



- NOTES :**
- THE FOLLOWING INFORMATION IS OBTAINED FROM THE PROJECT DESIGN DRAWINGS:
 - POLE LENGTH AND STRENGTH.
 - SPECIAL FOUNDATION REQUIREMENTS.
 - POLE EMBEDMENT DEPTH.
 - CONDUCTOR SIZE.
 - CROSSARM SIZE AND BRACE REQUIREMENTS.
 - STAY REQUIREMENTS.
 - DEVIATION ANGLE.
 - THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
 - ALL BOLTS AND INSULATOR PINS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
 - POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
 - NON-TENSION COMPRESSION SLEEVES TO BE USED WHEN REQUIRED TO JOIN CONDUCTORS.
 - THE SHACKLE STRAP IS TO BE FORMED TO SUIT THE CROSSARM AND INSULATOR.
 - IF THE CONDUCTOR DEVIATES AT THE INSULATOR, USE THE ANGLE TYPE CONDUCTOR TIE ARRANGEMENT. OTHERWISE, USE THE INTERMEDIATE TYPE CONDUCTOR TIE ARRANGEMENT AS SHOWN ON DRG: 514044.
 - COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERRED OPTION UNDER NORMAL CIRCUMSTANCES.
 - A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT CROSSARM. FOR NARROW FEEDER ALIGNMENTS, A SHORTER CROSSARM MAY BE CONSIDERED TO OVERCOME DESIGN AND SITE CONSTRAINTS.
 - ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732, 514373, 514374, 15233 & 237491 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
 - THE 690mm CROSSARM BRACES ARE TO BE USED ON A 2706mm, 2106mm, 2700mm, 2100mm & 2750mm CROSSARM. THE 490mm CROSSARM BRACES ARE TO BE USED ON A 2406mm & 2400mm CROSSARM.
 - POLE STEPS ARE TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NS128.
 - REFER TO DESIGNER SAFETY REPORT D22/200897 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.



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| 20 | STEP - POLE, SCREW-IN (SEE NOTE 12) | 250144 | 185198 | A/R |
| 19 | INSULATOR - LV, (LPLV PATTERN 'B') & PIN ARRANGEMENT | 513995 | | 4 |
| 18 | JOINT - NON TENSION, COMPRESSION (TO SUIT CONDUCTOR) (SEE NOTE 5) | 514053 | | 4 |
| 17 | TIE - CONDUCTOR, LOW VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 7) | 514044 | | 5m |
| 16 | BOLT & NUT - M16x130mm, HEX, GALVANISED | 515466 | 46979 | 8 |
| 15 | BRACKET - MOUNTING, SHACKLE, LV FLAT, GALVANISED (SEE NOTE 6) | 514379 | H17762 | 16 |
| 14 | INSULATOR - SHACKLE, REEL, TYPE SH.LV2 | 514407 | 75812 | 8 |
| 13 | DEADEND - PREFORMED, HELICAL (TO SUIT CONDUCTOR) | 514098 | | 8 |
| 12 | BLOCK - GAIN, ALUMINIUM, 125mm (USE WITH 2750mm CROSSARM) | | 146282 | 1 |
| | BLOCK - GAIN, ALUMINIUM, 100mm (USE WITH 2706mm, 2406mm, 2106mm, 2700mm, 2100mm & 2400mm CROSSARMS) | | 146274 | |
| 11 | WASHER - FLAT, M20, GALVANISED | 518081 | H39655 | 1 |
| 10 | WASHER - CONICAL, M20, GALVANISED | 518082 | H39655 | 1 |
| 9 | WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE) | 518081 | H39231 | 2 |
| 8 | BOLT & NUT - M20, HEX, GALVANISED (LENGTH TO SUIT POLE) | 515466 | | 1 |
| 7 | WASHER - CONICAL, M12, GALVANISED (USE WITH 2700mm, 2400mm & 2100mm CROSSARMS) | 518082 | H39639 | 2 |
| | WASHER - SPRING, M12, GALVANISED (USE WITH 2706mm, 2406mm, 2106mm & 2750mm CROSSARMS) | 518082 | H12047 | |
| 6 | WASHER - FLAT, M12, GALVANISED | 518081 | H17982 | 4 |
| | BOLT & NUT - M12x150mm, HEX, GALVANISED (USE WITH 2400mm & 2750mm CROSSARMS) | 515466 | 46847 | |
| | BOLT & NUT - M12x180mm, HEX, GALVANISED (USE WITH 2700mm & 2100mm CROSSARMS) | 515466 | 46888 | 2 |
| | BOLT & NUT - M12x130mm, HEX, GALVANISED (USE WITH 2706mm, 2406mm & 2106mm CROSSARMS) | 515466 | 46805 | |
| | CROSSARM - 2750x125x125mm, ITEM 1, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 237491 | 183933 | |
| | CROSSARM - 2400x125x100mm, TYPE LT3, HARDWOOD (SEE NOTES 8, 9 & 10) | 15233 | 71746 | |
| | CROSSARM - 2100x150x100mm, TYPE I, HARDWOOD (SEE NOTES 8, 9 & 10) | 514374 | H23745 | |
| | CROSSARM - 2700x150x100mm, TYPE E, HARDWOOD (SEE NOTES 8, 9 & 10) | 514373 | H23892 | 1 |
| | CROSSARM - 2106x102x102mm, TYPE 4, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 262732 | 186774 | |
| | CROSSARM - 2406x102x102mm, TYPE 5, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 262732 | 186775 | |
| | CROSSARM - 2706x102x102mm, TYPE 6, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 262732 | 186776 | |
| 3 | SCREW - COACH, M12 x 100mm, GALVANISED | | H40484 | 1 |
| 2 | BRACE - CROSSARM, FLAT, TYPE L, 490mm, GALVANISED (SEE NOTE 11) | 46 | 76745 | 2 |
| | BRACE - CROSSARM, FLAT, 690mm, GALVANISED (SEE NOTE 11) | 514385 | H17738 | |
| 1 | POLE - TIMBER (AS REQUIRED) | 513988 | | 1 |

| ITEM | DESCRIPTION | DRG. No | STOCK CODE | QTY |
|------|---|---------|------------|-----|
| 20 | STEP - POLE, SCREW-IN (SEE NOTE 12) | 250144 | 185198 | A/R |
| 19 | INSULATOR - LV, (LPLV PATTERN 'B') & PIN ARRANGEMENT | 513995 | | 4 |
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| | BLOCK - GAIN, ALUMINIUM, 100mm (USE WITH 2706mm, 2406mm, 2106mm, 2700mm, 2100mm & 2400mm CROSSARMS) | | 146274 | |
| 11 | WASHER - FLAT, M20, GALVANISED | 518081 | H39655 | 1 |
| 10 | WASHER - CONICAL, M20, GALVANISED | 518082 | H39655 | 1 |
| 9 | WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE) | 518081 | H39231 | 2 |
| 8 | BOLT & NUT - M20, HEX, GALVANISED (LENGTH TO SUIT POLE) | 515466 | | 1 |
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| | BOLT & NUT - M12x180mm, HEX, GALVANISED (USE WITH 2700mm & 2100mm CROSSARMS) | 515466 | 46888 | 2 |
| | BOLT & NUT - M12x130mm, HEX, GALVANISED (USE WITH 2706mm, 2406mm & 2106mm CROSSARMS) | 515466 | 46805 | |
| | CROSSARM - 2750x125x125mm, ITEM 1, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 237491 | 183933 | |
| | CROSSARM - 2400x125x100mm, TYPE LT3, HARDWOOD (SEE NOTES 8, 9 & 10) | 15233 | 71746 | |
| | CROSSARM - 2100x150x100mm, TYPE I, HARDWOOD (SEE NOTES 8, 9 & 10) | 514374 | H23745 | |
| | CROSSARM - 2700x150x100mm, TYPE E, HARDWOOD (SEE NOTES 8, 9 & 10) | 514373 | H23892 | 1 |
| | CROSSARM - 2106x102x102mm, TYPE 4, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 262732 | 186774 | |
| | CROSSARM - 2406x102x102mm, TYPE 5, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 262732 | 186775 | |
| | CROSSARM - 2706x102x102mm, TYPE 6, COMPOSITE FIBRE (SEE NOTES 8, 9 & 10) | 262732 | 186776 | |
| 3 | SCREW - COACH, M12 x 100mm, GALVANISED | | H40484 | 1 |
| 2 | BRACE - CROSSARM, FLAT, TYPE L, 490mm, GALVANISED (SEE NOTE 11) | 46 | 76745 | 2 |
| | BRACE - CROSSARM, FLAT, 690mm, GALVANISED (SEE NOTE 11) | 514385 | H17738 | |
| 1 | POLE - TIMBER (AS REQUIRED) | 513988 | | 1 |

ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. DO NOT SCALE.

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| CAD DRAWING DO NOT MANUALLY AMEND AMENDMENTS DWN: P.R. CHKD: P.J. APPD: G.F. DATE: 08/12/2023 NOTES & MATERIAL LIST AMENDED. ASSOCIATED DRAWING ADDED. 15 | COMPOSITE FIBRE CROSSARM MECHANICAL LOAD REQUIREMENTS 237491 2700mm CROSSARMS FOR LV, 11kV, 22kV AND 33kV CONSTRUCTION DETAILS 514373 COMPOSITE FIBRE CROSSARMS SPECIFICATION 262732 LV CONDUCTOR TIE & SUPPORT ARRANGEMENTS 514044 WOODEN CROSSARMS FOR 415V OVERHEAD MAINS 15233 WOODEN CROSSARMS FOR LV, 11kV & 33kV CONSTRUCTION DETAILS 514374 | NETWORK STANDARD 145 NEWCASTLE RD WALLSEND, NSW 2287 | SCALE 1:15 DESIGNED - DRAWN PETER SAUNDERS CHECKED - APPROVED ROBERT BREMELL DATE 19/04 PROJECT NUMBER STD PROJTRAK NUMBER - | STANDARD CONSTRUCTION LV THROUGH TERMINATION CONSTRUCTION 1-11 | SIZE A2 DRAWING No 513904 SHEET 1 AMD 15 |
| | ASSOCIATED DRAWINGS | | | | |
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