

ENGINEERING STANDARD

GE-CIC-ES-0067

G81-PART 5 : MATERIAL SPECIFICATION

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Author/Reviewer:	Electricity Networks Commercial Engineer	Andy Hall	June 2025
Approver:	Head of Electricity Asset Management	Steve Mockford	June 2025
Authoriser:	Electricity Networks Director	David Overman	June 2025

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06	Updates made to Appendix 1,2 and 3: Approved Manufacturers updated.

Full Document History is available at the end of this document

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FOREWORD

This document forms Appendix A to Energy Networks Association (ENA) Engineering Recommendation (EREC) G81 - Part 5: Materials Specification, " Framework **for new industrial and commercial underground connections**" on behalf of GTC and should be read in conjunction with that document.

Other documents, which must be read in conjunction with this appendix, are:

- GTC Housing Development Framework Appendices relating to Materials Specification, Installation Records and Cable Recording Techniques.
- G81 Part 4 Design and Planning (GE-CIC-ES-0066) – New Industrial and Commercial Underground Connections
- G81 Part 5 Material Specification (GE-CIC-ES-0067) – New Industrial and Commercial Underground Connections (This Document)
- G81 Part 3 & 6 Installation and Records (GE-CIC-ES-0068) – New Low Voltage Housing Development Installations & Industrial and Commercial Underground Connections
- Design Policy HV & LV (GE-DPR-ES-0119)

This document contains a summary of the information contained in GTC product specification

Please note that GTC is unable to provide copies of external documentation, standards and specifications referenced in this document, but copies may be obtained from the relevant issuing body (such as the British Standards Institution (BSI) or Energy Networks Association)

Appendix A of this document details assessed products by reference, description and supplier.

1. SCOPE

This appendix to ENA EREC G81 Part 5 covers the materials specification for new industrial and commercial connections to the electricity distribution network of GTC comprised of licenses Energy Network Company (ENC) and Independent Power Network Company (IPNL).

For the purpose of this document, where 'Electricity Networks Manager' is referenced, this covers any of the following;

- Electricity Networks Director
- Head of Electricity Asset Management
- Head of Electricity Operations
- Electricity Asset Manager

2. GENERAL

- 2.1 This document provides details of GTC's approved range of cables, plant, equipment and auxiliary items used to construct distribution assets for connection to GTC's distribution network. Only equipment approved by GTC and listed in this document shall be used to construct electricity networks, substations and services for adoption by GTC in its distribution networks.
- 2.2 For all new connections work, the approved installer (ICP – Independent Connection Provider) shall work in line with GTC G81 Standards.
- 2.3 Where GTC's requirements are not specified in this document, the approved installer shall liaise with the Engineer, to gain approval from GTC's Electricity Networks Manager for its suggested equipment, prior to purchasing the equipment.
- 2.4 This document will be updated on a regular basis when new equipment is approved by GTC's Electricity Networks Manager. Further details will also be added as requirements for further information on the range of equipment used is identified.

APPENDIX 1**LOW VOLTAGE EQUIPMENT INCLUDING UNDERGROUND CABLES, JOINTS, LINK BOXES, TERMINATIONS AND FUSES****Approved Manufacturers :-**

HV Cables – Including LS0H (Low Smoke Zero Halogen) – Prysmian UK, NKT (Denmark), Tratos (Italy), Telefonika (Poland), Cabelte (Portugal), Hellenic (Greece), Nexans (Greece) and Solidal (Portugal).

LV Cables – Including LS0H – Prysmian UK, NKT (Denmark), Hellenic (Greece) Tratos (Italy), Telefonika (Poland) and Nexans (Greece).

LV Service Cables – NKT (Denmark), Cabelte (Portugal), Tratos (Italy) and Telefonika (Poland).

Jointing Compound – Prysmian UK, Sicame / WT Henley (GTC Version / 2 Part Polyurethane)

Jointing Kits – Sicame / WT Henley and TE Connectivity

S.No	Description	Material Supplier
1	Branch Joint- 185mm ² (No Resin)	Utility Power Services / Wolesley / Jointing Technologies
2	Branch Joint - 300mm ² (No Resin)	
3	Mains Branch Joint 95mm ²	
4	Branch Joint, inc Resin - 95mm ² (No Resin)	
5	15 Way MSDB ST LH Incoming Mechanical Connector	
6	15 Way MSDB ST RH Incoming Mechanical Connector	
7	24 Way MSDB ST RH Incoming Mechanical Connector	
8	30 Way MSDB ST LH Incoming Mechanical Connector	
9	30 Way MSDB ST RH Incoming Mechanical Connector	
10	MSDB 1J 45 Way Double Door C/W 100A HSCO	
11	45 Way MSDB ST LH Incoming Mechanical Connector	
12	MSDB 2J 24 Way RH	
13	2 Way J Type 30 Way MSDB LH Incoming Mechanical Connector	
14	374LSF01 2 Bolt LS0H Cable Cleat	
15	Link Box Fuse Handle	
16	10-56FR Cable Cleat (Pack of 100)	
17	10-98FR Cable Cleat (Pack of 100)	
18	Cable Cleats for LS0H Cable (Pack of 100)	
19	300mm ² Waveform Cold Shrink Shorting End Caps	
20	95-185mm ² Waveform Cold Shrink Shorting End Caps	
21	95mm ² Triplex Cold Shrink Shorting End Caps	
22	185-300mm ² Pot End Kit	
23	185-300mm ² Pot End Kit	
24	95mm ² Pot End Kit	
25	95mm ² Pot End Kit	
26	Single Phase 100amp House Service Kit CNE	
27	Single Phase 100amp SNE Riser Kit (c/w Red Link)	

28	Meter Board Insulators	
29	Double Pole Street Light Kit – Route Of Main NPG/ENW	
30	Double Pole Street Light Kit - Looping Multi Column	
31	Street Lighting Cut Out Kit	

S.No	Description	Material Supplier
32	Brass S/O Neutral Lug 185/300WF 12mm Hole	Utility Power Services / Wolesley / Jointing Technologies
33	Brass S/O Neutral Lug 185/300WF 16mm Hole	
34	Brass S/O Neutral Lug 95WF 12mm Hole	
35	Brass S/O Neutral LUG 95WF 16mm Hole	
36	35mm ² CNE Service Cable - 100m Drum	
37	Single Phase 35mm ² SNE LS0H Service Cable - 100m Drum	
38	35mm ² Split Concentric Cable LS0H - IDNO ONLY	
39	3 x 185mm ² Waveform	
40	3 x 300mm ² Waveform	
41	3 x 35mm ² Al/Cu Plain Concentric LV Cable	
42	3 x 35mm ² Al/Cu Split Concentric LV Cable	
43	3 x 35mm ² 3 Core Split Concentric LV LS0H Cable	
44	3 x 95mm ² Waveform	
45	3 x 95mm ² Al/Cu (CNE) LS0H Waveform Cable	
46	4 x 95mm ² Waveform LS0H	
47	4 x 95mm ² Waveform	
48	4 x 185mm ² Waveform	
49	4 x 300mm ² Waveform	
50	Joint LV Main/Service Single Mod >185mm ²	
51	Joint LV Main/Service Double Mod >185 mm ²	
52	Joint LV Main/Service Single Mod >300 mm ²	
53	Joint LV Main/Service Double Mod >300 mm ²	
54	Service Branch Joint 35mm ² to 4mm ² SBJ2/EDF	
55	3 Phase Service Branch Joint	
56	LV main pot end >300mm (heat shrink)	
57	35mm ² Single Phase CNE Service Heat Shrink Pot End	
58	Heavy Duty Cut Out 200Amp	
59	Heavy Duty Cut Out 400Amp	
60	Heavy Duty Cut Out 600Amp	
61	2 Way Link Box TYCO Mark 2 Untailed	
62	2 Way Link Box 2 Way Tailed EDF	
63	4 Way Link Box 4 Way Tailed EDF	
64	Lucy Electric Rising Surface Box 10 W GF	
65	1 Phase Meter Board - Fire Proof – Unilin Antivlam EM4933FP, F5035	
66	3 Phase Meter Board - Fire Proof - Unilin Antivlam F6546	
67	2 Part Resin	
68	Service Joint 95-185mm ²	

69	300mm ² Mains Service Branch Joint	
70	95mm ² Mains Service Joint	
71	Single Phase Service To Service Branch Joint, inc Resin (2P) -35mm ²	
72	Single Phase Service To Service Straight Joint, inc Resin (2P) -35mm ²	

S.No	Description	Material Supplier
73	Branch Joint, inc Resin (2p) - 35mm ²	Utility Power Services / Wolesley / Jointing Technologies
74	Service Straight Joint, inc Resin (2P) -35mm ²	
75	Branch Joint, inc Resin (2p) - 185mm ²	
76	Branch Joint, inc Resin (2p) - 300mm ²	
77	Branch Joint, inc Resin (2p) - 95mm ²	
78	95mm ² Mains Straight Joint (2P)	
79	300mm ² 3-Core Waveform Branch Joint	
80	3-35mm ² Mains Branch Joint (With 2 Additional Connectors)	
81	35mm ² Single Phase CNE Service Pot End	
82	Stop End Kit, inc Resin (2P) - 95/185mm ²	
83	Service Joint, inc Resin (2P) - 300mm ²	
84	Service Joint, inc Resin (2P) - 95/185mm ²	
85	Straight Joint, inc Resin (2P) - 185mm ²	
86	Straight Joint, inc Resin (2P) - 300mm ²	
87	Straight Joint, inc Resin (2P) - 95mm ²	
88	Straight Joint, C/W Service Connector, inc Resin (2P) - 185mm ²	
89	35mm ² Single Phase CNE – Single Phase CNE Service	
90	4-35mm ² Three Phase CNE - Three Phase CNE Service	
91	35mm ² Single Phase CNE- Service Stop End Joint	
92	185mm ² to 300mm ² Waveform Stop End Kit	
93	3 Core 35mm ² Waveform Pot End	
94	95mm ² /185mm ² Cold Shrink End Caps	
95	Mains Straight Joint 300mm ²	
96	Straight Joint - 300mm ² (No Resin)	
97	Straight Joint, - 95mm ² (No Resin)	
98	35mm ² Single Phase CNE - Single Phase CNE Service	
99	Feeder Pillar Fuse 100 Amps 82mm Fixings	
100	J [Type] 100 Amp Fuse 92mm Centres	
101	Feeder Pillar Fuse 160 Amps 82mm Fixings	
102	Feeder Pillar Fuse 160 Amps 92mm Fixings	
103	Feeder Pillar Fuse 200 Amps 82mm Fixings	
104	Feeder Pillar Fuse 200 Amps 92mm Fixings	
105	Feeder Pillar Fuse 250 Amps 82mm Fixings	
106	Feeder Pillar Fuse 250 Amps 92mm Fixings	
107	House Service Fuse 25 Amps Small Diameter	

108	Feeder Pillar Fuse 315 Amps 82mm Fixings	
109	Feeder Pillar Fuse 315 Amps 92mm Fixings	
110	Feeder Pillar Fuse 355 Amps 92mm Fixings	
111	Feeder Pillar Fuse 400 Amps 82mm Fixings	Utility Power Services / Wolesley / Jointing Technologies
112	Feeder Pillar Fuse 400 Amps 92mm Fixings	
113	92mm Solid Links (Set of 3)	
114	J(Type) 500 Amp Fuse 92mm Centres	
115	120mm ² Green/Yellow Earth Cable	
116	120mm ² Bare Copper Earth Wire	
117	25mm ² AL/CU Plain Concentric LV Cable	
118	35mm ² AL/CU Plain Concentric LV Cable	
119	70mm ² Bare Copper Earth Wire Soft Drawn	
120	70mm ² Green/Yellow Earth Cable	
121	70mm ² to 120mm ² Waveform Stop End Kit	
122	Neutral Earth Connector - Brass	
123	Earth Terminal Block - 5 Way	
124	CT Chamber M/S 540 x 520 x 230mm	
125	Meter Box Key	
126	Lucy Electric CT Chamber C/W Integrated 200 Amp Heavy Duty Cut Out (CTCO)	
127	Lucy Electric CT Chamber C/W Integrated 400 Amp Heavy Duty Cut Out (CTCO)	
128	Meter Box Electric - M00022	
129	Meter Box Door	
130	Slimline Meter Box - Electric	
131	Electric Surface M-Box M06004	
132	Meter Box Hockey Stick - White	
133	Meter Box Hockey Stick cleat	
134	Electric Hockey Stick – Black	
135	16mm ² x1200mm ² CU Bond Earth Rod	
136	16mm ² Driving Stud	
137	16mm ² Earth Rod Coupling	
138	19mm ² x1200mm ² CU Bond Earth Rod	
139	19mm ² Earth Rod Coupling	
140	19mm ² (Bespoke) Driving Stud	
141	19mm ² U-Bolt M10 Lug Clamp	
142	Rod To Cable Clamp Type G 19mm Rod 6-70mm	
143	Rod To Tape Clamp 16mm Rod Max 26 x 12mm Tape	
144	Rod To Cable Clamp Type GUV 16mm ² Rod 150-300mm ²	
145	Rod To Cable Clamp Type GUV 16mm ² Rod 16-150mm ²	
146	Rod To Cable Clamp Type G 16mm ² Rod 6-70mm ²	
147	Lightweight Inspection Pit	
148	Concrete Inspection Pit	
149	Square Tape Clamp - 4 Way/Cross	
150	DC Clip - Plastic 25 x 3mm ² Tape	

S.No	Description	Material Supplier
151	Copper DC Clip 25 x 3mm ² Tape	Utility Power Services / Wolesley / Jointing Technologies
152	Single Way Earth Bar, Disconnecting Link	
153	6 Way Earth Bar	
154	6 Way Earth Bar with Single Disconnecting Link	
155	8 Way Earth Bar	
156	Braid Bonds (200mm Hole Centres)	
157	Braid Bonds (400mm Hole Centres)	
158	Insulator M10 c/w Studs and Nuts	
159	Bentonite 25Kg Sack	
160	Denso Tape 50mmx10m	
161	Self Locking Cleat 40x6mm Tape	
162	Self Locking Cleat 40x4mm Tape	
163	40 x 6mm Aluminium Tape (50m Coil) Per Meter	
164	25 x 6mm Bare Copper Tape (40m)	
165	40 x 4mm Bare Copper Tape (30m)	
166	16mm ² Bare Stranded Copper Cable (50m)	
167	70mm ² Bare Stranded Copper Cable (50m)	
168	70mm ² Green/Yellow Stranded Copper Cable (50m)	
169	120mm ² Bare Stranded Copper Cable (50m)	
170	120mm ² Green/Yellow Stranded Copper Cable (50m)	
171	25 x 4mm Bare Copper Tape (50m)	
172	16mm ² Green/Yellow Stranded Copper Cable (50m)	
173	95mm ² 3 Core LS0H Orange Cable	
174	1 x 95mm ² XLPEB 11kV WST 35H EQ Orange LS0H	
175	1 x 185mm ² XLPEB 11kV WST 35H EQ Orange LS0H	
176	1 x 300mm ² XLPEB 11kV WST 35H EQ Orange LS0H	
177	95mm ² Waveform Mains Straight Joint (5.4ltr)	
178	185mm ² Waveform Mains Straight Joint (8.6ltr)	
179	300mm ² Waveform Mains Straight Joint (10.6ltr)	
180	95mm ² Waveform Mains Branch Joint (6.7ltr)	
181	185mm ² Waveform Mains Branch Joint (14.4ltr)	
182	300mm ² Waveform Mains Branch Joint (19.5ltr)	
183	95-185mm ² Mains/Service Branch Single Phase (8ltr)	
184	185-300mm ² Mains/Service Branch Single Phase (10ltr)	
185	95-185mm ² Mains/Service Branch Three Phase (8ltr)	
186	185-300mm ² Mains/Service Branch Three Phase (10ltr)	
187	95mm ² Waveform Mains Pot End - Resin Filled (4ltr)	
188	185-300mm ² Waveform Mains Pot End - Resin Filled	
189	95mm ² Waveform Mains Pot End – Heatshrink	
190	185-300mm ² Waveform Mains Pot End – Heatshrink	

S.No	Description	Material Supplier
191	35mm ² CNE Straight Joint Single Phase	Utility Power Services / Wolesley / Jointing Technologies
192	35mm ² CNE Branch Joint Single Phase	
193	4-35mm ² CNE Straight Joint Three Phase	
194	4-35mm ² CNE Branch Joint Three Phase	
195	35mm ² CNE Heatshrink Single Phase Stop End	
196	4-35mm ² CNE Heatshrink Three Phase Stop End	
197	95mm ² Waveform Mains Straight Joint	
198	185mm ² Waveform Mains Straight Joint	
199	Lucy Electric MSDB 15 Way 2J Left Hand Double Door 3 Core Bottom Neutral	
200	TYCO/CE (56168) 4 Way CNE LV Underground Link Box	
201	CSD Systems Actifoam Firestop Fire Resistent Sealant	

APPENDIX 2

HIGH VOLTAGE EQUIPMENT INCLUDING UNDERGROUND CABLES, JOINTS & TERMINATIONS

BUUK accept the use of 11kV Aluminium sheathed cable in the UK Power Networks Areas, to UK Power Networks Standard where anticipated fault levels can be satisfied.

S.No	Description	Material Supplier
202	1 x 300mm ² (B) WB EQ CWS (35 SZ WB) MDPE Red 11kV	Utility Power Services / Wolesley / Jointing Technologies
203	3 x 1 x 300mm ² CU XLPE CU/W (70) MDPE 11kV	
204	3 x 1 x 95mm ² AI XLPE CU/W (35) MDPE 11kV	
205	3 x 1 x 185mm ² AI XLPE CU/W (70) MDPE 11kV	
206	3 x 1 x 300mm ² AI XLPE CU/W (70) MDPE 11kV	
207	3 x 1 x 300mm ² CU XLPE CU/W (25) MDPE 11kV	
208	3 x 1 x 70mm ² SAC XLPE CU/W (25) MDPE 11kV	
209	3 x 1 x 95mm ² SAC XLPE CU/W (25) MDPE 11kV	
210	1 x 95mm ² (B) WB EQ CWS (35 SZ WB) MDPE Red 11kV	
211	1 x 185mm ² (B) WB EQ CWS (35 SZ WB) MDPE Red 11kV	
212	3 x 1 x 95mm ² XLPE WST EW CU/W (35) WST MDPE 11kV	
213	3 x 1 x 95mm ² XLPE WST CU/W (35) WST MDPE 11kV	
214	3 x 1 x 185mm ² SAC XLPE CU/W (25) MDPE 11kV	
215	3 x 1 x 185mm ² XLPE WST EW CU/W (35) WST MDPE 11kV	
216	3 x 1 x 185mm ² XLPE WST CU/W (35) WST MDPE 11kV	
217	3 x 1 x 300mm ² SAC XLPE CU/W (25) MDPE 11kV	
218	3 x 1 x 300mm ² XLPE WST EW CU/W (35) WST MDPE 11kV	
219	3 x 1 x 300mm ² XLPE WST CU/W (35) WST MDPE 11kV	
220	3 x 95mm ² XLPE CU/W (70) + EQ Red MDPE 11kV	
221	3 x 185mm ² XLPE CU/W (95) + EQ Red MDPE 11kV	
222	3 x 300mm ² XLPE CU/W (95) + EQ Red MDPE 11kV	
223	3 x 1 x 95mm ² EPR CU/W (35) MDPE 11kV	
224	3 x 1 x 185mm ² EPR CU/W (35) MDPE 11kV	
225	3 x 1 x 300mm ² EPR CU/W (35) MDPE 11kV	
226	70-95mm ² AL Triplex Termination Kit	
227	185-300mm ² AL Triplex Termination Kit	
228	300mm ² CU Triplex Termination Kit	
229	Size Y 3 Core Gland (Top Hat) upto 300mm ²	
230	MV 3 Core Breakout 95-300mm ²	
231	70mm ² AL H/S Triplex Straight Joint – One Per Phase	
232	95-300mm ² AL H/S Triplex Straight Joint – One Per Phase	
233	300mm ² CU Triplex Straight Joint – One Per Phase	
234	70-185mm ² H/S Triplex Branch Joint - One Per Phase	

235	185-30mm ² H/S Triplex Branch Joint - One Per Phase	
236	300mm ² Main 95mm Branch H/S Triplex Branch Joint - One Per Phase	
237	TE Connectivity / Raychem T-Connector RST-X9 upto 1250Amp 42kV	

APPENDIX 3**DISTRIBUTION AND PRIMARY SUBSTATIONS - PLANT, EQUIPMENT & HOUSING**

S.No	Description	Approved Suppliers	Comments
236	Distribution Transformer 315/500/800/1000/1500*KVA 11000/433V Tier 2 ECO Losses ONAN Mineral Oil / MIDEI Fluid Filled *Subject to P2/8 Compliance	Schneider Electric Leeds - UK / Turkey	Approved Package Substation Assembly - Leeds
		Kyte Powertech Ireland	Approved Package Substation Assembly Via Lucy Electric - Thame
		Toshiba – India (Via Wilsons Power Solutions Leeds - UK)	Approved Package Substation Assembly WPS – Leeds and also Via Lucy Electric – Thame and Schneider Electric - Leeds
		EFACEC Energia Portugal	Approved Package Substation Assembly Via Lucy Electric - Thame
		Winder Power Leeds – UK	Approved Package Substation Assembly Via Schneider Electric - Leeds
		Green Transfo Turkey	Approved Package Substation Assembly Via Schneider Electric - Leeds
		Emirates Transformers and Switchgear Dubai	Approved Package Substation Assembly via Lucy Electric - Thame
237	Distribution Transformer 1000/1250*/1500*/1600*kVA 22000/433V Tier 2 ECO Losses ONAN Mineral Oil / MIDEI Fluid Filled *Subject to P2/8 Compliance	Schneider Electric Leeds - UK / Turkey	
		Toshiba – India (Via Wilsons Power Solutions Leeds - UK)	
		Winder Power Leeds – UK	
		Green Transfo Turkey	
		Brush Power Loughborough - UK	Approved MR VBO OLTC
		Schneider Electric Turkey	
		Hitachi Energy Turkey and Italy	>15/30MVA From Turkey - 20/40MVA From Italy
238	Power Transformer 33/11kV 7.5/15MVA CER/CMR 33/11kV 12/24MVA CER/CMR 33/11kV 15/30MVA CER/CMR 33/11kV 20/40MVA CER/CMR	Toshiba – India (Via Wilsons Power Solutions Leeds - UK)	
		Winder Power Leeds – UK	Approved MR VBO OLTC
		Green Transfo Turkey	Facility previously owned by Schneider Electric
239	36kV Indoor Extensible Gas Insulated Switchgear	Schneider Electric Regensburg - Germany	WS

			1250/2000/2500A Single/Double Busbar
		Siemens Frankfurt - Germany	NX+ 1250/2000A Single/Double Busbar
		ABB Ratingen - Germany	ZX1.2, ZX2.0 1250/2000/2500A Single/Double Busbar
240	24kV Indoor RMU Vacuum / Gas Insulated Switchgear	ABB Norway	Safering – SF6 630A 20kA
		Lucy Electric Thame	Sabre VRN24
		Eaton Holland	Xiria – Vacuum 630A 21kA
241	11kV Indoor Extensible Air Insulated Switchgear	Brush Power Blackwood – UK	Eclipse and Quantum 630/1250/2000A Single/Double Busbar
		Schneider Electric Leeds – UK	GENIE EVO 630/1250/2000A Single/Double Busbar
242	11kV Outdoor RMU Gas Insulated Switchgear (11kV Oil Filled Switchgear not accepted on GTC Network)	Schneider Electric Leeds – UK	RN2c/d 200/630A 21kA Top Entry Ring Switch Boxes not permitted for installation in GTC standard 2.8m x 2.8m GRP Enclosure RN2d to be fitted with Internal Arc Chimney RMR- ETO-FO37 as standard
		Lucy Electric Jebel Ali - Dubai	Sabre 200/630A 21kA Top Entry Ring Switch Boxes not permitted for installation in GTC standard 2.8m x 2.8m GRP Enclosure
243	11kV Outdoor Extensible Gas Insulated Switchgear	Schneider Electric Leeds – UK	Ringmaster Range CE2/CE6/SE6/RE2/RE6
		Lucy Electric Jebel Ali - Dubai	Sabre 200/630A 21kA
244	11kV Outdoor Metering/NVD Protection	Schneider Electric Leeds - UK	MU2/MU6
		Lucy Electric Jebel Ali - Dubai	AMU2/AMU4 (MIDEL/Oil Filled)
245	433V Low Voltage Transformer Mounted Take Off Cabinets	Schneider Electric Scarborough – UK	Shielded And SAIF Outgoing Ways Approved
		Lucy Electric Thame – UK	ACULOK Approved For Transformer Mounted Cabinets
246	433V Low Voltage Freestanding/Wall Mounted Fusepillars/Boards And Cabinets – ACBS/MCCBS	Schneider Electric Scarborough – UK	Shielded And SAIF Outgoing Ways Approved
247	433V Low Voltage Multi Service Distribution Boards (Any weight reductions to facilitate safe handling must be limited to mechanical components – doors / fusehandles / gland plates etc)	Lucy Electric Thame – UK	MSDB – 10/12/18/24/36/48 Outgoing Ways
		Schneider Electric Scarborough – UK	MODE – 12/18/24/36/48 Outgoing Ways
		BEMCO Glasgow – UK	Via Distribution Channel
		Ryefield Electric Cheshunt – UK	Via Distribution Channel

248	Combined Low Voltage CT Metering Chamber And Heavy Duty Cut Out (CTCO)	Lucy Electric Thame – UK	Via Utility Power Services
		Schneider Electric Scarborough – UK	Direct with Supplier or Via Distribution Channel
249	Heavy Duty Cut Out (HDCO)	Lucy Electric Thame – UK	Via Utility Power Services/ Wolesley
		W T Henley Rochester - UK Series 6 & 7	
250	Street Lighting Cut Out Kit	Lucy Electric Thame – UK	Via Utility Power Services
251	Street Lighting Cut Out	Lucy Electric Thame – UK	Via Utility Power Services
252	HV Protection Relays (Generic Identification of Approved Suppliers – Formal Approval to be obtained from Asset Management for specific equipment type prior to installation on GTC Network)	Schneider Electric Leeds – UK	Micom VIP300 (11kV RMU)
		GE Grid Solutions Boulogne - France	Micom Agile
		Siemens Berlin - Germany	Argus 196 Siprotec4
		Fanox Derio – Spain	Fanox SIA-C
		Nortech Evesham - UK	NX44 EFPI
253	Low Voltage ACB/MCCB Protection Devices	Schneider Electric Scarborough – UK	Micrologic 2.0 (MCCB) Micrologic 5.0 (ACB) Micrologic 6.0 (ACB REF)
		Terasaki Electric Company Osaka – Japan	Tembrake2 – MCCB Tempower2 – ACB
254	Low Voltage Power Meters/MDI	Schneider Electric Scarborough – UK	PM5110
		Rayleigh Instruments Chelmsford – UK	Nemo 72b
255	GRP Housing with Locking Shroud To GTC/Nominated DNO Specification	Morgan Marine Llandybie – UK	GTC Substation Specification GTC-E-SS-0002
		Envico Engineering Swansea – UK	GTC Substation Specification GTC-E-SS-0002
		Kingsley Plastics Winkleigh – UK	GTC Substation Specification GTC-E-SS-0002
		NPS Group Bradford - UK	GTC Substation Specification GTC-E-SS-0002
256	Housing Doors (with lock shroud)/ Vents	Bradbury Group Scunthorpe- UK	Metal Security Doors/Vents
		Sunray Ashford – UK	Metal Security Doors/Vents
		TS Designs High Wycombe – UK	Metal Security Doors/Vents
		Wolesley Chesterfield - UK	Metal Security Doors/Vents
257	GRP Trench covers for distribution substations	Wolesley Chesterfield – UK	
		Sunray Ashford – UK	
258	Substation Floodgates	JT Atkinson Nationwide - UK	
		Floodgate Limited Carmarthen – Wales	
259	Duct Knockouts	Roxtec Ltd Bury – UK	

260	Duct Seals	Roxtec Ltd Bury – UK	Other alternative only via approval from Asset Management
		Filoform UK Reading - UK	
		Hauff-Technik - UK Harmaringen - Germany	
		CSD Duct Seals Beele Engineering Beunkdijk Netherlands	
261	11kV Distribution Transformer Package Substation Assembly	Schneider Electric Leeds - UK	Approved to assemble Package Substations utilising Wilson Power Solutions (Toshiba), Winder Power, Green Transfo and Schneider Electric Distribution Transformers
		Lucy Electric Thame – UK	Approved to assemble Package Substations utilising Wilson Power Solutions (Toshiba), Kyte Powertech and Efacec Distribution Transformers
		Bowers Electrical Leeds – UK	Approved to assemble Package Substations utilising Wilson Power Solutions (Toshiba), Kyte Powertech and Efacec Distribution Transformers
		Wilson Power Solutions Leeds - UK	Approved to assemble Package Substations utilising Wilson Power Solutions (Toshiba- India) Distribution Transformers
		Mekufa Ltd Turkey	11kV RMU Bushing Assembly accepted on GTC Network Transformers
262	HV Monoblock	Kaizan Switchgear Products India	11kV RMU Bushing Assembly accepted on GTC Network Transformers
263	PreCast Concrete Plinths 11kV Distribution Substations	Banagher Precast Concrete Ltd Norfolk – UK	GTC Derivative subject to Asset Management Approval

3. DOCUMENT HISTORY

Revision Number	Date	Reasons For Amendment
01	November 2014	Issued.
01	May 2018	Document reviewed, no changes required so revision number retained.
02	April 2022	Sec 1 Scope updated. Appendix 1 - Approved Manufacturers Updated and Part Numbers removed. Appendix 2 - Reference to 11kV Aluminium Sheathed Cable added and Part Numbers removed. Appendix 3 - Approved Manufacturers updated.
03	July 2023	Appendix 1 Approved Manufacturers updated. Appendix 3 Approved Manufacturers updated.
04	July 2024	Updates made to Appendix 3: Approved Manufacturers updated.
05	February 2025	Updates made to Appendix 3: Approved Manufacturers updated.
06	June 2025	Updates made to Appendix 1,2 and 3: Approved Manufacturers updated.