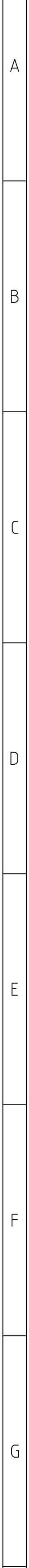


1	2	3	4	5	6	7	8	9	10	11	12
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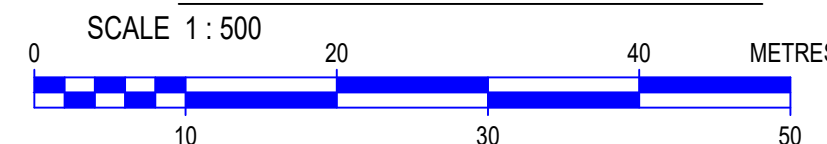
LOCALITY MAP

NOT TO SCALE

HVC DETAILS	
SUBSTATION NAME:	ABERDEEN BATTERY
SUBSTATION NUMBER:	HC37271
ADDRESS:	981 NEW ENGLAND HWY, ABERDEEN
SUBSTATION TYPE:	KR
SIZE (kVA):	N/A
VECTOR GROUP:	N/A
TAP SETTING:	N/A
HV SWITCHGEAR:	SCHNEIDER ELECTRIC RM6 RMICB
HV FUSE DETAILS:	N/A
LOAD CYCLE:	N/A
PHASING DETAIL:	N/A
CONFIGURE AS Dyn11:	N/A
EARTHING REQUIREMENTS:	NS116 & SPECIFIC EARTHING DESIGN ON SHEET
HVC PIERING:	NS195 DRAWING NUMBER 258017
EASEMENT PLAN DETAIL:	AS PER SHEET 7

FAULT CURRENT (kA)			
?	?	?	?
3 PHASE	PHASE TO PHASE	PHASE TO GND (DESIGN)	PHASE TO GND (ACTUAL)
7.900 $\angle$ -85.2°	6.844 $\angle$ -55.2°	8.307 $\angle$ -81.9°	2.773 $\angle$ -21.6°

CONSTRUCTION PLAN



DESIGN NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH AND MUST COMPLY WITH AUSGRIDS NETWORK STANDARDS REFER TO BUT NOT LIMITED TO: - NS104, NS113, NS116, NS130, NS156, NS114, NS127, NS129 & NS177.
2. ALL SERVICE WORK TO BE DONE IN ACCORDANCE WITH AS3000:2007 AND THE N.S.W. SERVICE AND INSTALLATION RULES.
3. ALL TRENCHING, PITS, CABLES & CONDUITS ARE TO BE SURVEYED MARKED, & PHOTOGRAPHED (INSPECTED BY COMPLIANCE OFFICER PRIOR TO BACKFILLING)
4. CONSTRUCTOR IS TO ENSURE THAT ALL CABLES AND CONDUITS ARE INSTALLED RELATIVE TO FINAL LEVELS.
5. 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.
6. 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.
7. HAND EXCAVATION IS TO BE USED IN THE VICINITY OF EXISTING UNDERGROUND CONSTRUCTION.
8. ALL CONDUITS ARE TO BE IN ACCORDANCE TO NS130.
9. ACCREDITED DESIGNER TO BE CONTACTED REGARDING ISSUES RAISED WITH THIS DESIGN.
10. CONSUMER MAINS LENGTH TO BE IN ACCORDANCE WITH AS3000.
11. DUCT CONFIGURATIONS SHOWN ARE A GUIDE ONLY - REFER DBYD SEARCHES AND AUGRID UNDERGROUND MAPS FOR MORE DETAIL.
12. 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.
13. TELSTRA AND OPTUS TO BE NOTIFIED OF PROPOSED WORK PRIOR TO CONSTRUCTION:
CONTACTS:
TELSTRA: f0204107@team.telstra.com (EMAIL)
OPTUS: dartnsw@optus.com.au (EMAIL)
14. EXCAVATION NEAR TREES TO BE DONE IN ACCORDANCE WITH AS4970.

GENERAL NOTES

1. 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.
2. THE ASP1 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.
3. THE ASP1 MUST MINIMISE 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 9 OF THE NATIONAL ENERGY RETAIL RULES.
4. 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).
5. THE ASP1 IS TO MAINTAIN ADEQUATE PUBLIC LIGHTING LEVELS FOR THE DURATION OF THE WORKS. IF NECESSARY, THE ASP1 IS TO ARRANGE FOR SUITABLE TEMPORARY STREET LIGHTING TO BE PROVIDED UNTIL PERMANENT LIGHTING IS RE-ESTABLISHED.
6. THE ASP1 IS TO CO-ORDINATE THE MODIFICATION AND TESTING OF ANY REQUIRED PROTECTION RELAY WITH THE AUSGRID TECHNICAL SERVICES GROUP
7. THE ASP1 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).
8. THIS INFORMATION INCLUDES DATA FROM THE NSW DIGITAL CADASTRAL DATABASE BY LAND AND PROPERTY INFORMATION © 2016, USED UNDER CREATIVE COMMONS LICENCE VERSION 4.0.
9. FOR IDENTIFICATION AND JOINTING PURPOSES, ALL CABLE ENDS SHALL BE LABELLED AT THE TERMINATION LOCATIONS AND IN JOINT BAYS DURING CABLE INSTALLATION. THE CABLES MUST BE LABELED AS PER CERTIFIED DESIGN DRAWING

ASP LEVEL 2 WORK

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



CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATING
Tel: 1100 www.byda.com.au

- "THIS DESIGN PLAN CANNOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE LOCATION OF ALL EXISTING SERVICES IS VERIFIED."
- "THE INFORMATION PROVIDED IN THIS DESIGN PLAN 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 BYDA BY AT WWW.BYDA.COM.AU
- "BYDA INFORMATION MUST BE CURRENT, AS INDICATED BY THE VALIDITY DATES ON THE BEFORE YOU DIG AUSTRALIA INFORMATION, AT THE TIME OF CONSTRUCTION."
- IF THE LAND BASE USED IN THE DESIGN IS SUPPLIED BY AUSGRID: "THIS INFORMATION INCLUDES DATA FROM THE NSW DIGITAL CADASTRAL DATABASE BY LAND & PROPERTY INFORMATION @2016. USED UNDER CREATIVE COMMONS LICENCE VERSION 4.0."
- "ALL WORKS TO COMPLY WITH AUSGRID NETWORK STANDARDS, UNLESS NETWORK STANDARDS VARIATION IN ACCORDANCE WITH NS181 HAS BEEN APPROVED IN WRITING BY AUSGRID. IN THE EVENT OF DISCREPANCY BETWEEN THIS CERTIFIED DESIGN AND AUSGRID'S NETWORK STANDARDS, THE NETWORK STANDARD REQUIREMENTS SHALL PREVAIL."

DESIGNED BY	Braj Dubey
AUTH NO.	2431
SUBMIT DATE	02.11.2023
LGA	MUSWELLBROOK
MAP REF.	UJD or STREET DIR. RE
AUSGRID REF.	AJ33/AJ44
PR.ITRAK No	XCW027907

ABERDEEN KR HVC
BESS CONNECTION
LOT 1 DP 776564
981 NEW ENGLAND HWY
ABERDEEN, NSW 2336

3	SIZE A1	AUSGRID PROJECT No. AN-24994	SHEETS 1 of 7	AMD. 0
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ASSOCIATED DRAWINGS

CERTIFICATION NUMBER	3343734/20231113	SIZE A1
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	PROPOSED	EXISTING		PROPOSED	EXISTING		PROPOSED		EXISTING		REMOVE		PROPOSED	EXISTING	
Pole			Pole-to-be removed				UGOH Pot End		Joint Sealed End		OH Lines		Pole Sub		
SL Standard			USL				Joint Sealed End		Joint Sealed End		LHV - - - - -		Ground Sub		
Pillar Standard			ABS				Conduit		Conduit		SL - - - - -		Note Point		
LV Pillar			REMOVE ABS				OH Lines		UG Cables		UG lines		Node Point		
LV Link Pillar			Kiosk Sub				-HV- - - - -		-HV-		LHV - - - - -		Mains Section Change		
Streetlight			Chamber Sub				-LV- - - - -		-LV-		LHV - - - - -		LV Links		
Streetlight-PCC			Pole Sub				-SL- - - - -		-SL-		LHV - - - - -		OH Mains		
Streetlight-replacement			Two Pole Sub				-SV- - - - -		-SV-		LHV - - - - -		UG Mains		

20160817

1

2

3

4

5

7

8

1

5

EXISTING HV NETWORK DIAGRAM

The diagram illustrates the existing high-voltage (HV) network and the proposed modifications. The existing network (left) shows a vertical line with various components including a 348PU transformer, busbars, and various equipment like HP.72810, HP.70512, HP.72850, and 42284 HC.42285. A red box highlights the area to be removed, labeled "REMOVE EXISTING ABS 79101". The proposed network (right) shows the same vertical line but with a new section highlighted in red, labeled "SCOPE OF WORKS". This section includes a new pole "AJ-30947 HV UGOH" and a new line to "HC 37780" and "HC 37271 ABERDEEN BATTERY". The diagram also shows the connection to "TO: LB 77901 & LB 75215" at the bottom.

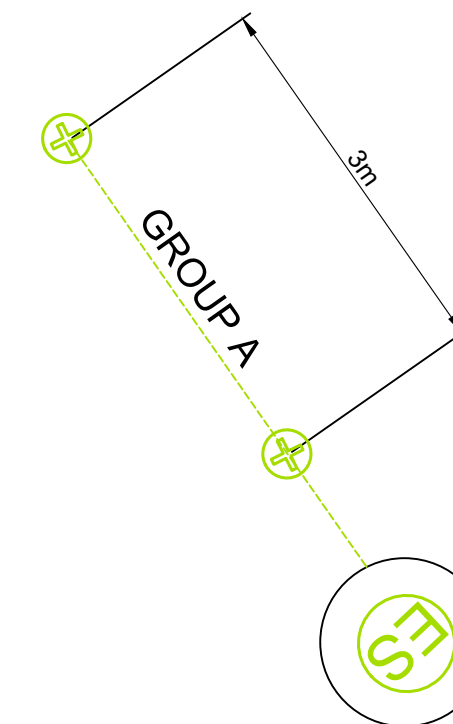
PROPOSED HV NETWORK DIAGRAM



ASSOCIATED DRAWINGS

ABERDEEN KR HVC
BESS CONNECTION
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981 NEW ENGLAND HWY
ABERDEEN, NSW 2336

SIZE	AUSGRID PROJECT No.	SHEETS	AMD.
A1	AN-24994	3 of 7	0



EARTHING DIAGRAM FOR PROPOSED HV UGOH POLE AJ-30947

EARTHING LEGEND

(REFER TO NS0116 FOR MORE DETAILS)

----- BLACK INSULATED 70mm²
STRANDED COPPER CONDUCTOR



ELECTRODE

EARTHING NOTES

EARTHING IS TO BE INSTALLED AFTER THE SITE IS CLEARED

EARTHING DETAILS FOR KIOSK SUBSTATION
IS INDICATIVE ONLY AS EACH KIOSK SITE
REQUIRES A

SPECIFIC EARTHING DESIGN TO BE UNDERTAKEN AS INDICATED IN NETWORK STANDARD NS116

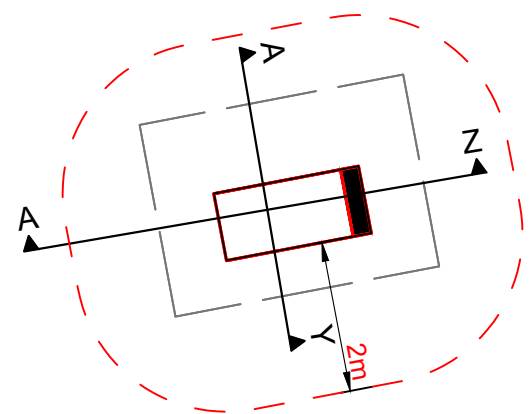
GENERAL		
EARTHING CONFIGURATION :		HV ONLY
DESIGN CURVE :		ENA- TDMEN/TDB 5 Ωm
ELECTRODES INSTALLATION :		DRIVEN
	DESIGN	AS BUILT
HV ELECTRODES		
NUMBER OF ELECTRODES :	2	
DEPTH OF EACH ELECTRODE :	10.8	m
SPACING BETWEEN ELECTRODES :	3	m
MAX RESISTANCE - NORMAL :	0.58	ohm/m
MAX RESISTANCE - DROUGHT :	0.89	ohm/m
MEASURED :		ohm/m
MINIMUM SEPARATION DISTANCES *		
MINIMUM SEPARATION FROM TELCO ASSETS :	14.8	m
MINIMUM SEPARATION FROM LONG METALLIC ASSETS WITH HIGH LIKELIHOOD OF CONTACT:	4.100	m
AND/OR MEN ELECTRODES :	6.0	m
REFERENCE DRAWINGS FOR THIS INSTALLATION		
160354		

<i>ASSOCIATED DRAWINGS</i>		

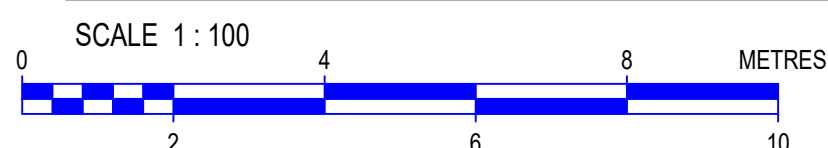
DESIGNED BY	Braj Dubey
AUTH NO.	2431
SUBMIT DATE	02.11.2023
LGA	MUSWELLBROOK
MAP REF.	UBD or STREET DIR. RE
AUSGRID REF.	AJ33/AJ44
PRJ/TRAK No.	XCW027907

ASSOCIATED DRAWINGS

3	SIZE A1	AUSGRID PROJECT No. AN-24994	SHEETS 5 of 7	AMOUNT 0
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-ANY METER, REGULATOR OR EXPOSED PIPE WORK ASSOCIATED WITH THE RETICULATION OF GAS WHICH IS WITHIN 2 METRES IN ANY DIRECTION FROM THE HOUSING OF A KIOSK SUBSTATION AND WHICH DOES NOT HAVE A FIRE RESISTANCE LEVEL OF 60/60/60, SHALL BE SHELTERED BY A NON-IGNITABLE BLAST-RESISTING BARRIER



ASSOCIATED DRAWINGS

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BESS CONNECTION
LOT 1 DP 776564
981 NEW ENGLAND HWY
ABERDEEN, NSW 2336

SIZE	AUSGRID PROJECT No.	SHEETS	AMOUNT
A1	AN-24994	6 of 7	0

