



If you need help lodging your form, contact us		Office use only	
Email	council@northernbeaches.nsw.gov.au	Form ID	4000
Phone	1300 434 434	TRIM Ref	C000902
Customer Service Centres	<b>Manly</b> Townhall, 1 Belgrave Street Manly NSW 2095	Last Updated	24 November 2017
	<b>Mona Vale</b> 1 Park Street Mona Vale NSW 2103	Business Unit	Parks and Recreation
	<b>Dee Why</b> Civic Centre, 725 Pittwater Road Dee Why NSW 2099	Application No.	DA2018/0399
	<b>Avalon</b> 59A Old Barrenjoey Road Avalon Beach NSW 2107	Receipt No.	100341259

Privacy Protection Notice	
Purpose of collection:	For Council to provide services to the community
Intended recipients:	Northern Beaches Council staff
Supply:	If you choose not to supply your personal information, it may result in Council being unable to provide the services you seek
Access/Correction:	Please contact Customer Service on 1300 434 434 to access or correct your personal information

## Part 1: Applicant Details

1.1 APPLICANT DETAILS		<div>NORTHERN BEACHES COUNCIL</div> <div>15 MAR 2018</div> <div>DEE WHY CUSTOMER SERVICE RECEIVED</div> <div>Signature .....</div>
Applicant name	OMAR ISMAIL	
Landowner(s) name	DEE WHY RSL CLUB	

1.2 ADDRESS OF PROPERTY WHERE TREE(S) LOCATED			
Address	DEE WHY RSL, CLARENCE AVE (932 PITTWATER RD)		
Suburb	DEE WHY	Postcode	2099
Title details (Lot/DP as shown on rates notice)	DP 706230		

1.3 INSPECTION FEES (NON-REFUNDABLE)			
1 Tree	<input checked="" type="checkbox"/> \$150		
Additional fee per tree for pruning/removal	<input checked="" type="checkbox"/> \$45 x number of additional trees =	405	
On site appointment	<input checked="" type="checkbox"/> \$85	Total	640

## Part 2: Site Plan and Details

Please provide sufficient details to locate tree(s) including labeling the tree(s) numerically on the plan. It is recommended that you tie a marker to tree(s) once this application has been lodged.

Reason for application and outline of proposed work

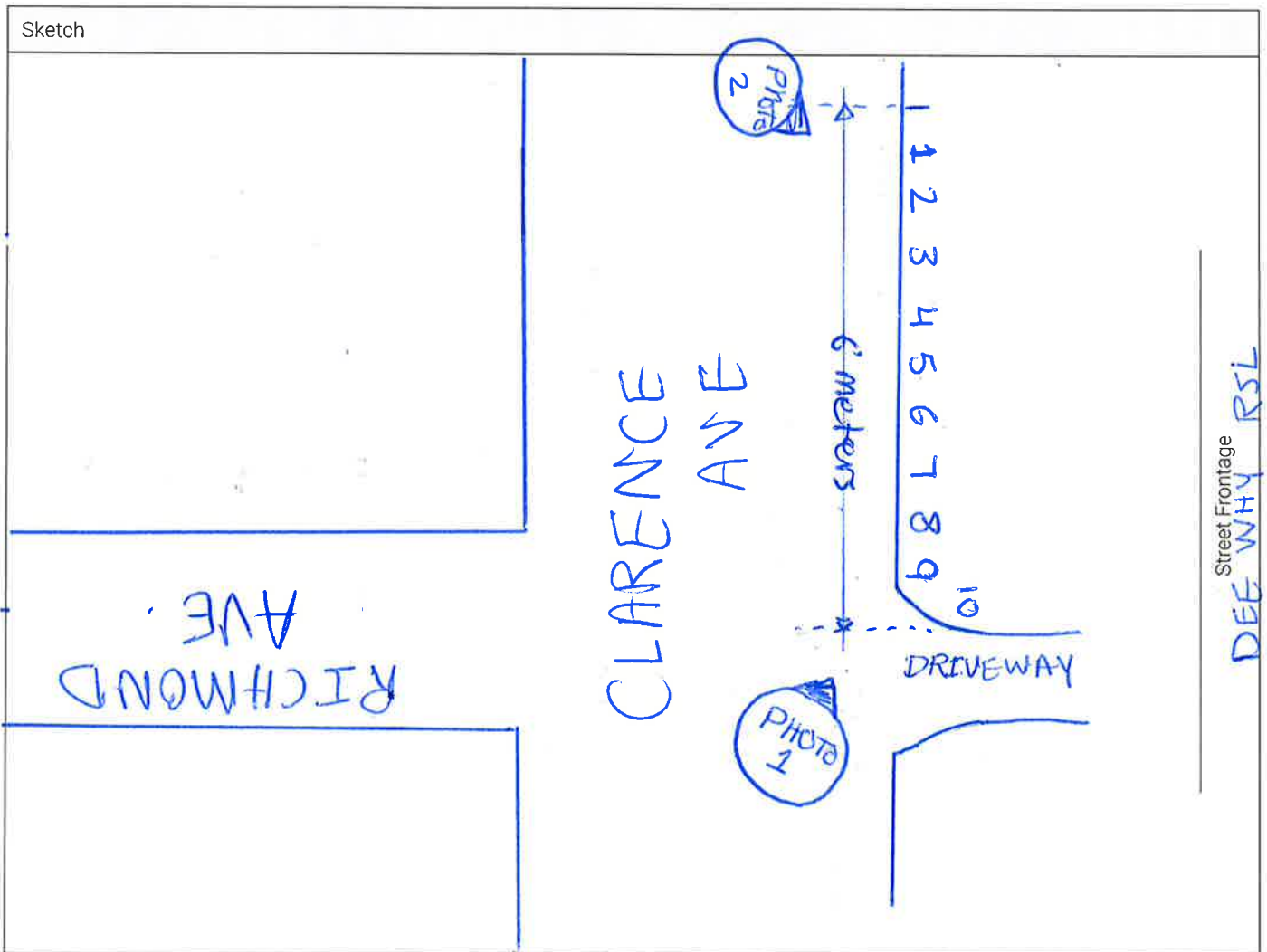
Connect Infrastructure is undertaken electrical infrastructure work for DEE WHY RSL to install new

substations. Part of the work scope is to trench along Clarence Ave near the corner of Clarence Ave and

Richmond Ave, to lay new ducts and cables. To be able to do this, Connect will have to remove 10 trees on

the Private Property of DEE WHY RSL Club . See attached Sketch and photos.

Sketch



TREE AND SITE INFORMATION	
Is the tree(s) on private property? <i>(This application is only for trees on private property.)</i>	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is there a dog on the property?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Special arrangements required for site access	<input type="radio"/> Yes <input checked="" type="radio"/> No
If yes, please provide details	
Is there a current development application lodged for this property? <i>(Tree removal as part of a separate development application is assessed under that application and this application may not be required).</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No
<ul style="list-style-type: none"> <li>• Please note trees will not be assessed under this application process for complying development.</li> <li>• Applications for removal of significant trees will require an arborist's report by an independent qualified arborist. Please attach to this application.</li> <li>• Significant trees include local endemic trees, habitat trees, heritage listed trees or trees of large amenity and visual significance.</li> <li>• Replacement trees may be a condition of approval of this application.</li> </ul>	
Please list any supporting documents attached to your application eg. engineer's report or arborist report.	



# CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATING

## NOTES:

- CLAIMS FOR VARIATIONS TO THE COST OF NON-CONTESTABLE WORKS, INCLUDING ROCK EXCAVATION, WILL NOT BE ACCEPTED UNLESS VERIFIED ON SITE BY AUSGRID WHILE THE WORKS ARE IN PROGRESS.
- THE ASP/1 IS RESPONSIBLE FOR UNDERTAKING SATISFACTORY CONSULTATION WITH ALL LOCAL CUSTOMERS WHO MAY POTENTIALLY BE AFFECTED BY THE CONSTRUCTION WORKS INCLUDING ALL ALTERATIONS TO SERVICE MAINS.
- THE ASP/1 MUST MINIMIZE THE IMPACT OF THE WORKS ON THE ELECTRICITY SUPPLY TO CUSTOMERS AND INTERRUPTIONS TO SUPPLY MUST BE AVOIDED WHEREVER POSSIBLE. AT LEAST FOUR (4) CLEAR BUSINESS DAYS NOTICE MUST BE PROVIDED TO ALL AFFECTED CUSTOMERS PRIOR TO ANY PLANNED INTERRUPTIONS TO THE ELECTRICITY SUPPLY. NOTICE MUST BE IN WRITING IN ACCORDANCE WITH CLAUSE 90 OF THE NATIONAL ENERGY RETAIL RULES.
- SPECIFIC PRIOR APPROVAL MUST BE SOUGHT FROM AUSGRID FOR ANY PLANNED ELECTRICITY SUPPLY INTERRUPTIONS WHERE THE PLANNED INTERRUPTION WILL EXCEED ONE (1) HOUR IN DURATION OR THE DURATION WILL BE LESS THAN ONE HOUR, BUT A SUITABLE TIME FOR THE INTERRUPTION CANNOT BE MUTUALLY AGREED TO WITH THE AFFECTED CUSTOMER(S).
- THE ASP/1 IS TO MAINTAIN ADEQUATE PUBLIC LIGHTING LEVELS FOR THE DURATION OF THE WORKS. IF NECESSARY, THE ASP/1 IS TO ARRANGE FOR SUITABLE TEMPORARY STREET LIGHTING TO BE PROVIDED UNTIL PERMANENT LIGHTING IS RE-ESTABLISHED.
- FOR KIOSK AND CHAMBER TYPE SUBSTATIONS IN THE HUNTER AREAS, ARRANGE PHASING OF 11KV AND LOW VOLTAGE TRANSFORMER TERMINATIONS TO ACHIEVE DYN 11 INTERCONNECTION CAPABILITIES.
- THE ASP/1 IS TO CO-ORDINATE THE MODIFICATION AND TESTING OF ANY REQUIRED PROTECTION RELAY WITH THE AUSGRID TECHNICAL SERVICES GROUP.
- THE ASP/1 IS REQUIRED TO COMPLY WITH THE CORRECT PROCEDURE(S) FOR WORKING WITH AND/OR NEAR ASBESTOS MATERIAL (REFER TO AUSGRID NUS 211 - WORKING WITH ASBESTOS PRODUCTS). THE FOLLOWING AUSGRID ASSETS ARE REGISTERED AS CONTAINING ASBESTOS.

## WARNING

- THIS DESIGN CANNOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE LOCATION OF ALL EXISTING SERVICES IS VERIFIED.
- THE INFORMATION PROVIDED IN THIS DESIGN MUST BE CHECKED ON SITE AND THE MOST CURRENT INFORMATION ON THE CONFIGURATION OF ALL SERVICES, INCLUDING AUSGRID'S NETWORK, MUST BE VERIFIED IMMEDIATELY BEFORE CONSTRUCTION COMMENCES BY CONTACTING DIAL-BEFORE-YOU-DIG BY TELEPHONE ON 1100 OR AT [www.1100.com.au](http://www.1100.com.au).
- DIAL-BEFORE-YOU-DIG INFORMATION MUST NOT BE OLDER THAN 20 BUSINESS DAYS AT THE TIME OF CONSTRUCTION.

## ASP LEVEL 2 WORK

ALL LEVEL 2 ASP WORK DEPICTED ON THIS DRAWING IS SHOWN FOR INFORMATION PURPOSES ONLY AND DOES NOT FORM PART OF THE CERTIFIED DESIGN.

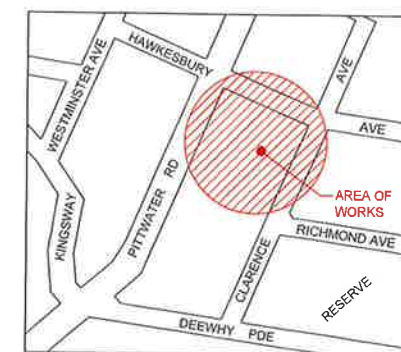
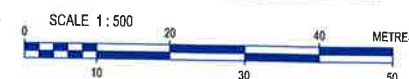
## NOTES:

- THIS DRAWING TO BE READ IN CONJUNCTION WITH AND MUST COMPLY WITH AUSGRID'S NETWORK STANDARDS, REFER TO BUT NOT LIMITED TO: NS110, NS130, NS141, NS116, NS117 & NS156.
- ALL SERVICE WORK TO BE DONE IN ACCORDANCE WITH AS3000:2007 AND THE N.S.W. SERVICE AND INSTALLATION RULES.
- ENSURE 6m REQUIREMENT FROM FORCED AND NATURAL VENTILATION IS MAINTAINED. REFER TO NS141 SECTION 6.
- ALL TRENCHING, PITS CABLES & CABLES & CONDUITS ARE TO BE SURVEYED MARKED, & PHOTOGRAPHED (INSPECTED BY COMPLIANCE OFFICER PRIOR TO BACKFILLING).
- CONSTRUCTOR IS TO ENSURE THAT ALL CABLES AND CONDUITS ARE INSTALLED RELATIVE TO FINAL LEVELS.
- DO NOT PLACE ANY RELIANCE ON ANY QUANTITIES OR DIMENSIONS GIVEN IN THIS DRAWING. QUANTITIES AND DIMENSIONS GIVEN IN THIS DRAWING ARE BASED ON DESIGN INFORMATION AND SITE CONDITIONS AT THE TIME OF DESIGN. AS QUANTITIES AND DIMENSIONS ARE SUBJECT TO CHANGE, THE BUILDER OF THIS PROJECT MUST CHECK ALL QUANTITIES AND DIMENSIONS ON THE SITE PRIOR TO TENDERING AND PRIOR TO CONSTRUCTION.
- THE PREPARATION OF THIS DESIGN, HAS BEEN UNDERTAKEN GIVING DUE CONSIDERATION TO THE EXISTING SERVICES. THE PROJECT CONSTRUCTOR IS, HOWEVER, WHOLLY RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF EXISTING SERVICES AND PERMANENT SURVEY MARKS BEFORE CONSTRUCTION COMMENCES, AND NO RESPONSIBILITY NOR LIABILITY WILL BE ACCEPTED BY THE DESIGNER OF THIS PROJECT FOR DAMAGE TO EXISTING SERVICES AS A RESULT OF THIS DESIGN.
- HAND EXCAVATION IS TO BE USED IN THE VICINITY OF EXISTING UNDERGROUND CONSTRUCTION.
- ALL CONDUITS ARE TO BE IN ACCORDANCE TO NS130.
- SUBSTATION SITE TO BE CLEAR OF ALL OBSTRUCTIONS AND SERVICES.
- ACCREDITED DESIGNER TO BE CONTACTED REGARDING ISSUES RAISED WITH THIS DESIGN.
- AUSGRID TO CONDUCT LV NETWORK PHASING. REFER TO NS117 SECTION 9.5.
- THE FINISHED SURFACE OF THE KIOSK AREA IS TO COMPLY WITH NS141 CL3.7 OR OTHER SURFACES AS APPROVED BY AUSGRID.
- CUSTOMER TO PREPARE A REGISTERED SURVEY OF THE SUBSTATION AREA FOR EASEMENT ESTABLISHMENT PURPOSES. IN ADDITION CUSTOMER IS TO PROVIDE A 'SURVEY OF THE DUCT LINES AS THEY ARE LAID AND BEFORE TRENCH IS BACKFILLED FOR EASEMENT CREATION AND COMPLIANCE OFFICER INSPECTION.
- CONSUMER MAINS TO BE IN ACCORDANCE WITH REQUIREMENTS OF THE NSW SERVICE AND INSTALLATION RULES, AUSTRALIAN STANDARDS, & AUSGRID NS117 CLAUSE 12.5.1.
- THE COMBINED SYSTEM EARTHING IS TO BE INSTALLED AS SHOWN IN THE DESIGN, REFER TO NS 116 AND DRAWING 167433 FOR DETAILS.
- DUCT CONFIGURATIONS SHOWN ARE A GUIDE ONLY - REFER DBYD SEARCHES AND AUSGRID UNDERGROUND MAPS FOR MORE DETAIL.
- HV MAINS TO HAVE MIN 600mm COVER IN FOOTPATH & MIN 750mm COVER IN ROADWAY. LV MAINS TO HAVE MIN 500mm COVER IN FOOTPATH & MIN 750mm COVER IN ROADWAY.
- TELSTRA AND OPTUS TO BE NOTIFIED OF PROPOSED WORK PRIOR TO CONSTRUCTION. CONTACTS: TELSTRA: [0204107@learn.telstra.com](mailto:0204107@learn.telstra.com) (EMAIL) OPTUS: [darthsw@optus.com.au](mailto:darthsw@optus.com.au) (EMAIL)
- EXCAVATION NEAR TREES TO BE DONE IN ACCORDANCE WITH AS4970.
- THE PHASING DETAILS ARE TO BE VERIFIED ON SITE TO COMPLETING THE COMMISSIONING OF THE JOINTS. AUSGRID IDENTIFY, STAB & PHASE AS A MONOPOLY FUNCTION.
- FOR IDENTIFICATION AND JOINTING PURPOSES, ALL CABLE ENDS SHALL BE LABELLED AT THE TERMINATIONS AND IN JOINT BAYS DURING CABLE INSTALLATION. THE CABLES MUST BE LABELLED AS PER THE CERTIFIED DESIGN.
- THE ASP/1 IS REQUIRED TO COMPLY WITH THE CORRECT PROCEDURE(S) FOR WORKING WITH AND/OR NEAR ASBESTOS MATERIAL (REFER TO AUSGRID NUS 211 - WORKING WITH ASBESTOS WITH ASBESTOS PRODUCTS).
- THIS INFORMATION INCLUDES DATA FROM THE NSW DIGITAL CADASTRAL DATABASE BY LAND & PROPERTY INFORMATION © 2016. USED UNDER CREATIVE COMMONS LICENCE VERSION 4.0" NOTATION PLACED ON PLAN IF THE LAND BASE USED IS SUPPLIED BY AUSGRID.

KIOSK SUBSTATION DETAILS	
SUBSTATION NAME:	DEE WHY RSL No. 1
SUBSTATION NUMBER:	S.77762
ADDRESS:	932 PITTSWATER ROAD, DEE WHY
SUBSTATION TYPE:	KL
SIZE (KVA):	1000
VECTOR GROUP:	Dyn1
TAP SETTING:	11000 / 433
HV SWITCHGEAR:	ABB Safelink RMI
HV FUSE DETAILS:	100amp SIBA 30.020.93.100
LOAD CYCLE:	A: Commercial / Industrial
PHASING DETAIL	
LOW VOLTAGE BOARD:	1600 / 400 / 400
TRANSF. LV LINK RATING:	
CCT1 LV FUSE SIZE (Amps):	1600 A
CCT2 LV FUSE SIZE (Amps):	400 A
CCT3 LV FUSE SIZE (Amps):	400 A
CONFIGURE AS Dyn11:	NO
EARTHING REQUIREMENTS:	
EARTHING DESIGN ATTACHED	
SUBSTATION PIERING:	AS PER NS-141 DRAWING 151572
EASEMENT PLAN DETAIL:	REFER TO SHEET 5

KIOSK SUBSTATION DETAILS	
SUBSTATION NAME:	DEE WHY RSL No. 2
SUBSTATION NUMBER:	S.77763
ADDRESS:	932 PITTSWATER ROAD, DEE WHY
SUBSTATION TYPE:	KL
SIZE (KVA):	1000
VECTOR GROUP:	Dyn1
TAP SETTING:	11000 / 433
HV SWITCHGEAR:	ABB Safelink RMI
HV FUSE DETAILS:	100amp SIBA 30.020.93.100
LOAD CYCLE:	A: Commercial / Industrial
PHASING DETAIL	
LOW VOLTAGE BOARD:	1600 / 400 / 400
TRANSF. LV LINK RATING:	
CCT1 LV FUSE SIZE (Amps):	1600 A
CCT2 LV FUSE SIZE (Amps):	400 A
CCT3 LV FUSE SIZE (Amps):	0 A
CONFIGURE AS Dyn11:	NO
EARTHING REQUIREMENTS:	
EARTHING DESIGN ATTACHED	
SUBSTATION PIERING:	AS PER NS-141 DRAWING 151572
EASEMENT PLAN DETAIL:	REFER TO SHEET 5

## CONSTRUCTION PLAN



## LOCALITY MAP

NOT TO SCALE

Pole		Pole to be removed		UG OH Lines		UG Cables		OH Lines		OH Cables		REMOVE	
SL Standard	○	USL	○	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—
Pillar Standard	□	ABS	□	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—
LV Link Pillar	□	IDT	□	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—
Streetlight	○	Kiosk Sub	□	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—
Streetlight-PEC	○	Chamber Sub	□	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—
Streetlight-replacement	○	Remove Chamber Sub	□	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—
Streetlight-removal	○	Pole Sub	□	UG OH Lines	—	UG Cables	—	OH Lines	—	OH Cables	—	OH Lines	—

## ASSOCIATED DRAWINGS



DESIGNED BY: ELI TOPIA  
AUTH NO: 1104  
SUBMIT DATE: 28/02/2018  
LGA: NORTHERN BEACHES  
MAP REF: UBD MAP 178 REF. C5  
AUSGRID REF: FF63  
PRUTRAK NO: XCY12339

ASP REF: DT559A-10

CERTIFICATION NUMBER 1173924/20180305A1

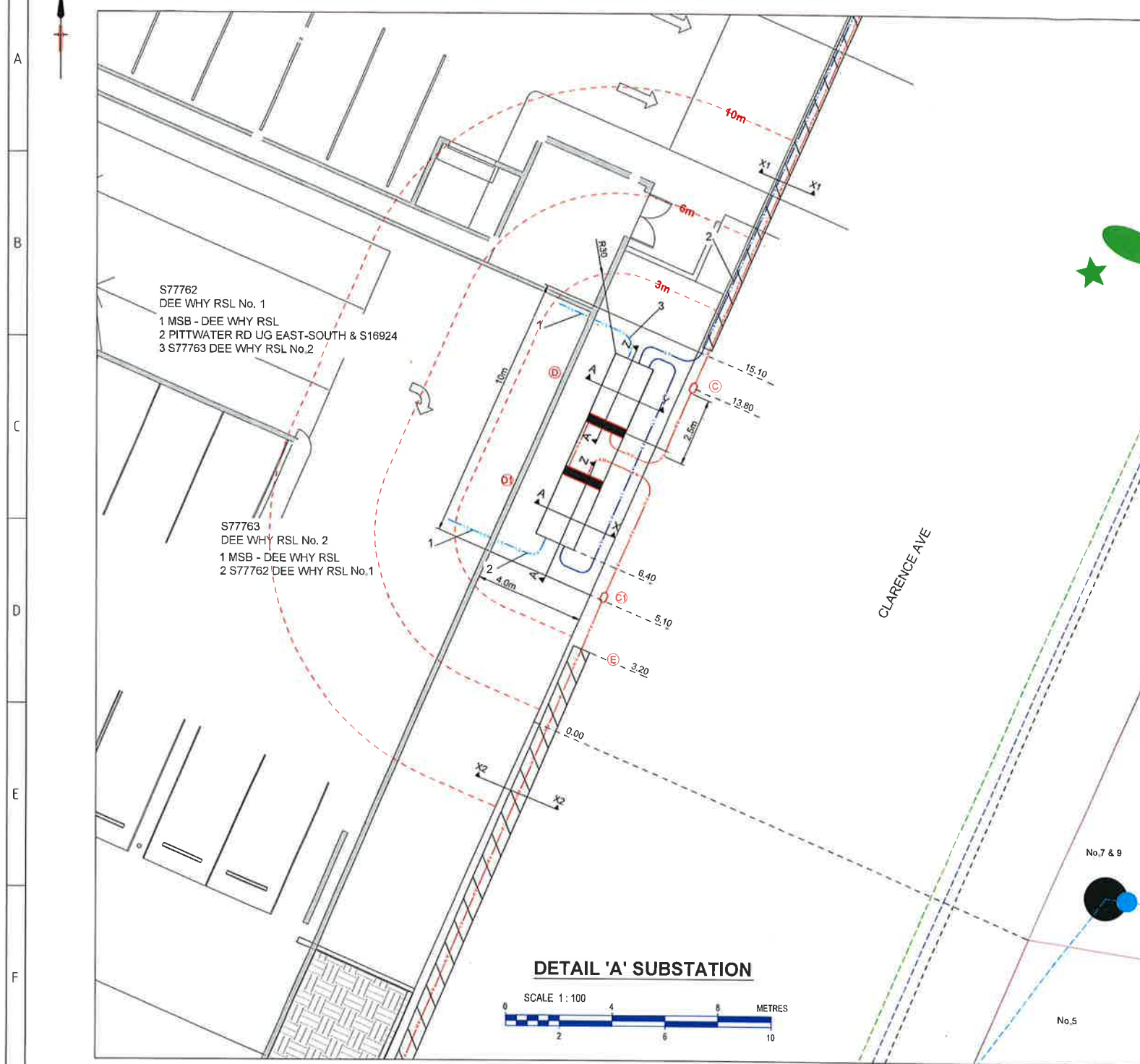
ESTABLISH KIOSK SUBSTATIONS AND DECOMMISSION CHAMBER SUBSTATION S.15403  
932 PITTSWATER ROAD  
DEE WHY

AUSGRID PROJECT No. SC11815

SHEETS 1 of 6



CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATING



REDUNDANT EQUIPMENT TO BE REMOVED FROM SERVICE AND RETURNED TO AUSGRID AND THE AUSGRID APPROVED EIA FOR THIS PROJECT).

THE REDUNDANT EQUIPMENT IS EXPECTED TO BE:

EQUIPMENT	SAFETY HAZARD
SUB S.15403 TRANSFORMER	OIL FILLED EQUIPMENT, POSSIBLE PCB AND ASBESTOS.
SUB S.15403 LV PANEL	POSSIBLE ASBESTOS

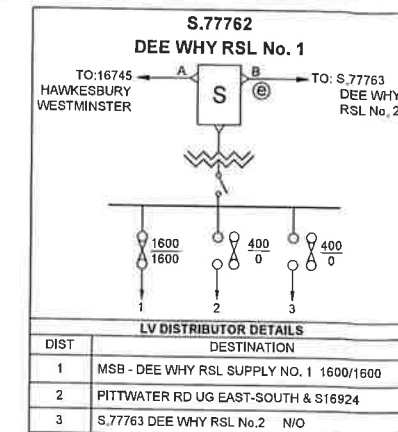
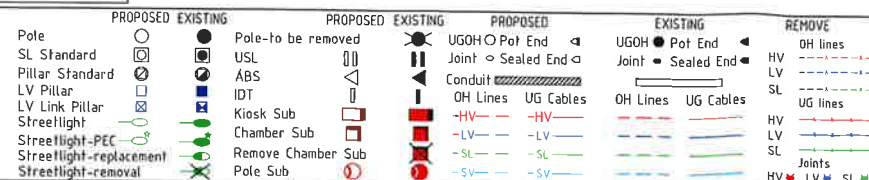
THE NOMINATED RETURN POINT FOR THIS EQUIPMENT IS:

DEPOT	ADDRESS	CONTACT OFFICER	TELEPHONE NUMBERS
CHATSWOOD	337-355 MOWBRAY RD, CHATSWOOD	-	(02) 94105268

**3m CLEARANCE:**  
ANY PORTION OF A BUILDING WITHIN 3 METRES OF KIOSK HOUSING IS REQUIRED TO HAVE A FIRE RESISTANCE LEVEL (FRL) OF NOT LESS THAN 120/120/120. OPENABLE OR FIXED WINDOWS OR GLASS BLOCKWORK OR SIMILAR ARE NOT PERMITTED WITHIN 3 METRES IN ANY DIRECTION FROM THE HOUSING OF A KIOSK SUBSTATION, UNLESS THEY ARE SHELTERED BY A NON-IGNITABLE BLAST RESISTING BARRIER.

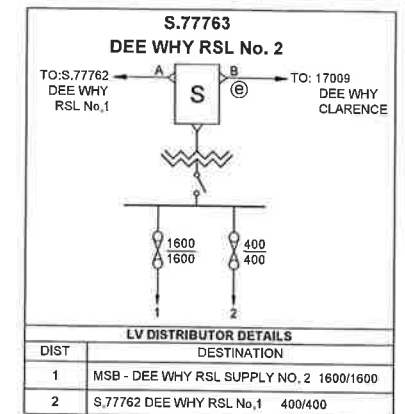
**6m CLEARANCE:**  
KIOSK SUBSTATION HOUSINGS TO BE SEPARATED FROM BUILDING VENTILATION SYSTEM AIR INTAKE AND EXHAUST DUCT OPENINGS, BY NOT LESS THAN 6 METRES. THIS APPLIES IRRESPECTIVE OF WHETHER THE BUILDING DUCTED VENTILATION SYSTEM IS MECHANICAL OR NATURAL.

**10m CLEARANCE:**  
EXTERNAL FIRE HYDRANTS ARE REQUIRED TO BE LOCATED IN A POSITION NOT LESS THAN 10 METRES FROM ANY HIGH VOLTAGE ELECTRICAL DISTRIBUTION EQUIPMENT.



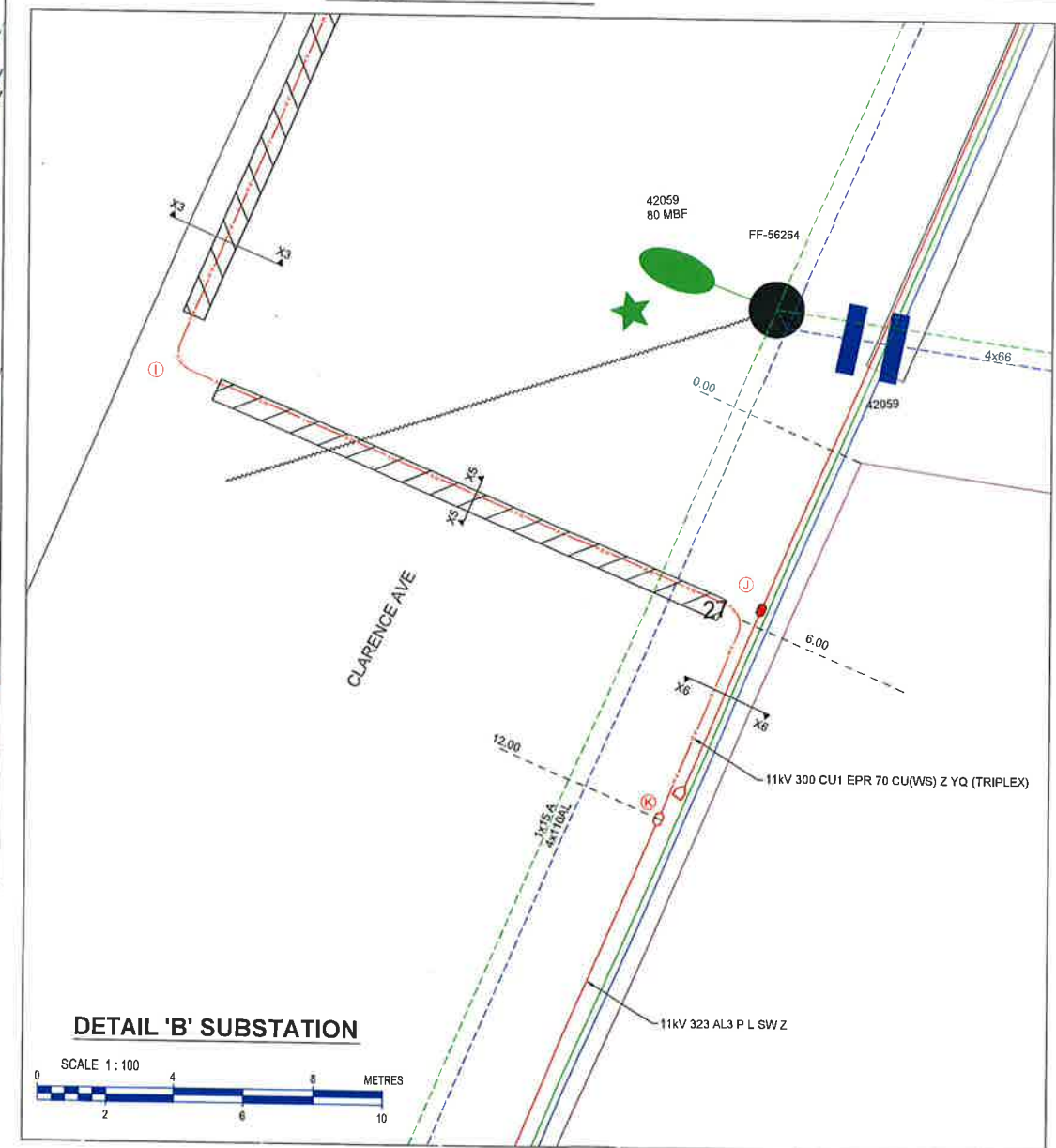
MAXIMUM 11kV 3 PHASE FAULT LEVEL 7.17kVA

SUBSTATION SCHEMATIC DIAGRAM FOR S.77762

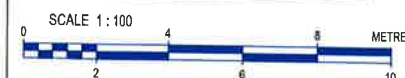


MAXIMUM 11kV 3 PHASE FAULT LEVEL 7.17kVA

SUBSTATION SCHEMATIC DIAGRAM FOR S.77763



DETAIL 'B' SUBSTATION



ASSOCIATED DRAWINGS



DESIGNED BY	ELI TOPIA
AUTH NO.	1104
SUBMIT DATE	28/02/2018
LGA	NORTHERN BEACHES
MAP REF.	UBD MAP 178 REF. C5
AUSGRID REF.	FF63
PRJTRAK No.	XCY12339

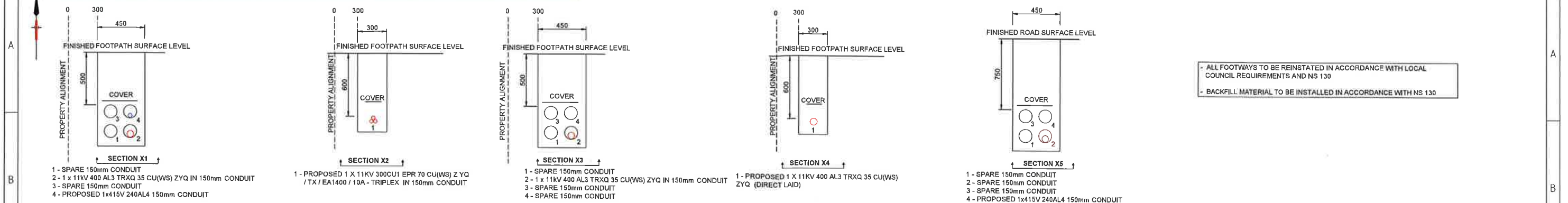
ESTABLISH KIOSK SUBSTATIONS AND DECOMMISSION CHAMBER SUBSTATION S.15403 932 PITWATER ROAD DEE WHY

CERTIFICATION NUMBER 1173924/20180305

SIZE SC11815 SHEETS 2 of 6



## CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATING



OVERHEAD CONSTRUCTION WORKS SCHEDULE																	
REF. IDENTIFIER	POLE NUMBER	SIZE (m)	STRENGTH (kN)	POLE TYPE TIMBER/CONC	DEPTH (m)	FOOTING DETAILS	HV CONSTRUCTION		LV CONSTRUCTION		STAY DETAILS			No. of VIBRATION DAMPERS	No. of ARMOUR RODS	ADDITIONAL CONSTRUCT DETAIL	
							CONST TYPE	ATTACHED (m) FROM HEAD OF POLE	CONST TYPE	ATTACHED (m) FROM HEAD OF POLE	STAY SIZE	ATTACHED (m) FROM HEAD OF POLE	STAY BEARING (Deg)				
1	FF-62898	11	EX	TIMBER			N/A	N/A	LV-71 + LV UGOH	2	N/A	N/A	N/A	N/A	N/A	INSTALL A NEW LV UGOH CONSTRUCTION AND LV LINKS.	

UNDERGROUND CONSTRUCTION WORKS SCHEDULE (DUCT PULL V.1.15 UNDERGROUND DESIGN SOFTWARE USED)									
REF. IDENTIFIER	ROUTE DISTANCE (m)	CIRCUIT VOLTAGE	CONDUCTOR OR ASSET DETAIL	CABLE CODE	MIN. INTERNAL BENDING RADIUS (mm) DURING INSTALLATION	MIN. INTERNAL BENDING RADIUS (mm) AFTER INSTALLATION	CALCULATED MAX. PULLING TENSION (kN) DURING INSTALLATION	CONSTRUCTION DETAIL	
A	N/A	N/A	DECOMMISSION S.15403	N/A	N/A	N/A	N/A	DECOMMISSION EXISTING SUBSTATION S.15403 AND RETURN ALL MATERIALS TO CHATSWOOD DEPOT 337-355 MOWBRAY RD CHATSWOOD.	
D	N/A	N/A	1000kVA KIOSK SUBSTATION S.77762 'DEE WHY RSL No. 1'	N/A	N/A	N/A	N/A	'L' TYPE KIOSK INSTALLATION, PIERING, EARTHING AND CABLE TERMINATION	
	N/A	11kV	2 x KIOSK HV TERMINATIONS (HV 1 - 52); INSTALL AN EARTH FAULT INDICATOR AT THE PROPOSED KIOSK S.77762 ON THE S.77763 FEEDER.	N/A	N/A	N/A	N/A	TERMINATE 2 x 11kV 300 CU1 EPR 70 CU(WS) Z YQ (TRIPLEX) TO KIOSK	
	N/A	415kV	2 x KIOSK LV TERMINATION (LV 1 - 41)	N/A	N/A	N/A	N/A	TERMINATE 2 x 415 LV 240 AL4 XQZ/SAC TO KIOSK;	
D1	N/A	N/A	1000kVA KIOSK SUBSTATION S.77763 'DEE WHY RSL No. 2'	N/A	N/A	N/A	N/A	'L' TYPE KIOSK INSTALLATION, PIERING, EARTHING AND CABLE TERMINATION	
	N/A	11kV	2 x KIOSK HV TERMINATIONS (HV 1 - 52); INSTALL AN EARTH FAULT INDICATOR AT THE PROPOSED KIOSK S.77763 ON THE S.17009 FEEDER.	N/A	N/A	N/A	N/A	TERMINATE 2 x 11kV 300 CU1 EPR 70 CU(WS) Z YQ (TRIPLEX) TO KIOSK	
	N/A	415kV	1 x KIOSK LV TERMINATION (LV 1 - 41)	N/A	N/A	N/A	N/A	TERMINATE 1 x 415 LV 240 AL4 XQZ/SAC TO KIOSK;	
B - F1 - F	170	N/A	4x150mm PVC CONDUITS (3 SPARES)	N/A	N/A	N/A	N/A	INSTALL 4x150mm CONDUITS AS PER DUCT CROSS SECTION X3 & X8.	
F - C	65	N/A	4x150mm PVC CONDUITS (2 SPARES)	N/A	N/A	N/A	N/A	INSTALL 4x150mm CONDUITS AS PER DUCT CROSS SECTION X1.	
E - H - I	69	N/A	4x150mm PVC CONDUITS (3 SPARES)	N/A	N/A	N/A	N/A	INSTALL 4x150mm CONDUITS AS PER DUCT CROSS SECTION X3.	
I - J	16	N/A	4x150mm PVC CONDUITS (3 SPARES)	N/A	N/A	N/A	N/A	INSTALL 4x150mm CONDUITS AS PER DUCT CROSS SECTION X5.	
B - C	270	11kV	1 x 11kV 400 AL3 XQ MB CU(WS) Z YQ/ISC	12057	2180	1305	18.88	INSTALL 11kV 400 AL3 XQMB CU(WS) ZYQ/ISC HV CABLE IN DUCT AS PER DUCT CROSS SECTION X1, X3 & X8.	
B	N/A	11kV	1 x HV STRAIGHT JOINT (HV2-25)	N/A	N/A	N/A	N/A	CUT EXISTING 11kV 300 AL3 P L SW Z CABLE AT REF 'B' AND ESTABLISH 1 TO 1 HV JOINT BETWEEN EXISTING 11kV 300 AL3 P L SW Z AND PROPOSED 11kV 400 AL3 XQ MB CU(WS) Z YQ/ISC CABLES.	
C	N/A	11kV	1 x 3 - 1 JOINT TYPE (HV2 - 23)	N/A	N/A	N/A	N/A	INSTALL 1 x STRAIGHT THROUGH JOINT 400AL3 TO 300CU1 TRIPLEX	
C - D	10	11kV	1x 11kV 300CU1 EPR 70 CU(WS) Z YQ / TX / EA1400 / 10A - TRIPLEX	391	1275	850	MANUAL	INSTALL 300CU1 TRIPLEX CABLE FROM REF 'C' TO PROPOSED SUBSTATION S.77762	
C1 - D1	12	11kV	1x 11kV 300CU1 EPR 70 CU(WS) Z YQ / TX / EA1400 / 10A - TRIPLEX	391	1275	850	MANUAL	INSTALL 300CU1 TRIPLEX CABLE FROM REF 'C1' TO PROPOSED SUBSTATION S.77763	
C1	N/A	11kV	1 x 3 - 1 JOINT TYPE (HV2 - 23)	N/A	N/A	N/A	N/A	INSTALL 1 x STRAIGHT THROUGH JOINT 400AL3 TO 300CU1 TRIPLEX	
D - D1	6	11kV	1x 11kV 300CU1 EPR 70 CU(WS) Z YQ / TX / EA1400 / 10A - TRIPLEX	391	1275	850	MANUAL	INSTALL 300CU1 TRIPLEX CABLE BETWEEN S.77762 - S.77763.	
	8	LV	415 240 AL4 XQZ / SAC	2257	590	395	MANUAL	INSTALL 415 240 AL4 XQZ / SAC CABLE BETWEEN S.77762 - S.77763.	
C1 - K	102	11kV	1 x 11kV 400 AL3 XQ MB CU(WS) Z YQ/ISC	12057	2180	1305	5.62	INSTALL 11kV 400 AL3 XQMB CU(WS) ZYQ/ISC CABLE IN DUCT AS PER DUCT CROSS SECTION X3, X5 & X8.	
K	N/A	11kV	1 x 1 - 1 JOINT TYPE	N/A	N/A	N/A	N/A	CUT EXISTING 11kV 323 AL3 P L SW Z CABLE AT REF 'K' AND ESTABLISH 1 TO 1 HV JOINT BETWEEN EXISTING 11kV 323 AL3 P L SW Z AND PROPOSED 11kV 400 AL3 XQMB CU(WS) ZYQ/ISC CABLES. NOTE: AS PER SUPPLIER JOINT KITS FOR 11kV 323 AL3 P L SW Z AND 11kV 400 AL3 XQMB CU(WS) ZYQ/ISC CABLES ARE AVAILABLE (3 x 04317 links - LINK, COMPRESSION 400 AL323 (0.5) AL LINK, COMPRESSION 400MM2 ALUMINIUM / 323MM2 (0.5 INCH) ALUMINIUM).	
	N/A	11kV	SEAL END	N7A	N/A	N/A	N/A	CUT EXISTING UG 11kV CABLE AND ESTABLISH SEAL END ON ABANDON 11kV CABLE.	
H	N/A	LV	SEAL END	N7A	N/A	N/A	N/A	CUT EXISTING UG LV CABLE AND ESTABLISH SEAL END ON ABANDON LV ROAD CROSSING CABLE.	
	N/A	11kV	SEAL END	N7A	N/A	N/A	N/A	CUT EXISTING UG 11kV CABLE AND ESTABLISH SEAL END ON ABANDON 11kV ROAD CROSSING CABLE.	
D - F	90	LV	415 240 AL4 XQZ / SAC	2257	590	395	2.23	INSTALL 415 240 AL4 XQZ / SAC CABLE AS PER DUCT CROSS SECTION X1	
A - B	N/A	N/A	REMOVE CABLES AND CONDUITS	N/A	N/A	N/A	N/A	REMOVE CABLES & CONDUITS FROM REF POINT A TO B	
A - H	N/A	N/A	REMOVE CABLES AND CONDUITS	N/A	N/A	N/A	N/A	REMOVE CABLES & CONDUITS FROM REF POINT A TO H	
G	N/A	LV	POT END (LV1 - 50)	N/A	N/A	N/A	N/A	POT END EXISTING LV CABLE	

CAD DRAWING

AMENDMENTS

1. CHANGE IN HV CABLE ROUTE TO BE INSTALLED JOINT AT E AND ROAD CROSSING

DRAWN BY: 27/02/2018

CHECKED BY: 27/02/2018

20180817

PROPOSED EXISTING

Pole

SL Standard

Pillar Standard

LV Link

Streetlight

Streetlight-PEC

Streetlight-replacement

Streetlight-removal

PROPOSED EXISTING

Pole-to be removed

USL

ABS

IDT

Kiosk Sub

Chamber Sub

Remove Chamber Sub

Pole Sub

PROPOSED EXISTING

UGOH Pot End

Joint

Sealed End

Conduit

UG Lines

UG Cables

HV

LV

SV

EXISTING

UGOH Pot End

Joint

Sealed End

Conduit

UG Lines

UG Cables

HV

LV

SV

REMOVE

OH Lines

HV

LV

SV

Joint

HV

LV

SV

ASSOCIATED DRAWINGS

CERTIFICATION NUMBER

1173924/20180305

SIZE

A1

AUGUST PROJECT No.

SC11815

SHEETS

3 of 6

AND

1

connect

Electrical Infrastructure

Consultancy, Design & Construction

Tel: 02 9723 3333

Fax: 02 9723 3330

Email: info@connect.com.au

8 Progress Crt, Picnic NSW 1510

PO Box 484, Castle Mel NSW 1510

ASP REF:

DT559A - 10

DESIGNED BY

ELI TOPIA

AUTH NO.

1104

SUBMIT DATE

28/02/2018

LGA

NORTHERN BEACHES

MAP REF:

UBD MAP 178 REF. C5

AUGRID REF:

FF63

PRUTRAN No.

XC12339

ESTABLISH KIOSK SUBSTATIONS AND DECOMMISSION CHAMBER SUBSTATION S.15403 932 PITWATER ROAD DEE WHY



# CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATING

## WARNING

- THIS DESIGN CANNOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE LOCATION OF ALL EXISTING SERVICES IS VERIFIED.
- THE INFORMATION PROVIDED IN THIS DESIGN MUST BE CHECKED ON SITE AND THE MOST CURRENT INFORMATION ON THE CONFIGURATION OF ALL SERVICES, INCLUDING AUSGRID'S NETWORK, MUST BE VERIFIED IMMEDIATELY BEFORE CONSTRUCTION COMMENCES BY CONTACTING DIAL-BEFORE-YOU-DIG BY TELEPHONE ON 1100 OR AT [www.1100.com.au](http://www.1100.com.au).
- DIAL-BEFORE-YOU-DIG INFORMATION MUST NOT BE OLDER THAN 20 BUSINESS DAYS AT THE TIME OF CONSTRUCTION.

REFER AUSGRID STANDARD DRAWING 167433 FOR COMBINED EARTHING DETAILS

SUBSTATION EARTHING MUST BE INSTALLED TO COMPLY WITH NS 116.

ALL ELECTRODES MUST BE INSTALLED TO A MINIMUM DEPTH OF 5m.

INSTALL ALL EARTHING ELECTRODES AT THE CORNERS OF SUB EASEMENT 500mm INSIDE THE EASEMENT. REFER NOTE 17 ON SHEET 1.

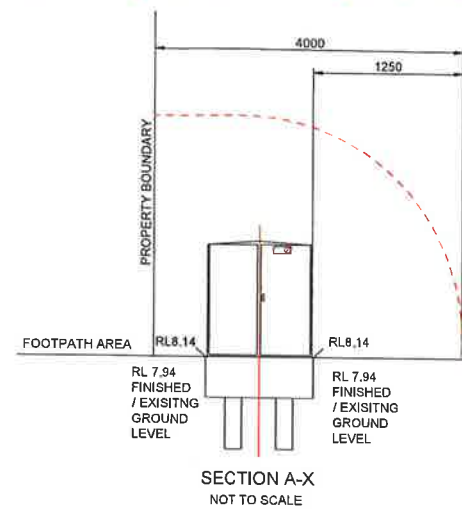
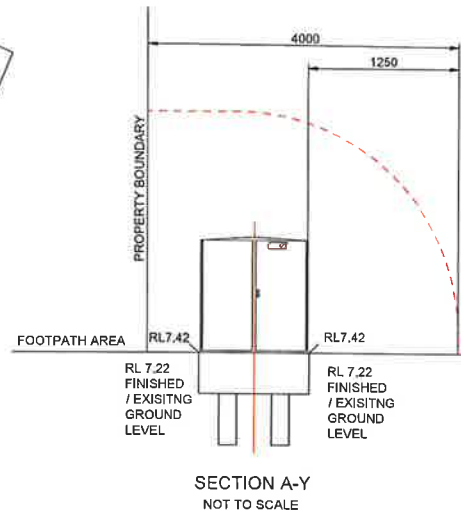


## EARTHING DIAGRAM FOR PROPOSED KIOSK SUB S.77762 & S.77763 ( COMBINED EARTHING )

NOT TO SCALE  
(REFER TO NS0116 FOR MORE DETAILS)

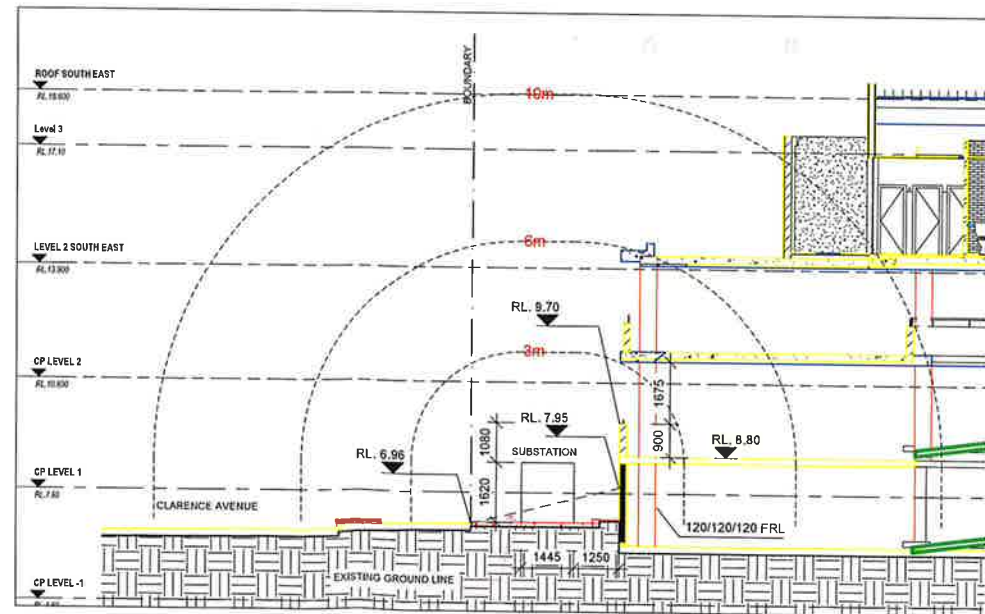
BLACK INSULATED 70mm<sup>2</sup> STRANDED COPPER CONDUCTOR  
ELECTRODE

GENERAL	
EARTHING CONFIGURATION :	COMBINED
DESIGN CURVE :	EN4 - TDMEN
ELECTRODES INSTALLATION :	DRIVEN
DESIGN	
HV ELECTRODES	
NUMBER OF ELECTRODES :	2
DEPTH OF EACH ELECTRODE :	5.4
SPACING BETWEEN ELECTRODES :	2.3
MAX RESISTANCE - NORMAL :	14.53
MAX RESISTANCE - DROUGHT :	22.30
MEASURED :	
LV ELECTRODES	
NUMBER OF ELECTRODES :	2
DEPTH OF EACH ELECTRODE :	5.4
SPACING BETWEEN ELECTRODES :	2.3
MAX RESISTANCE - NORMAL :	14.53
MAX RESISTANCE - DROUGHT :	22.30
MEASURED :	
COMBINED	
RESISTANCE :	12.95
MINIMUM SEPARATION DISTANCES *	
MINIMUM SEPARATION FROM TELCO ASSETS :	1.2
MINIMUM SEPARATION BETWEEN HV AND LV AND/OR MEN ELECTRODES :	4.3
REFERENCE DRAWINGS FOR THIS INSTALLATION	
167433	

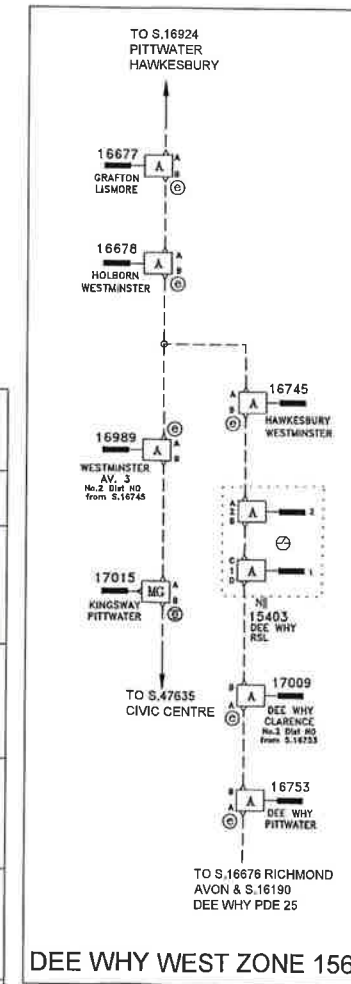


## SECTION A-Z KIOSK SUBSTATION SITE PROFILES NOT TO SCALE

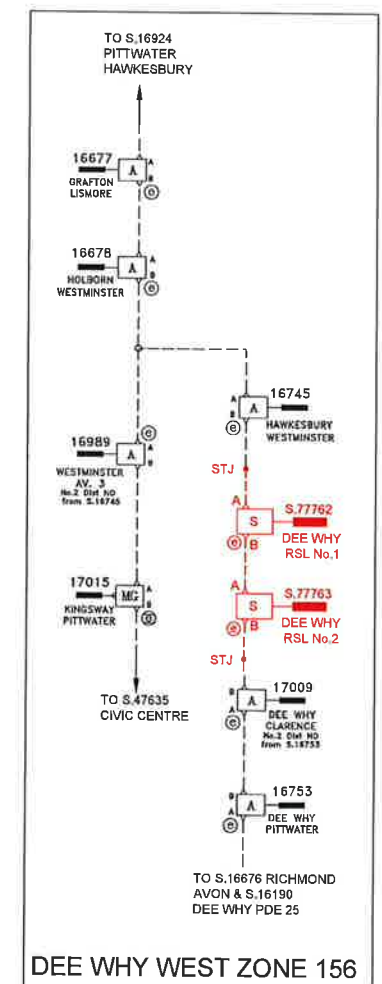
SECTION A-Z



## SECTION THROUGH SUBSTATION



## EXISTING HV SYSTEM DIAGRAM NOT TO SCALE



## PROPOSED HV SYSTEM DIAGRAM NOT TO SCALE

20160817

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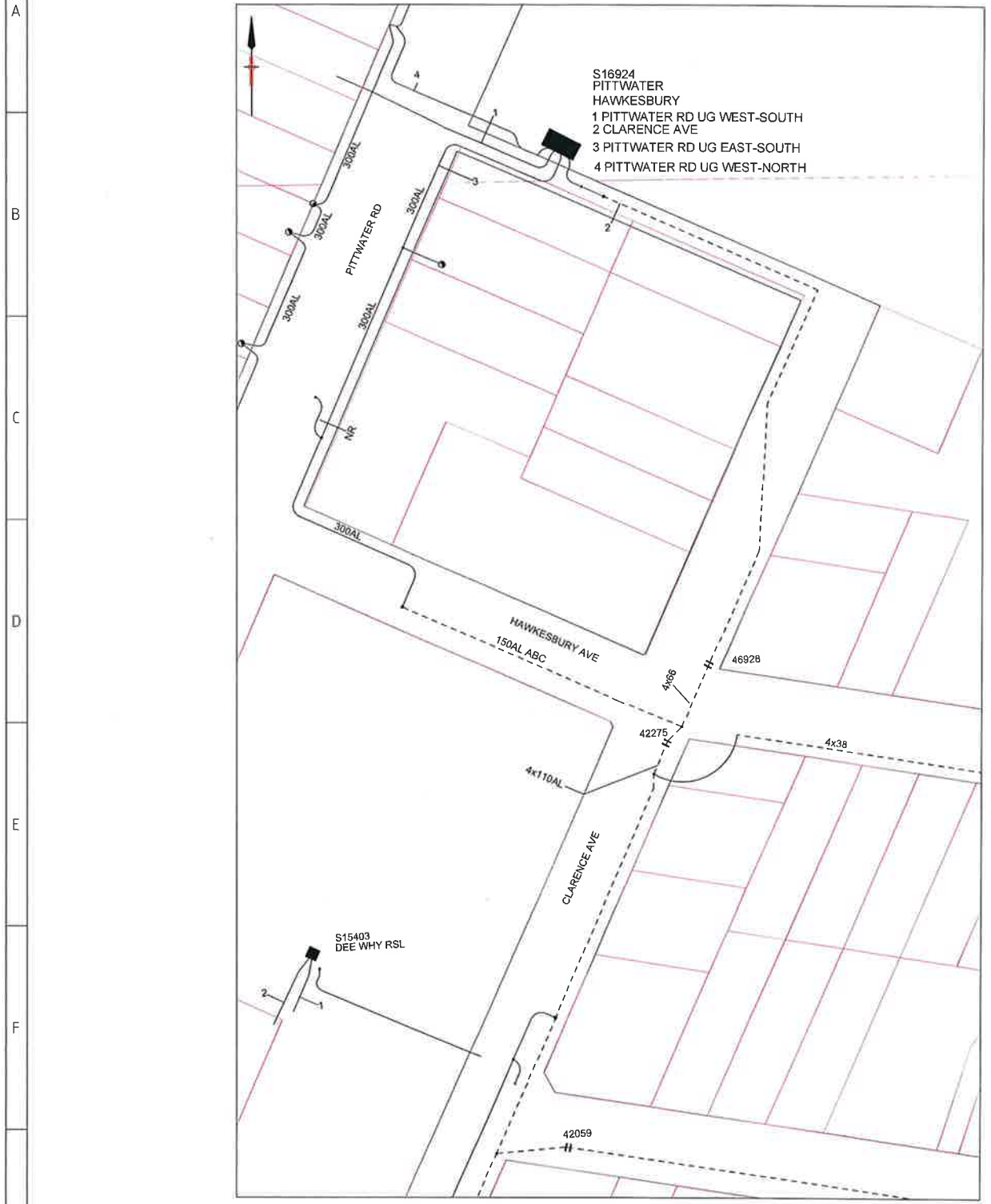
53

54

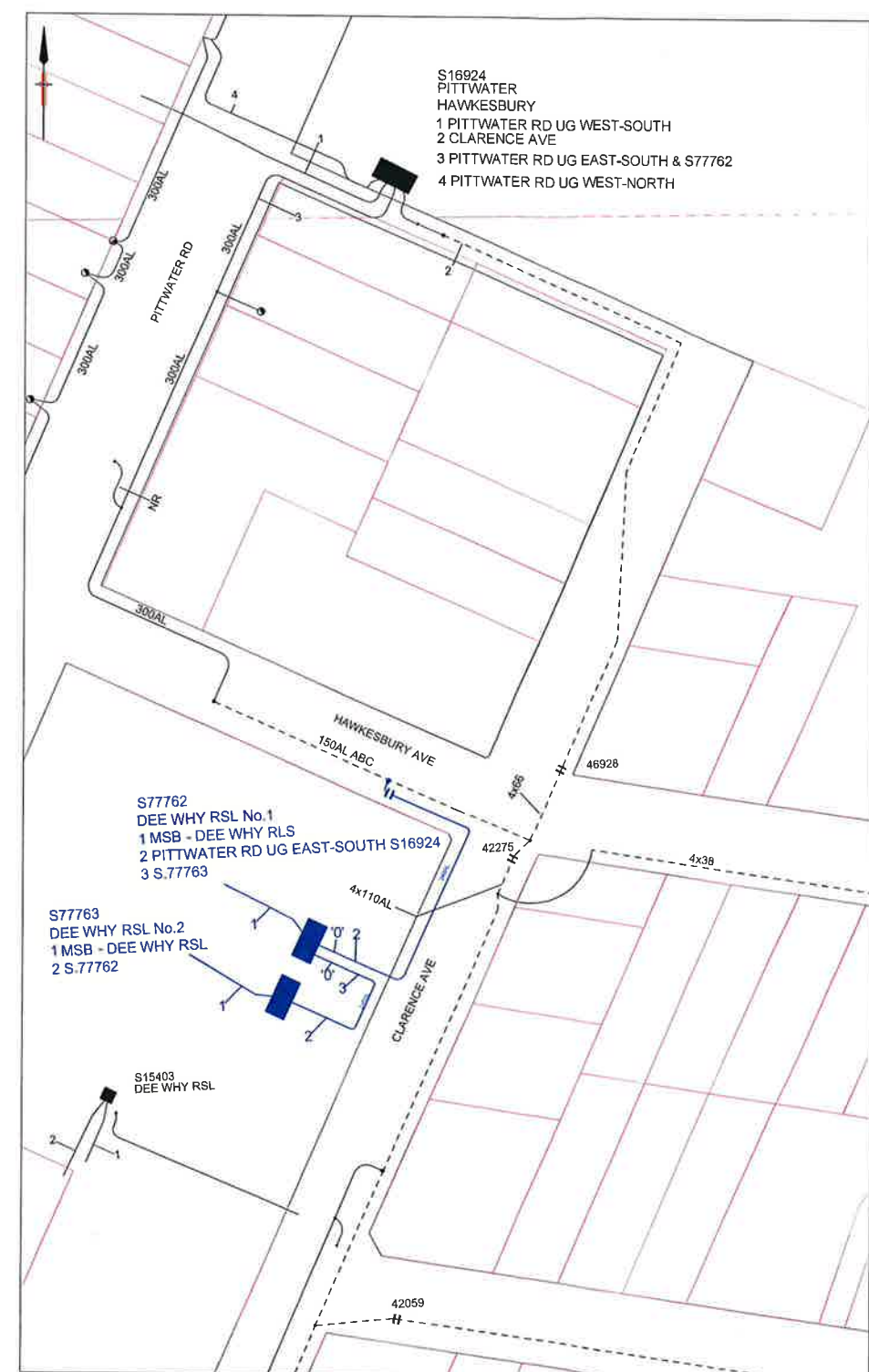
55



1	2	3	4	5	6	7	8	9	10	11	12
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









NOT TO SCALE



NOT TO SCALE

**LV GEOSCHEMATIC EXISTING**

LV UG cable	LV OH cable
 LV cable joint   termination   shackle point   open point   LV pillar   kiosk   substation	 tee   UGOH   mains section   IDT   link   UG link   switch number   link box   internals   pillar   chamber   substation

### LV GEOSCHEMATIC PROPOSED


LV UG cable		LV OH cable
UG cable joint	tee	UGOH
termination	main section	IDT
shackle point	fuse	link
open point	UG link	link box
LV pillar	switch number	internals
kiosk substation	LV link/switch pillar	
	chamber substation	pole mounted substation

CAD DRAWING

AMENDMENTS

CHANGE IN HV CABLE ROUTE  
 2-EL RELOCATION OF 11kV JOINT  
 AT E' AND ROAD CROSSING.

DRAWN BY KT 27/02/2018  
 CHECKED BY KT 27/02/2018  
 APPROVED BY KT 27/02/2018

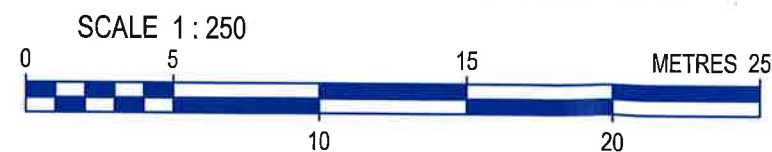
		 Electrical Infrastructure Consultancy, Design & Construction		DESIGNED BY AUTH NO. 1104 SUBMIT DATE 28/02/2018 LGA NORTHERN BEACHES URBAN REF. URB MAP 178 REF. C5 AUSGRID REF. FFG3 PRATRAK No. XCY12339		ESTABLISH KIOSK SUBSTATIONS AND DECOMMISSION CHAMBER SUBSTATION S.15403 932 PITTWATER ROAD DEE WHY			
		Tel: 02 9743 3333 Fax: 02 9743 3300 Email: <a href="mailto:info@connecting.com.au">info@connecting.com.au</a>		6 Pingree Cct, Freshwater NSW 2170 PO Box 494, Cessnock NSW 2170					
		ASP REF. DT559A - 10		CERTIFICATION NUMBER 1173924/20180305		SIZE A1		AUSGRID PROJECT No. SC11815	
ASSOCIATED DRAWINGS								SHEETS 5 of 6	



CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATING



### EASEMENT DIAGRAM



"A" - EASEMENT FOR ELECTRICITY & OTHER PURPOSES

CAD DRAWING  
AMENDMENTS



Tel : 02 9733 3333  
Fax : 02 9733 3330  
Email : mail@connecteng.com.au

6 Progress Cct, Prestons NSW 2170  
PO Box 484, Casula Mail NSW 2170

ASP REF. DT559A - 10

DESIGNED BY	ELI TOPIA
AUTH NO.	1104
SUBMIT DATE	28/02/2018
LGA	NORTHERN BEACHES
MAP REF.	UBD MAP 178 REF. C5
AUSGRID REF.	FF 64
PRJTRAK No.	XCY12339

ESTABLISH KIOSK SUBSTATIONS  
AND DECOMMISSION CHAMBER  
SUBSTATION S.15403  
932 PITTWATER ROAD  
DEE WHY

ASSOCIATED DRAWINGS

CERTIFICATION NUMBER 1173924/20180305

SIZE A3

AUSGRID PROJECT No. SC11815

SHEETS 6 of 6

AMD. 1