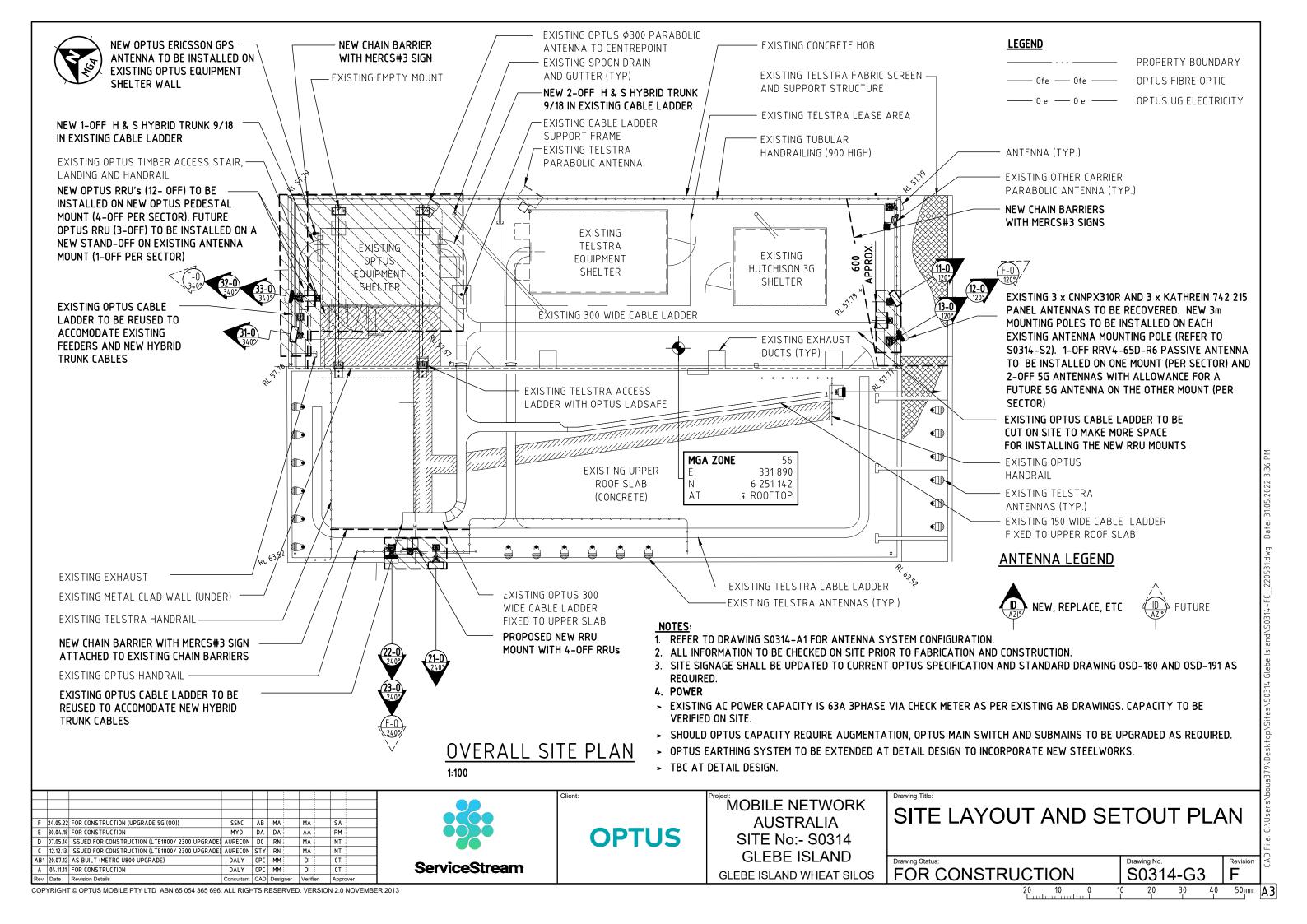
OVERALL SITE PLAN

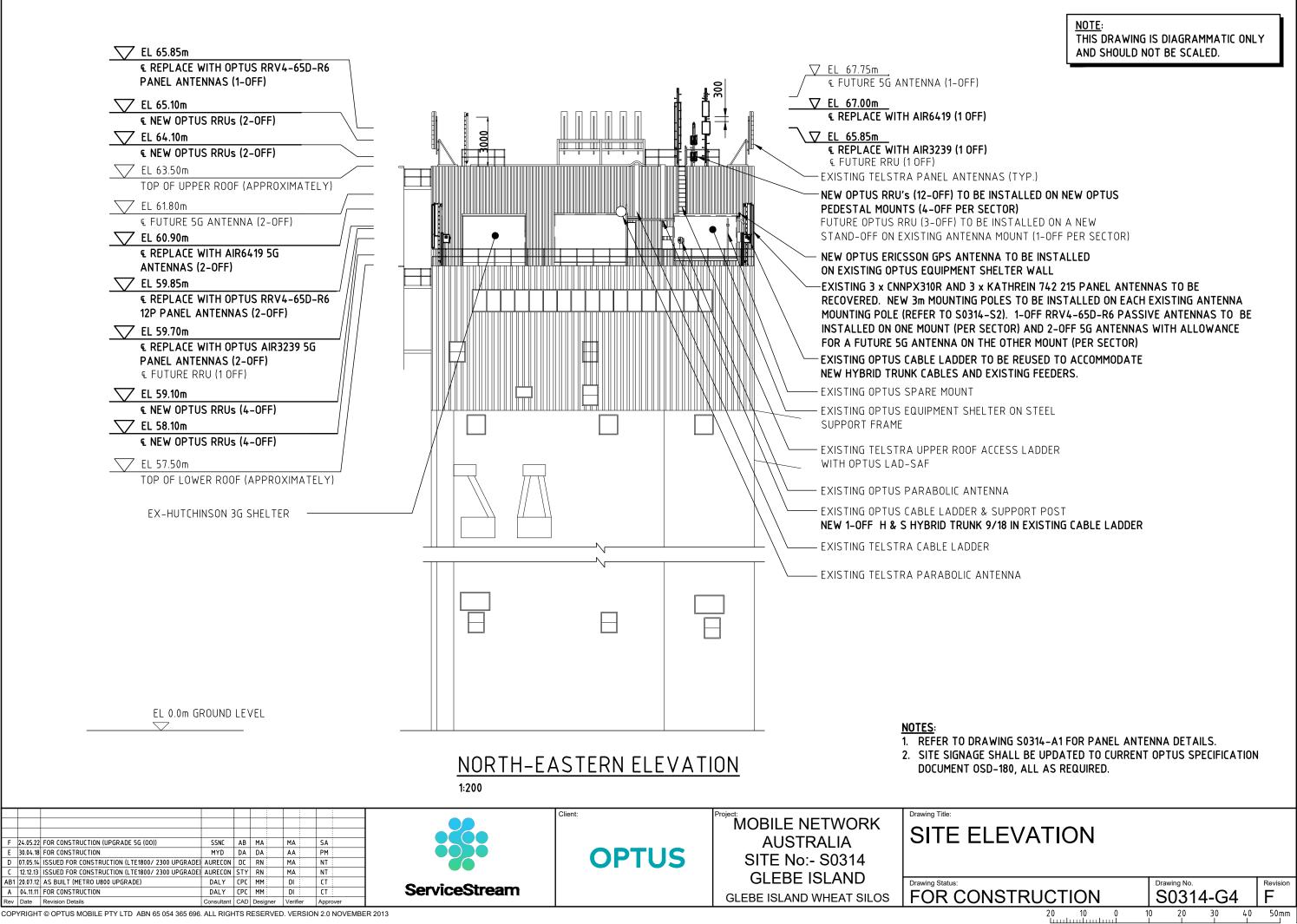
FOR CONSTRUCTION

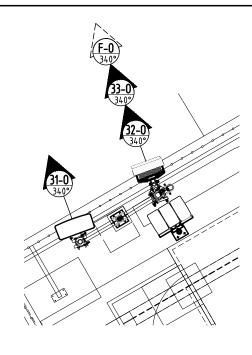
S0314-G2

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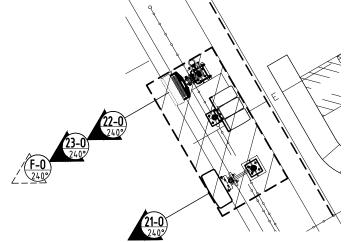




ANTENNA	OPERATOR	OPT	TUS	OP	TUS	OF	TUS
	SECTOR	SECT	OR 1	SEC	TOR 2	SEC	TOR 3
	IDENTITY № (SAO)	F-	0	F	-0	F	: - 0
	STATUS	FUT	JRE	FU	TURE	FU [*]	TURE
	AZMUTH (° TN)	120°	'TN	240)° TN	340)° TN
	EL C/L ANTENNA	61.8	0m	67.	75m	61.	.80m
	CO-ORDINATES (NOTE 2)	E 331 890	N 6 251 142	E 331 890	N 6 251 142	E 331 890	N 6 251 142
	MECHANICAL TILT (°)				-		-
	MAKE & MODEL	AA	U1	A	AU1	A	AU1
	DIMENSIONS (H x W x D)	290 x 20	00 x 136	290 x 2	200 x 136	290 x 2	200 x 136
	PORTS	18	k 2	1	& 2	1	& 2
	PORT USER)	0		0	
	FREQUENCY BANDS			-		-	
	RET	-		•		-	
ANCILLARIES	MHA	N/	Α	١	l/A	N	1/A
	COMBINER / DIPLEXER	N/			l/A	l l	I/A
	RRU / RF MODULES	N/	Α	N	l/A	N	I/A
COAXIAL	STATUS					-	
FEEDERS	TECHNOLOGIES						-
	QUANTITY	-			-		-
	DESIGNATION (SIZE)	-		-			-
	ESTIMATED LENGTH	-			-		-
TRUNK	STATUS						
CABLES	TECHNOLOGIES						
	QUANTITY	SHA			ARED		ARED
	MAKE A MODEL (OLZE)	WITH PASSIV	E ANTENNA	WITH PASSI	VE ANTENNA	WITH PASSI	VE ANTENNA
	MAKE & MODEL (SIZE)						
	NO. OF DC / SMF PAIRS	SECT	OR 1	SEC	TOR 2	SEC	TOR 3
			OR 1	SEC	TOR 2	SEC	TOR 3

ANCILLARY	EQUIPMENT CODE	MANUFACTURER PRODUCT CODE	TECHNOLOGY FREQUENCIES	DIMENSIONS (mm x mm x mm)	WEIGHT (kg)
МНА	MHA3	E15R02P15	900	260 x 170 x 140	8
	MHA5	E15S09P55	2100	191 x 170 x 50.5	3.3
RRU	ERICSSON RRU	4480	700/900	555 x 398 x 190	37.6
		4418	2300	420 x 342 x 150	15.6
		4419	2600	447 x 398 x 153	21
		4480	1800/2100	550 x 400 x 150	32
COMBINER	COM19D	E14F10P7100	2100/2300/2600	398 x 167 x 94	8.45
DIPLEXER	RF SWITCH	D08C99P0300	700/900	340 x 165 x 83	
FILTER	850 REJ FILTER	E14V00P21	700/900	147 x 106 x 158	2.5





OPTUS ANTENNAS PLAN







NOTES:

- 1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RF PLUMBING DIAGRAM DRAWING S0314-A2.
- 2. ANTENNA CO-ORDINATES ARE SPECIFIED FOR CENTRE OF EACH SECTOR, TO THE NEAREST METRE.
- 3. INFORMATION IN THE TABLES SUPPLIED AND VERIFIED BY OPTUS.
- 4. ANCILLARIES REFER TO ITEMS AT OR NEAR THE ANTENNA.
- 5. CO-AXIAL FEEDER AND TRUNK LENGTHS ARE ESTIMATED, ROUNDED UP TO
- 6. FEEDER TAILS TO BE 84 OFF WITH MAXIMUM LENGTH OF 5m FROM RRU/MHA/COMBINERS TO ANTENNA.

F	24.05.22	FOR CONSTRUCTION (UPGRADE 5G (00))	SSNC	AB	MA	MA	SA
Ε	30.04.18	FOR CONSTRUCTION	MYD	DA	DA	AA	PM
D	07.05.14	ISSUED FOR CONSTRUCTION (LTE1800/ 2300 UPGRADE)	AURECON	DC	RN	MA	NT
С	12.12.13	ISSUED FOR CONSTRUCTION (LTE1800/ 2300 UPGRADE)	AURECON	STY	RN :	MA	NT
AB1	20.07.12	AS BUILT (METRO U800 UPGRADE)	DALY	CPC	MM	DI	СТ
Α	04.11.11	FOR CONSTRUCTION	DALY	CPC	MM	DI	СТ
Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver



OPTUS

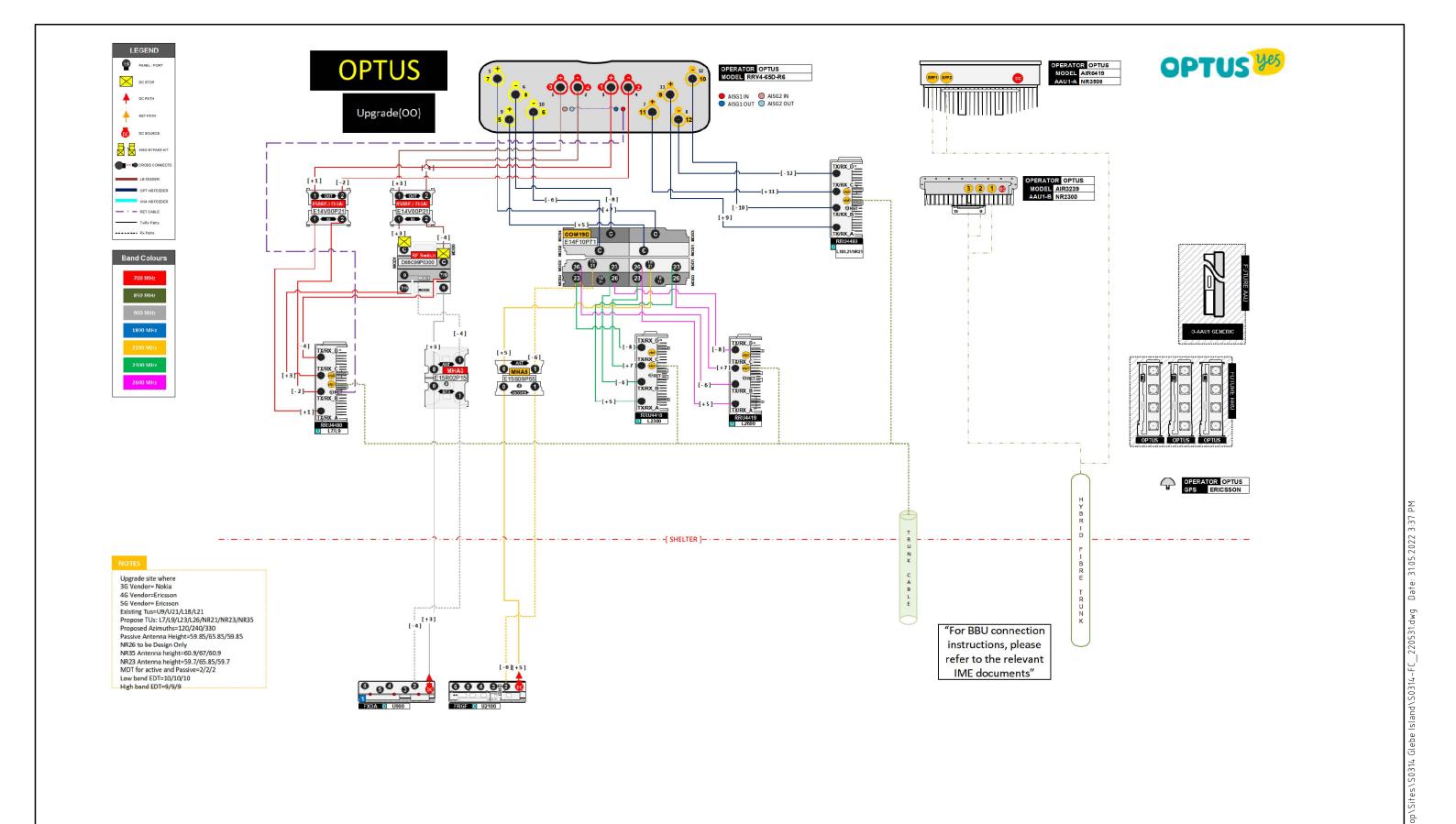
MOBILE NETWORK **AUSTRALIA SITE No:- S0314 GLEBE ISLAND GLEBE ISLAND WHEAT SILOS**

PANEL ANTENNA SYSTEM CONFIGURATION

FOR CONSTRUCTION

F S0314-A1

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<u>NOTES:</u>

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING S0314-A1.

OPTUS RF PLUMBING DIAGRAM

PER SECTOR

Ε	24.05.22	FOR CONSTRUCTION (UPGRADE 5G (00))	SSNC	AB	MA	MA	SA
D	30.04.18	FOR CONSTRUCTION	MYD	DA	DA	AA	PM
С	12.12.13	ISSUED FOR CONSTRUCTION (LTE1800/ 2300 UPGRADE)	AURECON	STY	RN :	MA	NT
AB1	20.07.12	AS BUILT (METRO U800 UPGRADE)	DALY	CPC	MM	DI	СТ
Α	04.11.11	FOR CONSTRUCTION	DALY	CPC	MM	DI	СТ
Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver

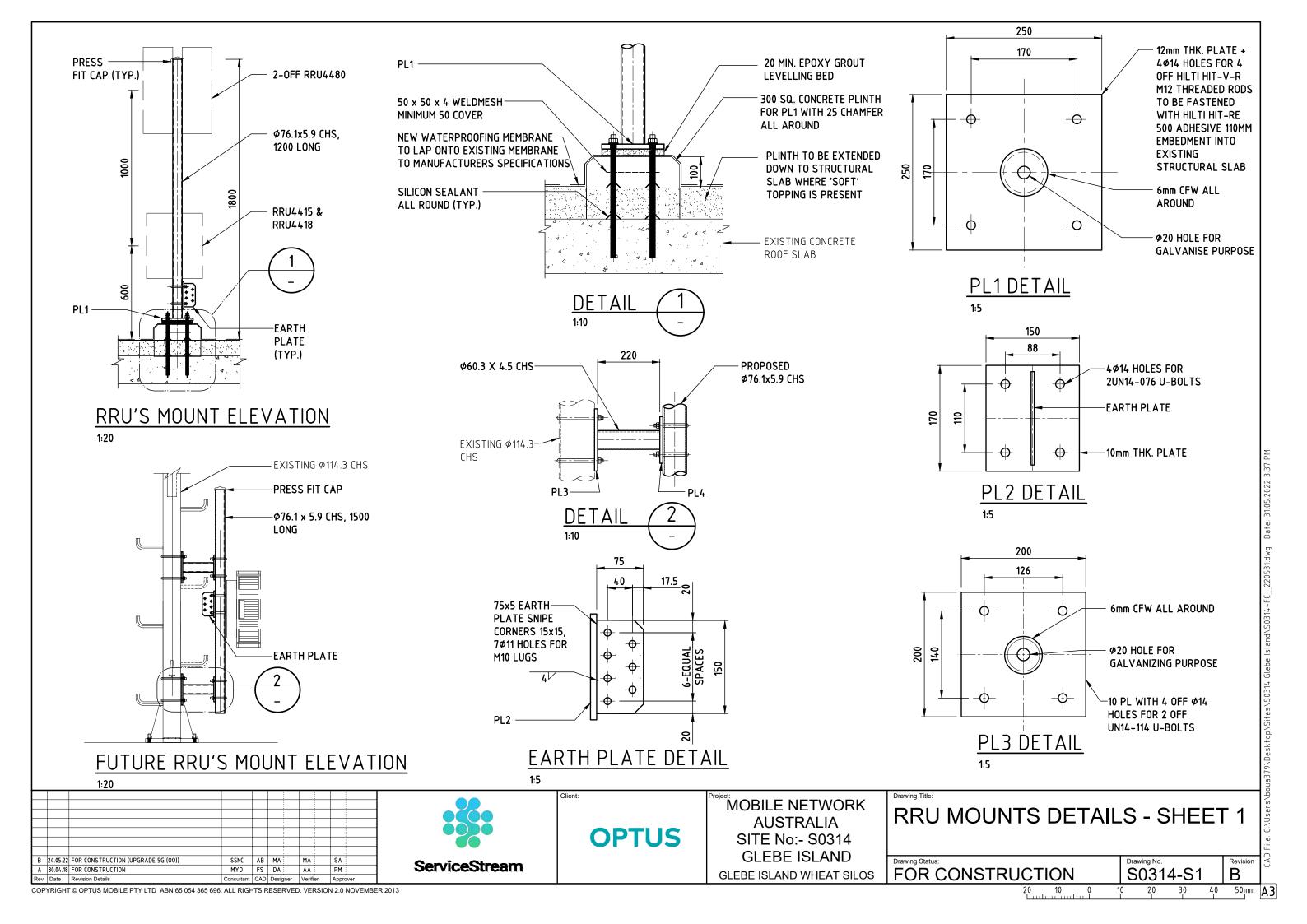


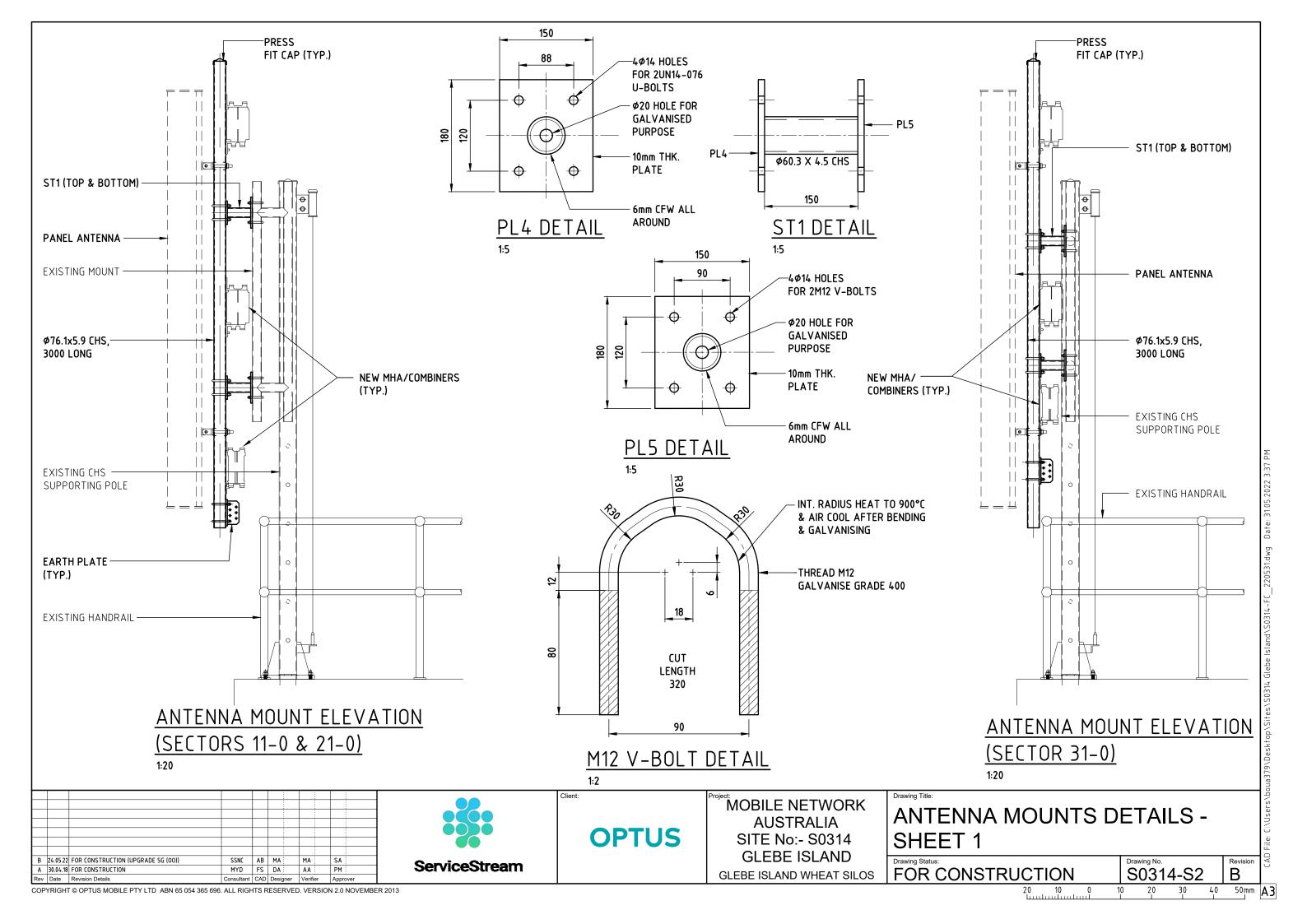
OPTUS

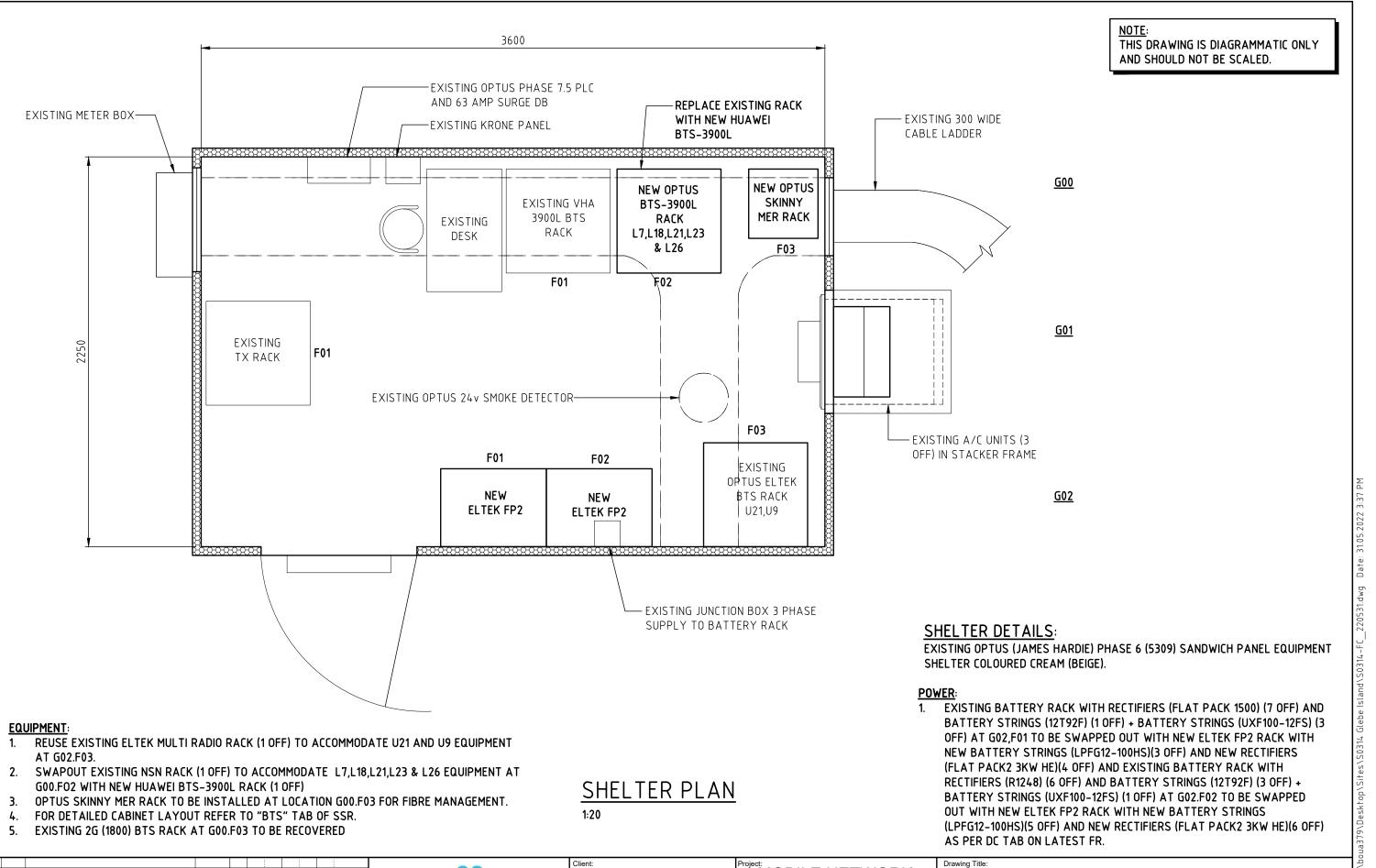
MOBILE NETWORK
AUSTRALIA
SITE No:- S0314
GLEBE ISLAND
GLEBE ISLAND WHEAT SILOS

RF PLUMBING DIAGRAM

Drawing Status:
FOR CONSTRUCTION
Drawing No.
S0314-A2
E







E 24.05.22 FOR CONSTRUCTION (UPGRADE 5G (OO)) SSNC AB MA MA SA
D 30.04.18 FOR CONSTRUCTION MYD DA DA DA AA PM
B 25.10.13 ISSUED FOR CONSTRUCTION (LTE1800/ 2300 UPGRADE) AURECON STY RN MA GR
AB1 20.07.12 AS BUILT (METRO U800 UPGRADE) DALY CPC MM DI CT
A 04.11.11 FOR CONSTRUCTION DALY CPC MM DI CT
Rev Date Revision Details Consultant CAD Designer Verifier Approver



OPTUS

MOBILE NETWORK
AUSTRALIA
SITE No:- S0314
GLEBE ISLAND

GLEBE ISLAND WHEAT SILOS

EQUIPMENT SHELTE	R
LAYOUT PLAN	

Prawing Status:

FOR CONSTRUCTION

Drawing No.

S0314-F1

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Ε

- 1. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR ALL WORKS AND REQUIREMENTS UNLESS NOTED OTHERWISE.
- 2. THE CONTRACTOR OR REPRESENTATIVE SHALL BE RESPONSIBLE FOR LIAISONS WITH THE PROPERTY OWNER REGARDING CONSTRUCTION OF THE INSTALLATION. THE PROPERTY MUST REMAIN SERVICEABLE AND OPERATIONAL AT ALL TIMES UNLESS AGREED WITH THE PROPERTY OWNER.
- 3. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS ON SITE PRIOR TO FABRICATION AND CONSTRUCTION
- 4. REFER TO GIVEN DIMENSIONS ONLY, DRAWINGS SHOULD NOT TO BE SCALED. DIMENSIONS ARE IN MILLIMETRES UNO.
- 5. SPECIFIED PRODUCTS (OR THEIR APPROVED EQUIVALENTS) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- 6. THE CONTRACTOR SHALL USE DROP SHEETS OR ANY OTHER METHOD DEEMED NECESSARY TO PROTECT THE EXISTING **BUILDING FROM DAMAGE DURING CONSTRUCTION.**
- 7. NORTH POINT AS SHOWN ON DRAWINGS INDICATES MGA NORTH (GDA 94 DATUM) UNLESS NOTED OTHERWISE.
- 8. ANTENNA AZIMUTHS ARE SPECIFIED IN DEGREES REFERENCED TO TRUE NORTH (TN).
- ALL LEVELS ARE EXPRESSED IN METRES TO AUSTRALIAN HEIGHT DATUM (AHD).

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SET OUT OF THE SHELTER OR OUTDOOR UNITS IN ACCORDANCE WITH THE DESIGN INTENT AS SHOWN ON THE DRAWINGS
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SET OUT OF THE CABLE LADDER IN ACCORDANCE WITH THE DESIGN INTENT AS SHOWN ON THE DRAWINGS.
- 3. CONCRETE WORKS TOLERANCES SHALL COMPLY WITH CLAUSE 17.5 OF AS 3600.
- 4. STRUCTURAL STEELWORK TOLERANCES SHALL COMPLY WITH CLAUSE 15.3 OF AS 4100.

USE OF OPTUS STANDARD DRAWINGS

CONSTRUCTION DETAILS ON OPTUS STANDARD DRAWINGS SHALL BE ONLY BE USED WITHIN THE SPECIFIED DESIGN CRITERIA. THE OPTUS DESIGN CONSULTANT SHALL CONFIRM APPLICABILITY TO THE SITE. THE OPTUS CONTRACTOR SHALL CONFIRM ACTUAL SITE CONDITIONS ARE SAME AS STATED ON THE STANDARD DRAWINGS REFERENCED.

STRUCTURAL STEELWORK

- 1. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS 4100, AS 1657 AND AS/NZS 1554.1.
- 2. ALL STEELWORK SHALL BE IN ACCORDANCE WITH AS/NZS 3679.1 (GRADE 300) FOR HOT-ROLLED SECTIONS AND BARS), AS/NZS 3678 (GRADE 250) FOR HOT-ROLLED PLATES AND AS 1163 (GRADE 250 (MIN)) FOR HOLLOW SECTIONS.
- 3. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS ON SITE PRIOR TO FABRICATION.
- 4. ALL PREFABRICATED STEELWORK SHALL BE HOT-DIP GALVANISED AFTER FABRICATION, IN ACCORDANCE WITH AS/NZS 4680. PLUG AND SEAL WATERTIGHT ANY HOLES MADE FOR GALVANISING.
- 5. THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL, WHETHER OR NOT DETAILED ON THE STEELWORK DRAWINGS.
- 6. UNLESS SPECIFIED OTHERWISE, WELDS SHALL BE GENERAL PURPOSE (GP) CONTINUOUS FILLET WELDS. DEFAULT SIZE IS LESSOR OF 6mm AND THICKNESS OF THE THINNEST PART, BEING JOINED. STRUCTURAL PURPOSE (SP) WELDS SHALL BE SELECTED FOR STRUCTURES SUBJECT TO FATIGUE.
- 7. ANY CUTS, HOLES AND WELDS TO EXISTING STEELWORK SHALL BE TREATED WITH 'COLD-GAL' ZINC RICH PAINT.
- 8. BOLTS NOT DESIGNATED SHALL BE GRADE 8.8 TO AS/NZS 1252 AND 'SNUG' TIGHTENED.
- 9. ALL BOLTS AND U-BOLTS, SHALL BE SNUG TIGHTENED AND SECURED WITH FLAT WASHER AND SPRING WASHER (UNLESS SPECIFIED OTHERWISE).
- 10. PROVIDE APPROVED NEOPRENE (OR EQUIVALENT) WASHERS AND COLLARS AT ALL DISSIMILAR METAL INTERFACES.
- 11. ALL CHEMICAL AND MECHANICAL MASONRY ANCHORS SHALL BE STAINLESS STEEL (UNLESS SPECIFIED OTHERWISE) AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
- 12. TWO-HOLE EARTH LUGS SHALL BE PROVIDED ON ALL MOUNTS, EXCEPT ON STEEL MONOPOLES, LATTICE TOWERS AND **GUYED MASTS.**

CONCRETE WORK

- 1. ALL CONCRETE WORK SHALL COMPLY WITH THE CURRENT ISSUE OF AS 3600 AND OTHER RELEVANT STANDARDS REFERENCED THEREIN.
- 2. UNLESS SPECIFIED OTHERWISE, CONCRETE MIX SHALL CONTAIN PORTLAND CEMENT TYPE GP OR GB, 20mm GRADED COARSE AGGREGATE AND ACHIEVE 80mm SLUMP AT POINT OF DELIVERY.

HUAWEI

3. UNLESS SPECIFIED OTHERWISE, CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (f'c) SHALL BE 32 MPa.

HUAWEI TECHNOLOGIES (AU) PTY LTD
ABN 49 103 793 800 EVEL 6 TOWER B 799 PACIFIC HIGHWAY

OPTUS

MOBILE NETWORK **AUSTRALIA**

OPTUS STANDARD DRAWING

STANDARD **CONSTRUCTION NOTES**

FOR CONSTRUCTION

OSD-100

THICKNESS (IF ANY).

ALL MASONRY WORK SHALL CONFORM WITH THE CURRENT ISSUE OF AS 3700 AND OTHER STANDARDS REFERENCED.

4. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED COATINGS. BEAM DEPTHS INCLUDES SLAB

5. CONCRETE SURFACES SHALL BE CURED FOR A MINIMUM OF 7 DAYS, COMMENCING IMMEDIATELY AFTER PLACING.

- 2. BUILD IN AS NECESSARY, LINTELS, FRAMES, BOLTS, LUGS, WALL TIES AND METALWORK.
- 3. CAREFULLY POSITION OPENINGS FOR OTHER TRADES TO ELIMINATE CUTTING.
- 4. BED JOINTS ARE TO BE 10mm THICK.
- 5. BEFORE LAYING MASONRY UNITS, ENSURE THAT THE BASE IS CLEAN AND FREE OF LAITANCE.
- 6. INSTALL WIRING FOR POWER AND OTHER CONDUITS WITHIN BLOCK CORES (WHERE APPLICABLE). DO NOT CUT CHASES IN HOLLOW BLOCKWORK.
- 7. ALL WALL INTERSECTIONS SHALL BE OF BONDED CONSTRUCTION OR TIED TO EXISTING WITH MEDIUM DUTY (MIN) TIES AT 400mm CENTRES VERTICALLY.

- 1. ALL TIMBER WORK SHALL CONFORM WITH THE CURRENT ISSUE OF AS/NZS 1684 AND AS/NZS 1720 AND OTHER STANDARDS REFERENCED THEREIN.
- 2. MINIMUM STRENGTH GRADE SHALL BE F7, UNLESS SPECIFIED OTHERWISE.

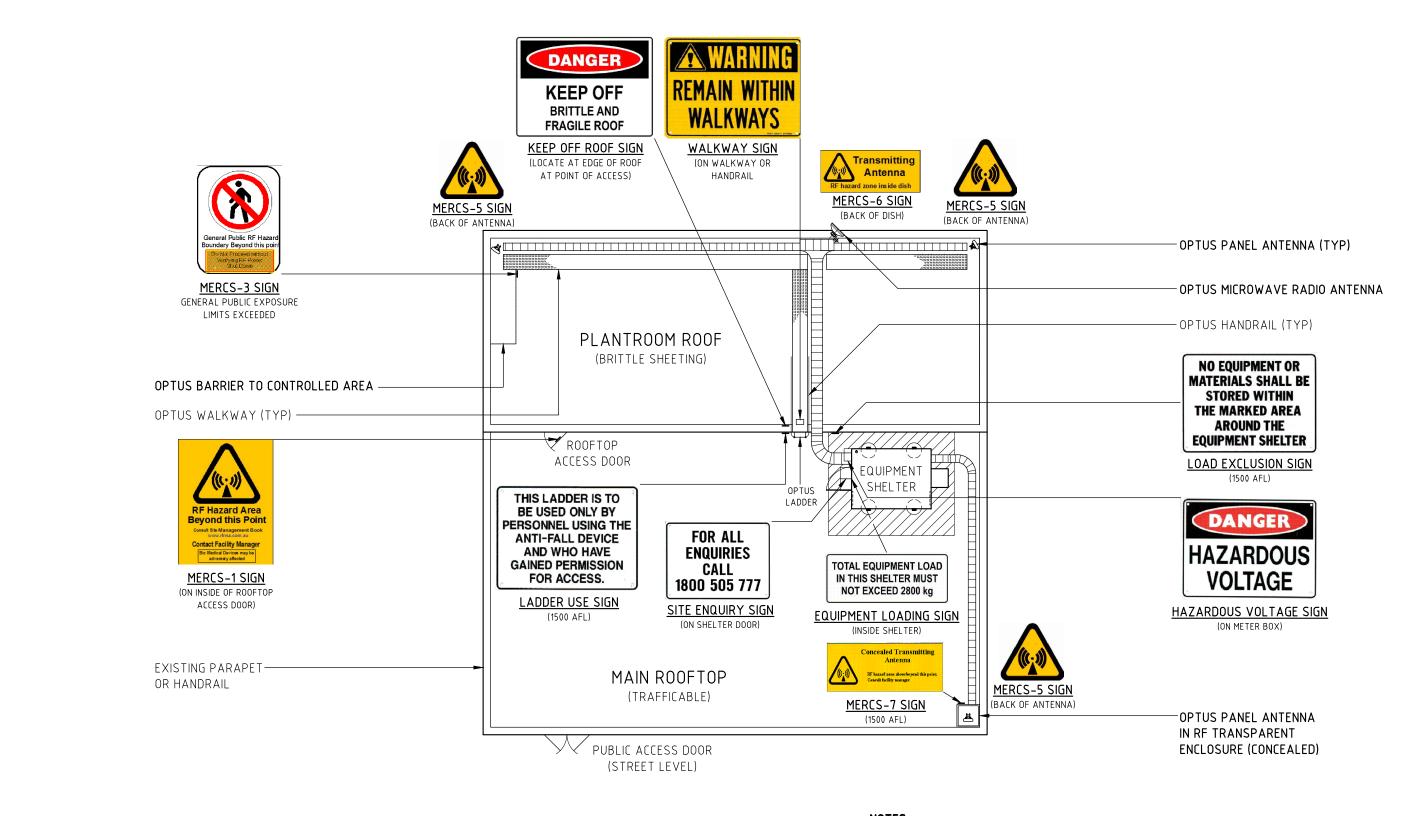
ELECTRICAL WORK (POWER)

- 1. THE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE RELEVANT CODES, STANDARDS, RULES, AND REGULATIONS OF STATUTORY AUTHORITIES. IN PARTICULAR: STATE SERVICE AND INSTALLATION RULES, AS/NZS 3000 WIRING RULES, AS3015, AS/NZS 3017 AND THE SUPPLY AUTHORITY REGULATIONS.
- 2. THE LOCATIONS AND MOUNTING HEIGHTS OF THE NEW INSTALLATION SHOWN ON THE SITE DRAWINGS IS INDICATIVE ONLY. THE FINAL LOCATIONS AND HEIGHTS SHALL BE DETERMINED ON SITE TO SUIT THE CLIENT AND THE INSTALLATION. THE CONTRACTOR SHOULD VISIT THE SITE DURING THE TENDER PERIOD TO BECOME FAMILIAR WITH THE SCOPE OF WORK.
- 3. ALL REQUIREMENTS FOR INSTALLATIONS REGARDING SUPPLY ARRANGEMENTS, PROVISION OF SERVICE CABLES AND CONSUMER MAINS AND METERING SHALL BE IN ACCORDANCE WITH AS/NZS 3000 AND RELEVANT STATE SERVICE AND INSTALLATION RULES.
- 4. A SEPARATE MEN EARTH ELECTRODE SHALL BE PROVIDED BY THE CONTRACTOR BELOW THE METER BOX AS REQUIRED.
- 5. ALL WIRING SYSTEMS SHALL BE INSTALLED AND ENCLOSED BY APPROVED METHODS WHICH WILL READILY PERMIT CABLES TO BE DRAWN IN OR REPLACED AFTER COMPLETION OF CONSTRUCTION.
- 6. CABLE MARKERS SHALL BE PROVIDED FOR UNDERGROUND WIRING FROM WITHIN THE PROPERTY BOUNDARY AND TO THE OPTUS INSTALLATION, AT THE COMMENCEMENT AND FINISH OF EACH ROUTE AND AT EACH CHANGE OF DIRECTION.
- 7. ALL EXISTING SURFACES, KERBS, GUTTERS, INVERTS, VEHICLE CROSSINGS AND PAVEMENTS DISTURBED AFTER INSTALLATION OF UNDERGROUND WIRING SHALL BE REINSTATED AND MADE GOOD BY THE CONTRACTOR.
- 8. LOCATE AND INDENTIFY ALL UNDERGROUND SERVICES BEFORE COMMENCING WORK.

- 1. EQUIPMENT AND ANTENNA MOUNTS SHALL BE EARTHED IN ACCORDANCE WITH THE EARTHING SPECIFICATION (OSD-030).
- 2. ALL EXTERIOR EARTH TAPE ELECTRODES SHALL BE COPPER BONDED HARDENED STEEL UNLESS OTHERWISE NOMINATED ON THE SITE DRAWINGS.
- 3. THE EARTHING SYSTEM SHALL BE CHECKED FOR CONTINUITY AND IMPEDANCE SHALL BE MEASURED AND A WRITTEN TEST
- 4. EARTHING ELECTRODES SHALL BE INSTALLED AT A DEPTH OF NOT LESS THAN 3 METRES UNLESS NOTED OTHERWISE.

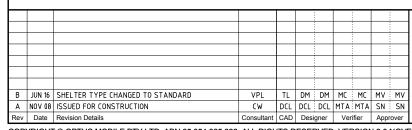
UNDERGROUND SERVICES

- 1. EXISTING SERVICES SHOWN ON SITE DRAWINGS IS REPRESENTATIVE OF AVAILABLE INFORMATION (OBTAINED FROM LOCAL AUTHORITIES) AND THE SITE SURVEY.
- 2. SERVICES INFORMATION SHALL BE READ IN CONJUNCTION WITH THE RELEVANT LOCAL AUTHORITIES DRAWINGS TO CONFIRM ACCURACY AND COMPLETENESS.
- 3. ADDITIONAL UNDOCUMENTED SERVICES MAY BE PRESENT ON SITE. FOR INFORMATION OF UTILITY UNDERGROUND SERVICES CALL 1100 'DIAL BEFORE YOU DIG'.
- 4. THE CONTRACTOR SHALL IDENTIFY AND CONFIRM THE LOCATION OF ALL RELEVANT UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF THE WORKS USING MANUAL POTHOLING OR OTHER APPROVED MEANS.



NOTES:

- 1. SIGNAGE ON AND INSIDE THE SHELTER IS PROVIDED BY THE SHELTER SUPPLIER.
- 2. REFER TO SECTION 6 OF THE OPTUS CONSTRUCTION SPECIFICATION (OSD-010) FOR SIGNAGE DETAILS, INCLUDING SIZE, MATERIALS AND FIXING.
- 3. EME SIGNAGE REQUIREMENTS FOR OPTUS MACRO ROOFTOP SITES ARE BASED ON MCF MERCS DOCUMENT "PREFERRED SITE SIGNAGE" (NOVEMBER 2007).
- 4. WHEN CO-SITING, EXISTING OTHER CARRIERS SIGNAGE SHALL NOT BE REMOVED.



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OPTUS STANDARD DRAWING

	Sheet Size	Scale 1.50	Drawing No.
TYPICAL	ROOF	FTOP SI	TE
SITE SIG	SNAGE		
Drawing Title:			

MERCS SIGNAGE

SIGN NAME	SYMBOL	SIGN IMAGE	SIZE / MATERIAL	LOCATION	FIXING METHOD
MERCS-1 (RF HAZARD AREA SIGN)	\$1>	RF Hazard Area Bey ond this Point Council is fasting uponed Boot Selected Devices may be subsectedly affected.	400H x 350W METAL OR SELF ADHESIVE 200H x 175W METAL OR SELF ADHESIVE	 INSIDE ROOFTOP ACCESS DOORS OR ON BUILDING FACADE (NEED OWNER'S APPROVAL) IF EWP ACCESS ONLY. CONSULT SAE FOR ANY COMMUNITY SENSITIVITIES. AT BOUNDARY OF CONTROLLED AREA (ROOFTOP EXCLUSION ZONES DEFINED BY HANDRAILS, SAFETY CHAINS, BALLARD, SHROUDS ETC). ON MONOPOLE FACE (DIRECTLY BELOW CLIMBING PEGS /LADDER AND FALL ARREST SYSTEM). ON INSTALLATIONS SUCH AS LIGHTING COLUMNS / POLES AT SPORTING VENUES, PARKS, RESERVES ETC. ON LATTICE TOWER LEG (DIRECTLY BELOW CLIMBING PEGS /LADDER AND FALL ARREST SYSTEM). 	CENTRE OF SIGN TO BE 1500mm ABOVE FLOOR LEVEL AND 400mm FROM DOOR EDGE. AFFIXED VIA SCREW-FIXED, RIVETED OR SELF-ADHESIVE. CENTRE OF SIGN TO BE 1500mm ABOVE BASE OF MONOPOLE. AFFIXED VIA STEEL STRAPS OR WEATHERPROOF ADHESIVE. CENTRE OF SIGN TO BE 1500mm ABOVE BASE OF TOWER LEG. AFFIXED VIA STEEL STRAPS (NOT OBSCURING SIGN OR SCREWED) TO STEEL BRACKET. CENTRE OF SIGN TO BE AT LEAST 3m BELOW ANTENNAS OR DISHES AND MIN. 5m ABOVE THE BASE OF THE STRUCTURE. ONE SIGN PER CLIMBING ACCESS POINT.
MERCS-2 (MCF INFORMATION SIGN)	\(\sigma_2 \)	This is a telecommunications facility. For information about this site visit waw of fins. com an Or contact the facility manager. NSA Site Number:	180H x 250W METAL	ON ALL TOWER AND MONOPOLE FACILITIES - FIXED TO SITE ACCESS GATES. MAY BE INSTALLED ON ROOFTOP ACCESS DOORS THAT ARE NOT RESTRICTED ACCESS (i.e. DOORS THAT DO NOT HAVE MERCS-1 SIGNAGE INSTALLED).	CENTRE OF SIGN TO BE 1500mm ABOVE GROUND LEVEL AND 400mm FROM PADLOCK SIDE OF DOUBLE ACCESS GATES. FOR SINGLE ACCESS GATES, LOCATE SIGN 400mm FROM PADLOCK SIDE ON FIXED FENCING ADJACENT THE ACCESS GATE. SIGN TO BE FIXED VIA STAINLESS STEEL OR CORROSION RESISTANT CABLE TIES.
MERCS-3 (GENERAL PUBLIC RF HAZARD SIGN)	\$3	General Public RF Hazard Bounday Beyond his port Coler Procede feder User Procede feder Shid Down	400H x 350W METAL OR SELF ADHESIVE 200H x 175W METAL OR SELF ADHESIVE	NEAR AREAS THAT EXCEED PUBLIC EXPOSURE LIMITS IN A CONTROLLED AREA (e.g. WALKWAYS PASSING IN FRONT OF TRANSMITTING ANTENNAS OR DISHES). IF BARRIERS ARE REQUIRED, LOCATION OF BARRIERS (E.G. CHAINS) AND SIGN TO BE SHOWN ON FC DRAWING. NEED OWNER APPROVAL FOR THE BARRIERS.	SIGN TO BE INSTALLED AT ENTRY POINT TO CONTROLLED AREAS (ESPECIALLY ON LARGE ROOFTOPS WITH MULTIPLE ACCESS POINTS OR POOR ACCESS RESTRICTION) - ON HANDRAIL, SAFETY CHAIN, BALLARD, SHROUD OR WALL. SIGN TO BE FIXED VIA FIXING SCREWS OR WEATHERPROOF ADHESIVE.
MERCS-4 (OCCUPATIONAL RF HAZARD SIGN)	\$4	Coopeloral RF Hazard Bounday Beyond this point Collections and Collection of the Col	400H x 350W METAL OR SELF ADHESIVE 200H x 175W METAL OR SELF ADHESIVE	NEAR AREAS THAT EXCEED OCCUPATIONAL EXPOSURE LIMITS IN A CONTROLLED AREA (e.g. EME EXCLUSION ZONES ON GROUND WITHIN COMPOUNDS OR ON STRUCTURES CAUSED BY TRANSMITTERS NEARBY). IF BARRIERS ARE REQUIRED, LOCATION OF BARRIERS (E.G. CHAINS) AND SIGN TO BE SHOWN ON FC DRAWING. NEED OWNER APPROVAL FOR THE BARRIERS.	SIGN TO BE INSTALLED AT ENTRY POINT TO CONTROLLED AREAS (EITHER SIDE OF CLIMBING BARRIERS ON STRUCTURES OR ON SMALL DIAMETER FREE-STANDING POLE ON GROUND EITHER SIDE OF EXCLUSION ZONES). SIGNAGE ON STRUCTURES IS NOT TO IMPEDE OPERATION OF FALL ARREST SYSTEM. SIGN TO BE FIXED VIA SCREWS, RIVETS OR STEEL STRAPS.
MERCS-5 (TRANSMITTING ANTENNA SIGN)	\(\subseteq \)	((:))	100 x 100 x 100 SELF ADHESIVE	REQUIRE ON BACK OF EACH PANEL ANTENNAS ON ROOFTOP SHARED FACILITY. ALTERNATIVELY INSTALL SIGNAGE FOR NON-EME AWARE ROOFTOP WORKERS WHERE THEY	CENTRE OF SIGN TO BE INSTALLED ON REAR OF PANEL ANTENNAS AND AT BASE OF OMNI ANTENNA MOUNTS, PREFERABLY 1500mm ABOVE NORMAL ACCESS (ROOF) LEVEL. SIGN TO BE SELF-ADHESIVE TO BACK OF PANEL ANTENNAS. SIGN TO BE INSTALLED MOUNTING POLE OF ANTENNA SO THAT IT'S VISIBLE FROM NORMAL ACCESS (ROOF) LEVEL
7.1.1.2.1.0.1.0.0.0.1,			200 x 200 x 200 METAL	MAY INADVERTENTLY ACCESS AN EME OVERHEAD HAZARD ZONE ON FOOT, OR VIA ACCESS LADDER, EWP ETC.	(e.g. ROOF EDGES IN THE VICINITY OF TRANSMITTING ANTENNAS OR DISHES INSTALLED ABOVE). SIGN TO BE FIXED VIA SCREWS OR RIVETS TO MOUNTING POLES OF PANEL ANTENNAS.
MERCS-6 (TRANSMITTING MICROWAVE SIGN)	S6 S 6 S 6 S 6 S 6 S 6 S 6 S 6	Transmitting Antenna RF hazard zone inside dish	110H x 200W SELF ADHESIVE 55H x 100W SELF ADHESIVE	REQUIRED ON ALL ROOFTOP SHARED FACILITIES TO IDENTIFY LOW POWER TRANSMITTING MICROWAVE ANTENNAS (DISHES). THESE TRANSMITTERS EME EXCLUSION ZONES ARE CONTAINED WITHIN THE DIAMETER OF THE ANTENNA (i.e TRANSMIT LINEALLY FROM WITHIN).	SIGN TO BE INSTALLED AT REAR OF DISH HEAD UNIT OR RADIO UNIT FACING IN THE DIRECTION FROM WHICH ROOFTOP VISITOR WOULD MOST LIKELY APPROACH. SIGNAGE SHOULD NOT IMPEDE DISH OPERATION OR COOLING. DO NOT INSTALL SIGNAGE ON FRONT OF DISHES. THIS SIGNAGE DOES NOT APPLY TO GRIDPAK ANTENNAS.



THIS TABLE IS BASED ON MOBILE CARRIERS FORUM (MCF) DOCUMENT 'FACILITY RF EME SIGNAGE - 7.1.01 PREFERRED SITE SIGNAGE' AND COMPLIES WITH ARPANSA'S RADIATION PROTECTION STANDARD (RPS3) [1] REFER TO DRAWING OSD-170, OSD-180 & OSD-190 FOR GUIDANCE ON LOCATION OF SIGNAGE.

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Α	JUN 16	ISSUED FOR CONSTRUCTION	VPL	KpL	NR : NR	AC : AC	DM : DM
Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver

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MOBILE NETWORK **AUSTRALIA**

OPTUS STANDARD DRAWING



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