



**GENERAL NOTES:**

- DO NOT SCALE FROM THIS DRAWING. NO VARIATION TO THE STATED DIMENSIONS OR MATERIALS SPECIFIED WILL BE PERMITTED WITHOUT PRIOR WRITTEN CONSENT FROM UK POWER NETWORKS.
- ALL DIMENSIONS ARE IN MILLIMETRES.
- THE RUNNING OF HEATING, GAS, TELECOMS, WATER AND OTHER SERVICES THROUGH OR UNDER THE SUBSTATION AREA IS NOT PERMITTED.
- WORKMANSHIP AND MATERIALS TO CONFORM TO THE LATEST EDITION OF THE RELEVANT CODES OF PRACTICE OR BRITISH STANDARD AND EUROCODES.
- THIS DRAWING IS NOT 'FOR CONSTRUCTION'. DESIGNER TO ISSUE SITE SPECIFIC DRAWINGS FOR UK POWER NETWORKS ACCEPTANCE.
- LOCATION OF THE SITE SHALL BE OVERLAID ON THE ORDNANCE SURVEY MAP AND ADDED ONTO THE PROJECT DRAWING TO BE ISSUED 'FOR CONSTRUCTION'. FOR LOCATION OF SITE REFER TO DRAWING NO. TBC.

**PLANNING, LOCATION AND POSITION**

- POSITION AND ORIENTATION OF THE SUBSTATION SHALL BE AGREED WITH UK POWER NETWORKS PRIOR TO THE COMMENCEMENT OF ANY BUILDING WORKS ON SITE. REFER TO DRAWING NO. TBC.
- SUBSTATIONS SHALL BE LOCATED ADJACENT TO A PUBLIC HIGHWAY OR REACHED BY A PRIVATE DEDICATED ACCESS WAY WITH FULL CONTROL AND ASSOCIATED LEGAL RIGHTS.
- THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL PLANNING CONSENTS AND BUILDING REGULATION APPROVALS.
- UNIMPEDDED ACCESS FOR UK POWER NETWORKS PERSONNEL IS REQUIRED AT ALL TIMES, 365 DAYS OF THE YEAR (24/7). ANY DOORS OR GATES ON THE ACCESS ROUTE SHALL BE LOCKED WITH THE STANDARD UK POWER NETWORKS LOCKING SUITE.
- ACCESS VIA 24 HOUR SECURITY IS UNACCEPTABLE.
- PROPOSED SOFT LANDSCAPING ADJACENT TO THE SUBSTATION (E.G. PLANTING SCHEMES) SHALL ALLOW FOR FUTURE PLANT GROWTH WITHOUT COMPROMISING ACCESS OR VENTILATION THROUGH DOORS OR LOUVRES.

**FOUNDATIONS AND REINFORCED CONCRETE**

- FOUNDATION TO SUSTAIN WEIGHT OF PLANT IN ANY POSITION WITH REINFORCEMENT TO SUIT SITE CONDITIONS (TO STRUCTURAL ENGINEERS REQUIREMENT AND DETAIL). ASSUME 50kN/m<sup>2</sup> INCREASE IN GROUND PRESSURE AT FORMATION LEVEL FOR PROJECT PLANNING PURPOSES.
- LOCAL SOFT SPOTS SHALL BE EXCAVATED AND BROUGHT UP TO FOUNDATION FORMATION LEVEL WITH A DESIGNATED GEN1 MIX TO BS 8500-2.
- GROUND WORK FOR CABLE ENTRY SHALL BE FULLY EXCAVATED BY DEVELOPER.
- STRUCTURAL CONCRETE TO BE POURED ON 50mm GEN1 MIX CONCRETE BLINDING ON 1200 GAUGE DPM, ON SAND BLINDING, ON WELL COMPACTED DTp1 TYPE MATERIAL.
- SULPHATE RESISTANCE CEMENT COMBINATION TO BS EN197-1:2011 UNLESS OTHERWISE SPECIFIED.
- REINFORCING BARS TO BE ELECTRICALLY CONTINUOUS. REINFORCEMENT DETAILS SHOWN ARE INDICATIVE ONLY. STRUCTURAL ENGINEER TO PRODUCE BAR BENDING SCHEDULE.
- ALL REINFORCEMENT TO HAVE A 50mm MINIMUM COVER TO PROVIDE FOUR-HOUR FIRE RESISTANCE.
- RIBBED BAR REINFORCING TO BS 4449:2005, STRENGTH GRADE B500B. FABRIC REINFORCEMENT TO BS 4483:2005.
- ALL EXTERNAL EDGES ABOVE GROUND LEVEL TO HAVE 25x25mm CHAMFERS.
- TOP 150mm OF ALL CONCRETE WORKS TO BE SHUTTERED TO PROVIDE A FAIR FACE FINISH. TOP OF ALL CONCRETE WORKS TO BE FINISHED SMOOTH AND LEVEL WITHIN +/-2mm OVER 2000mm.

**DUCTS**

- 125mm INTERNAL DIAMETER TWIN WALLED HIGH DENSITY POLYETHYLENE DUCTING TO BS EN 122-24 OR BS EN 61386-2010 (E.G. RIGIDUC OR SIMILAR), LAID FLAT AND LEVEL.
- THE ENDS OF THE DUCTS SHALL BE VISIBLE DURING FINAL INSPECTION BY UK POWER NETWORKS.

**INFILL TO AREA AROUND CABLES**

- BACKFILL WITH BUILDERS SAND TO FINISH 500mm FROM TOP OF GRATING.
- WHERE THE DEVELOPER BUILDS THE PLINTH, IT IS THEIR RESPONSIBILITY TO BACKFILL THE VOID AROUND THE CABLES UNDER THE UK POWER NETWORKS SUPERVISION.

**GRP ENCLOSURE**

- TOTAL WEIGHT OF GRP ENCLOSURE IS 600kg
- THREE WAY LOCKING DEVICE WITH FREE ISSUED UK POWER NETWORKS PADLOCK.
- KEEP 1000mm MINIMUM CLEARANCE ABOVE ENCLOSURE FOR PRESSURE RELIEF.
- MAXIMUM LOAD ON ROOF TO BE 25kN/m<sup>2</sup>
- LOUVERED VENTS SHALL NOT BE OBSTRUCTED, A MINIMUM CLEAR AREA OF 500mm IS REQUIRED AROUND THE ENCLOSURE.
- STANDARD COLOURS ARE MID BROWN 08-B-25 OR DARK GREEN 14-C-39 TO BS4800.

**GRP GRATINGS AND SUPPORTS**

- 38mm DEEP MOULDED GRP GRATINGS, OPEN TYPE WITH GRITTED SURFACE, GREEN.
- GRATINGS MUST BE FLUSH WITH TOP OF FOUNDATION AND SECURELY SUPPORTED. GRATINGS SHALL BE SEATED LEVEL WITH NO NOTICEABLE ROCKING OR SLIDING AND TO BE LEFT IN POSITION.
- CUT OFF OPENINGS FOR CABLE PENETRATIONS ENSURING THE GRATINGS CAN BE REMOVED WITH CABLES IN-SITU WHILE REMAINING STABLE.
- STEELWORK FOR GRP GRATING SUPPORTS SHALL BE GALVANISED.

**ASSOCIATED DRAWINGS:**

- 410637-1002 - GRP SMALL POWER & LIGHTING
- 410637-1003 - GRP ENCLOSURE LAYOUT LOCATION PLAN
- 410637-5001 - EARTHING LAYOUT

REV	DATE	DESCRIPTION	DRN	CHK	APP
B	31.05.18	DUCT ARRANGEMENT UPDATED AS PER CABLE ROUTE	H.M.	A.D.	S.S.
A	02.05.18	FOR APPROVAL	H.M.	A.D.	S.S.

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INFRASTRUCTURE SERVICES

TITLE  
**GRP ENCLOSURE AND PLINTH DESIGN FOR METERED RMU**

PROJECT NAME  
**GATE HOUSE 11kV DAGENHAM DATA CENTRE**

CUSTOMER  
**FREEDOM POWER SOLUTIONS**

CUSTOMER DRAWING NUMBER  
**410637-1001**

STATUS  
**FOR APPROVAL**

DRAWING NUMBER  
**410637-1001**

SCALE  
**NTS**

SIZE  
**A1**

REVISION  
**B**