

	10			11 12			13			14		15			1	6]
			ITEM	1 DESCRIPTION	DWG.	STOCK	QTY.	58	WASHER – SQUARE ONLY HEX M20 GALV	GALVANISED, M16 x 50	x 50 x 6mm		H39257	4 2 to 6			
]	(1	POLE – COMPOSITE 14m x 24kN NOT DRILLED	244221	185015	1	60 61a	SURGE ARRESTER LV	/ 500V 5KA ALSO USE FOR LV 100	- 400kVA)		H31893	3 3 3 or 6			A
		REFER NOTE 19	10 1b	15.5m x 24kN NOT DRILLED	244222	185016		61b	COVER LV BUSHING (25 - 100kVA)			H22032	3			
		L	1d	15.5m x 24kN MAUFACTURER DRILLED	251877	185463		62a	LUG COMPRESSION LU	12 TO SUIT 185mm ² CU	CABLE		90183	6			
			3	3 PHASE TRANSFORMER – STRAP HUNG	244223	184743	AS REQ.	62c 63a	LUG COMPRESSION M ¹ LUG COMP. 2 HOLE (3)	12 TO SUIT 240mm ² CU 0mm CENTRES) M12 TO	CABLE SUIT 95mm ² CU CABLE		179574 176968	6			
			3a 3b	25kVA 11000/433V Dyn11 3 PHASE TRANSFORMER 63kVA 11000/433V Dyn11 3 PHASE TRANSFORMER		180374 180381		63b 63c	LUG COMP. 2 HOLE (3) LUG COMP. 2 HOLE (3)	0mm CENTRES) M12 TO 0mm CENTRES) M12 FO	SUIT 185mm ² CU CABLE R 240mm ² CU CABLE		176952 179575	1			
A			Зс Зd	100kVA 11000/433V Dyn11 3 PHASE TRANSFORMER200kVA 11000/433V Dyn11 3 PHASE TRANSFORMER		180377 180376		64a 64b	LUG COMP. 2 HOLE (5) LUG COMP. 2 HOLE (5)	0mm CENTRES) M12 TO 0mm CENTRES) M12 TO	SUIT 95mm ² CU CABLE SUIT 185mm ² CU CABLE		182628 182629	1			
	· -]		Зе Зf	400kVA 11000/433V Dyn11 3 PHASE TRANSFORMER 400kVA 11000/433V Dyn1 3 PHASE TRANSFORMER		180383 180351		64c	LUG COMP. 2 HOLE (5) BOLT HEX HEAD STA	0mm CENTRES) M12 F0	R 240mm ² CU CABLE		182630 45146	1			B
	/		4	TRANSFORMER MOUNTING BRACKET	566101	176962	1	66	CABLE TIE BLACK 38	0 X 7.6mm			59907	AS REQ.			
	/		6	CONDUIT 25mm FLEXIBLE PVC	514409	H8919	AS REQ.	67a	CABLE 95mm ² CU PVC	CINSULATED BLACK	24		59584	AS REQ.			
[]			8	LINK EARTH BAR FOR POLE SUBSTATIONS	151592	176961	1	67b 67c	CABLE SINGLE CORE (CABLE SINGLE CORE (CU 185mm² XLPE INSUL CU 240mm² INSULATED	LATED BLACK D BLACK		61432 179163	AS REQ. AS REQ.			
/ /			9 10	ELECTRODE – DRIVEN EARTH, Ø15 x 1800mm COUPLER – EARTH ELECTRODE, TO SUIT Ø15 ROD		H31631 H31649	AS REQ. AS REQ.	68 69	HEATSHRINK – MEDIU BOLT HEX HEAD STA	IM AND THICK WALL M INLESS STEEL M12 X 2	ASTIC LINED 25mm		44693	AS REQ. 5 or 10			
			11 12	'P' CRIMP CONNECTOR - CU, 70mm ² TO Ø15 ELECTRODE 'C' CRIMP CONNECTOR - COPPER, COMPRESSION, 70mm ² TO 70mm ²		H31699 177942	AS REQ. AS REQ.	70а 70Ь	LUG BI-METALLIC CON	MP. M12 TO SUIT 150mm MP. M12 TO SUIT 95mm	n ² CABLE ² CABLE		150441 58743	3 or 6 3 or 6			ſ
			13	CONDUCTOR - 19/2.14 BLACK PVC INSULATED HD (70mm ² EARTH) PVC/POLYMERIC CABLE COVER - 150mm WIDE		60111 151084	AS REQ.	71a 71b	LUG BI-METALLIC CON	MPRESSION 2 X M12 TO MPRESSION 2 X M12 TO) SUIT 150mm ² CABLE) SUIT 95mm ² CABLF		177073 177074	1 or 2			
/	_		15	NA				73a 73b	DROPOUT FUSE BASE	AND CARRIER 12/24K	V TYPE EXPULSION		H84350	3			
			10	NA NA				74	CROSSARM 2400 X 10	00 X 100		566345	176222	1			
			18 19	NA NA				75	CLAMP SUSPENSION	LYMERIC LUNG-RUD			H113472	3			
) /			20 21	LUG - CRIMP, M12, FOR 70mm ² COPPER NA	31077	74831	AS REQ.	77 79	PLATE, TWISTED, GA BOLT & NUT HEX HEA	LV 150 X 50 x 6mm AD GALV.M12 X 130mm		151086	176901 46805	3 7 or 8			
\mathcal{V}			22 23	GALVANISED SADDLE FOR 70mm ² COPPER EARTH CABLE CLAMP 2 BOLT PARALLEL GROOVE - COPPER		176494 176946	AS REQ.	80 81	BOLT & NUT HEX HEA	AD GALV.M16 X 160mm			47043	3			D
₹ & b			24	SPLIT BOLT CLAMP (HENLEY B26)		H18815	2 AS REQ.	82 83	BOLT HEX HEAD STA WASHER – FLAT, M16	INLESS STEEL M16 X 4	⊧0mm SS STEEL		H38413 H39621	3			
MDI CURRENT			26	LUG - CRIMP, M12, FOR 16mm ² COPPER		H110270	1	84	NUT NYLOC, M16 STA	INLESS STEEL	/152		177122 H14578	3			
TRANSFORMER			27	BOLT HEX HEAD STAINLESS STEEL M12 X 30mm		H38528	8	86	LUG KIT HEAVY DUTY	Y TO SUIT 11kV LDPE C	ABLE (3 SET)		H125260	1 1			
			29 30	NUT M12 STAINLESS STEEL SCREWS SELF DRILLING - #12 X 45mm		8987 175567	21 AS REQ.	87	LUG COMPRESSION M ARRESTERS SURGE 1	12 TO SUIT 16mm² 11KV 1kV	/ LDPE CABLE		H110270 111948	6 3			
1			31 32	WASHER – FLAT, M12, STAINLESS STEEL WASHER – BELLEVILLE, M12, STAINLESS STEEL	518081 518082	49429 175903	AS REQ. AS REQ.	89 90	HEATSHRINK TERMINA CABLE 11kV 16mm ² CL	ATION KIT FOR HV DRO J LDPE INSULATED	OPPER LUGS		152207 6205	1 AS REQ.			Г
			33 34	LUG - COMPRESSION 2 X M12 AT 50mm CENTRES , FOR 70mm ² CU. LUG - COMPRESSION 2 X M12 AT 30mm CENTRES , FOR 70mm ² CU.		182609 176967	1	91 92	MAXIMUM DEMAND IN SADDLE CONDUIT GAI	IDICATOR /ENCLOSURE LV M20	AND WIRED UNIT	164578	178641 176493	1 AS REQ.			
			35	SIGN – DANGER HIGH VOLTAGE BOI T & NUT – M20, HEX, GAI VANISED, LENGTH TO SUIT POLE	515466	H47012	2 AS REQ	93 94	COACH BOLT M12 x 50 CROSSARM 2400 X 10	0mm 00 × 100		228823	50476 71589	6 or 7 AS REQ.			
92)			37	EYED LAG BOLT, M8 x 110mm, STAINLESS STEEL		182589	1	121	SEGREC	GATED EARTHING OPTI	ION TED ONLY)		98939	1			
			39	WASHER - FLAT ROUND, M20 x 44.5 x 3.23, GALV.	518081	177986	AS REQ.	122	SEGREGATED EARTH	ING SIGN CATION CROSSARM OP	TION	224403	182387 SEE NOTE 11	NOTE 8			
			40	COACH SCREW - M10 x 40mm, GALVANISED		50567	2	131a 131b	CROSSARM 2100 X 15	50 X 100		228823	H23745 71589				
			42 43a	FUSE BASE AND CARRIER LV 630A SINGLE CIRCUIT	117077	90522	3	132	BRACE CROSSARM 49	90 X 40 X 5mm	ΙΟΝ	46	76745				F
NOTE 17			43b 44	FUSE BASE AND CARRIER LV 630A DUAL CIRCUIT FUSE (REFER NS122 - SECTION 10.2)	31700	90563	3	141		ED TO SUIT 19/2.00 GA	LV. STEEL		58859	3 or 6			
			45a 45b	CROSSARM 2700 X 150 X 100 (LV ABC) CROSSARM 3300 X 150 X 100 (LV OPEN WIRE)	566345 167283	176221 H23020	1	142	CONDUCTOR 19/2.00	GALV. STEEL			H10485	AS REQ.			
			46 47	BRACE CROSSARM 740 X 38 X 38 X 5mm GAIN BLOCK - ALUMINIUM 100mm	46	99119 146274	3 2 or 3	144	GUY LOCK TO SUIT 19	9/2.00 GALV. STEEL	<u>tt</u> L		448 59063	1 or 2 1 or 2			
			48 49	LV ABC NEUTRAL CONNECTION PLATE BOLT & NUT HEX HEAD GALV M12 x 180mm	151570	149161 46888	1 2										
			50 51	BOLT & NUT HEX HEAD GALV M16 x 150mm BOLT EYE GALV M20 x 200mm	513653	175672 H37881	4 AS REQ.										G
			52 53	BOLT & NUT – M12, HEX, GALVANISED, LENGTH TO SUIT POLE NUT, EYE M20 GALV.	515466 513951	H38853	1 1 to 3										
EE NOTE 9			54	WASHER FLAT GALV M12 x32 x 2.71mm		177982	9 ог 10 1/										
EE NOTE 3			56	WASHER - CONICAL, M12, STAINLESS STEEL - VOLUTE		179601	4 or 5										
		NOTES			I	140500											
DETAIL D IG 228822		1. THIS DRAWING IS TO 2. CLEARANCE AROUND	BE REA MIDDLE	AD IN CONJUNCTION WITH NS122. E PHASE HV DROP OUT FUSE IS TO BE MAINTAINED BY INS	STALLIN	IG POLE ST	TEP ON OP	POSITE SIDE.									
		 70mm² COPPER CONE INSIDE THE POLE. AL 	DUCTOR: L EART	S SHALL BE USED FOR ALL EARTHING UNLESS OTHERWIS THING CABLES ARE TO BE SECURED TO THE POLE WITH SA	SE STAT ADDLES	ED. EARTH (ITEM 22) E	HING COND BEFORE EN	UCTORS FRO	1 THE TRANSFORM EARTHING CABLE	1ER TO THE EARTH HOLES.	I BAR AND FROM TH	E EARTH	I BAR TO	THE EART	H ELECTRODES S	HALL BE RUN	H
		 THE DISTANCE BETW TO ALLOW FOR SAFE THE SUPPORT CROSS 	/EEN TH E WORK SARM IS	IE HV FEEDER AND HV DROP-OUT FUSE CROSSARM MUST ING CLEARANCE TO HV. A HV SUPPORT CROSSARM IS REC S TO BE CONSTRUCTED AS SHOWN IRRESPECTIVE OF THE	BEAM QUIRED TYPEO	11NIMUM OF FOR ALL II OF HV MAIN	-1200mm (l NSTALLAT NS CABLE	JP IO A MAX TION WHERE T MIDWAY BET	IMUM OF 1500mm) THE DISTANCE BET WEEN THE HV EEF	WHERE HOT LINE C WEEN HV FEEDER . DFR AND HV DROP	LAMPS ARE USED. I AND HV DROP-OUT I -OUT FUSE CROSSA	HIS IS T FUSE CRI RM REFE	0 ACHIEVE OSSARM IS R TO DRA	: INCREAS 5 EQUAL 1 WINGS 22	ED HV FEEDER CL 10 OR GREATER 7 28823 & 228825 F	LEARANLE OR THAN 1500mm. OR DETAU S	
EE NOTE 8		5. HV DROPPER CABLES BE USED ON DROPPE	S TO BE	SUPPORTED AT THE TOP USING INSULATOR AND SUSPER	NSION (PLETE TI	CLAMP (ITE ERMINATIO	EMS 75 & ' DN OF CAB	76). THE BOT LE INTO LUG	TOM CABLES ARE TUNNEL. HEAVY DI	TO BE SECURED US UTY 16mm ² LUGS V	SING TWO 7.6mm WID WITHOUT HEATSHRIN	E CABLE IK ACCEP	TIES (ITEI PTABLE ON	M 66). HE N SURGE A	AVY DUTY 35mm	² LUGS MUST TO DRAWING	
		228824. 6. SURGE ARRESTER M	10UNTIN	NG BRACKETS ARE SUPPLIED ON EACH AUSGRID SPECIF	IED AND) APPROV	ED TRANS	FORMER. SU	RGE ARRESTERS A	ARE SUPPLIED AN	D FITTED DURING CO	ONSTRUC	TION OF	THE POLE	TRANSFORMER	SUBSTATION.	
		7. NO LV SERVICE CABL 8. SEGREGATED FARTH	LE TORO LES OR I	LUE ON ARRESTER IS 27Nm. TORQUE WRENCH MUST BE US COMMUNICATION CABLES SHALL BE INSTALLED THROUGH IN (ITEM 122 - REFER DRAWING 22///03) ONLY REQUIRED '	SED TO I HV DRO WHERE	ENSURE AI PPER CAB A SEGREG	RRESTER I BLES AND / ATED FAR	S NOT DAMA A MINIMUM 35 THING SYSTE	GED. Omm DISTANCE BE M IS INSTALLED	MAINTAINED BETW	VEEN LV AND HV.						
		9. DANGER SIGN TO BE 10. IF A LV UGOH IS REQ	BENT A	ROUND POLE BEFORE SECURING. IT IS TO BE INSTALLED TO THE REQUIREMENTS OF NS127.	DRILL SI	UITABLY S	SIZED PILO	T HOLES FOR	SELF DRILLING SC	REWS TO FIX CABI	LE COVERS AND SAD	DLES TO) THE POLI	E.			J
		11. COMMUNICATIONS CA COMMUNICATION CAE HOLES TO BE DRILLE	ABLES M BLE ALR	AUST BE INSTALLED ON THE CROSSARM, MOUNTING DIRE (EADY EXISTS: THERE ARE 2 OPTIONAL CROSSARM SIZES SITE - REFER TO DRAWING 228823 FOR DRILLING DETAILS	(ITEMS	N THE PU 131a & 131 RE GROUND	LE OR USH 1b) THAT C) CI FARAN	NG STANDOF IAN BE USED NCES ARE MA	F BRACKET IS NOT DEPENDING ON LOC INTAINED AS PER	I PERMITIED. COM CATION OF EXISTIN NS220 THE COMM	MUNICATION CRUSSA IG CABLE AND STAN UNICATIONS CATENA	ARM SHA DOFF TH Ary car	ALL UNLY AT IS REQ IF SHALL	BE INSTA UIRED. BC BF INSUI	TH CROSSARM S	J AREAS IF A IZES REQUIRE THER SIDE DE	
		THE POINT OF ATT TRANSFORMER SIDE	ACHMEN OF POL	T USING MINIMUM 0.6/1kV RATED INSULATION, UV ST. E IF 700mm WORKING CLEARANCE IS MAINTAINED TO 11kV	ABILISE TRANSI	D. THE CO	OMMUNICA USHINGS.	TIONS CABLE	SHALL BE INSTA	ALLED ON THE PR	OPERTY SIDE OF P	POLE. CO	MMUNICAT	TION CROS	SSARM MAY BE	MOUNTED ON	
		12. REFER TO NS158 FOR 13. INSULATION TO BE IN 14. SECURE TRANSFORM	REQUII	REMENTS REGARDING DISTRIBUTOR LABELLING AND SUBS ED OVER 'U' BOLTS , CUT 25mm 'V' IN CONDUIT UNDER FIBI KRI ATE TO POLE USING M12 BOLT JE NO KICK PLATE IS SU	REGLAS	NUMBER F S COVER T	PLATE. RE	FER TO NS14 ANY WATER. PINSTALL 80	B FOR REQUIREMEN	TS REGARDING MA	STER MAP POLE NU	MBER.					
		TO ALLOW HEAD OF 15. SECURE TRANSFORM	BOLT T	O BE RECESSED FORM TRANSFORMER TANK. TRANSFORMER MOUNTING BRACKET USING 12mm BOLTS (I	TEM 79)	THROUGH	HANGING	STRAPS. REF	ER TO DETAIL 'C'	AND DWG 566101 F	OR TRANSFORMER M		5 BRACKET	ASSEMB	LY AND INSTALL	ATION.	
ROAD (SEE NO	<u>WAY</u> ITE 19)	16. THE POLE SHALL BE 17. THE MDI MAY BE LOV 18. THE OPIENTATION OF	SET IN WERED 1 F THF P	CONCRETE FROM THE EDGE OF THE HOLE TO THE POLE AN TO ENSURE COMMUNICATION CROSSARM BRACES DO NOT I POLE SHALL BE ALIGNED WITH CORRECT BY PHASING BY	ND FROM MPEDE N CROSS	I THE POLE MDI MOUNT	E BUTT TO FING AND A T PERMITT	600mm BELC ACCESS. FD AT THE E	W FINAL GROUND I	LEVEL. THE CONCR	ETE SHALL BE WET I	MIXED AI	ND TAMPE	DEVERY	200mm DURING IN	STALLATION.	
RB		DIRECTION AS PER N 19. POLES ARE AVAILAE	S122. BLE NO	IN DRILLED OR PARTIALLY DRILLED BY THE MANUFACTU	RER. MA	NUFACTU	RER DRILL	ED POLES AF	E ONLY TO BE US	ED IF THE DESIGN	OF THE INSTALLATI	ON CAN	UTILISE TI	HE HOLES	SHOWN ON DRAY	wings 251876	
		and 251877. If hole	S DO NO	JT ALIGN A NON DRILLED POLE IS TO BE USED AS THE MAI	NUFACT	URER WILI	L NOT VAF	RY HOLE LOC	ATIONS TO SUIT IN	DIVIDUAL SITES.	1						
							REFERE	NCE DRAWI	NGS		-						
				POLE TRANSFOR	MER – 3 F	PHASE COMP	TITLE	DRILLING		DRAWING No 244220	-						
				POLE TRANSFOR	MER – 3 F	PHASE COMP	POSITE 14m x	24kN POLE MA	NUFACTURER DRILLED	251876	-						
				POLE TRANSFOR	MER – 3 F	PHASE - EAF	RTHING CONN	NECTION DETAIL	5	228822	-						L
				POLE TRANSFOR	MER - 3 F	PHASE - LV		IER AND LV AB	CONNECTIONS	228824	1						
				POLE TRANSFOR	MER - 3 F	PHASE - STE		NG DETAIL OPTI	DN	228826	4						
				3 PHASE TRANSF	FORMER P	POLE MOUNT	ING BRACKE	T MANUFACTUR	NG & ASSEMBLY	566101]						
								NETW	DRK STANDARD	SCALE DESIGNED	AS SHOWN P.JARVIS		STA	NDARD	CONSTRUC	TION	-
					~ • •			Au	sgrid	DRAWN CHECKED APPROVEN	P.JARVIS C.MABBUTT D.GRCEV	3 PHA	SE – 1 DISTF	1kV CO RIBUTIO	MPOSITE PO IN TRANSFO	DLE MOUNTED RMER	M
				LUNSTRUCTI	UN		ASSET ENGIN	IEERING, POLICY AN		DATE PROJECT	1.5.18 129021840				400kVA	NT	
							24 CAMPBELI	L STREET, SYDNEY		PROJTRAK NUMBER			AWING No	2447	19	SHEET AMD	1
	10			11 12			13			14	/ <i>`</i>	15	4		1	6	