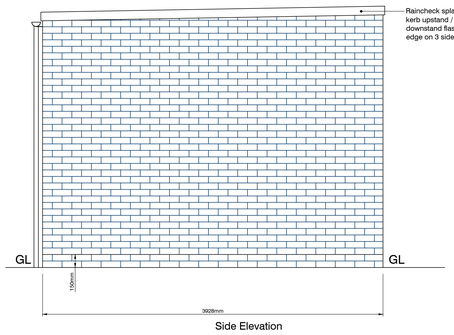
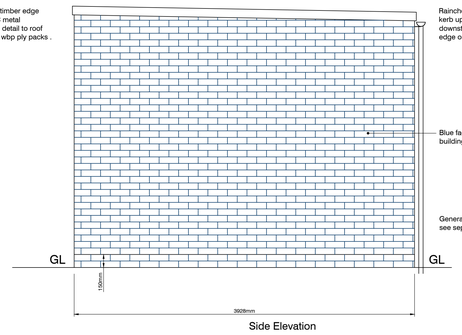
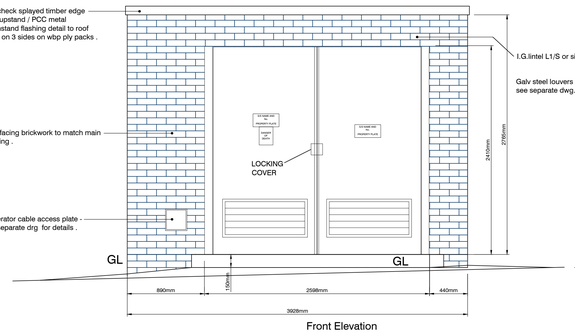


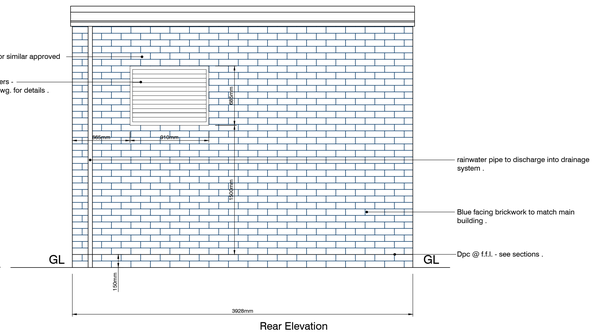
Side Elevation



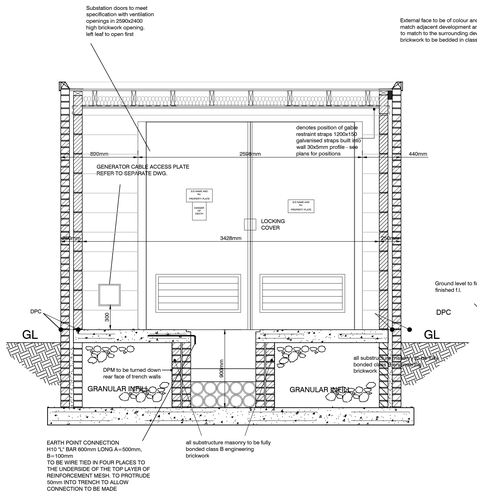
Side Elevation



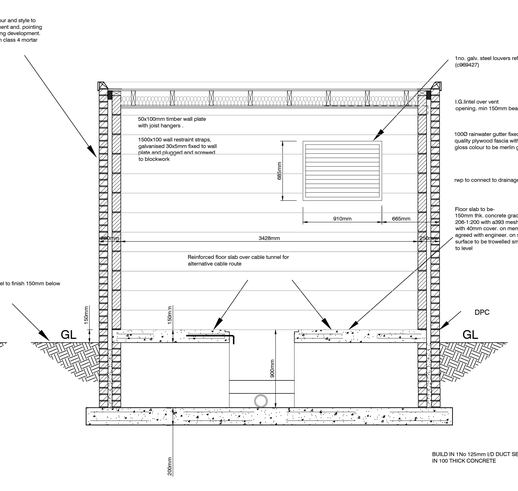
Front Elevation



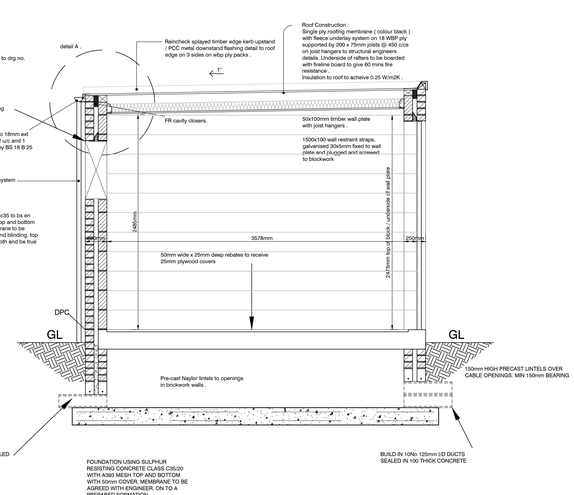
Rear Elevation



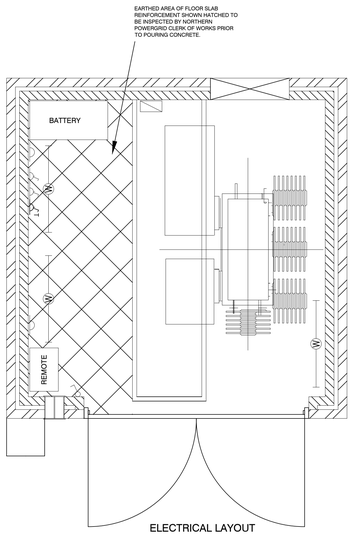
SECTION A-A
SECTIONAL ELEVATION
(VIEWED FROM OUTSIDE)



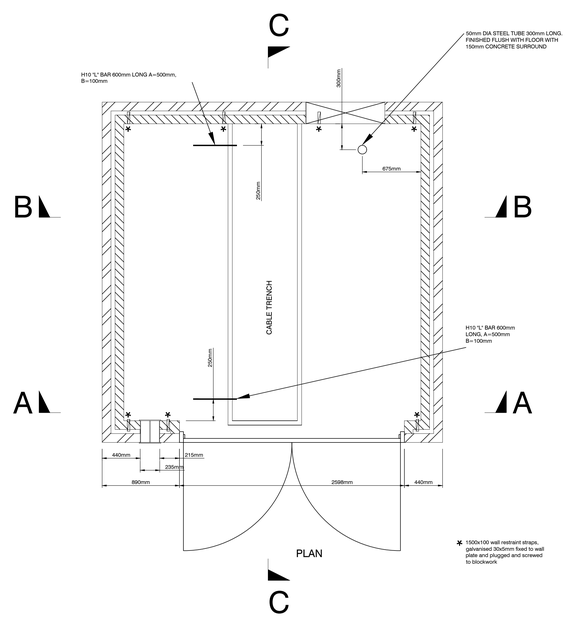
SECTION B-B



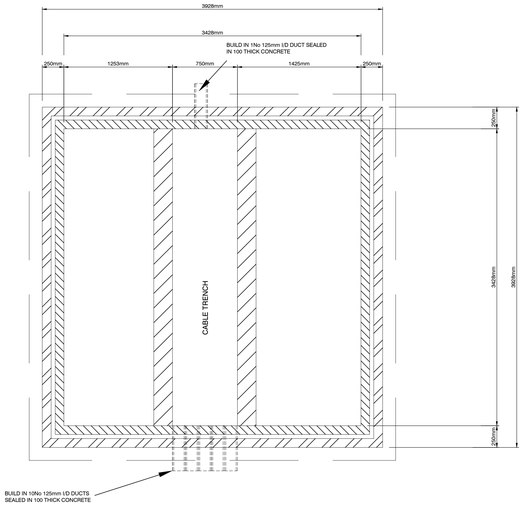
SECTION C-C



ELECTRICAL LAYOUT



PLAN



FOUNDATION PLAN

LIGHT SWITCH
SWITCHED SOCKET OUTLET
SWITCHED SOCKET OUTLET (TEST)
UNSWITCHED SPUR
CONSUMER UNIT WITH MCB's
FLUORESCENT TUBES IN IP56 FITTINGS (WALL MOUNTED)
TUBULAR HEATERS BEHIND PLASTIC COATED COVER (THERMOSTATICALLY CONTROLLED TO MAINTAIN A MIN. TEMPERATURE OF 5 °C)

ALL FITTING/CONDUIT TO BE PVC

FOR DETAILED INFORMATION SEE TECHNICAL SPECIFICATION NPS/006/001

Drawing to be read inconjunction with JPG structural details

Northern Powergrid drawings
C969423 - Standard steel door details (use door types A & D)
C970643 - Earth point connection details

FACING BRICKWORK TO BE SMOOTH BLUE FACING BRICKWORK WITH TILCON y12 COLOURED MORTAR ALL TO MATCH UNIT A BUILDING.

FLOOR:

1. Foundations to be designed for a maximum weight of transformer of 40kN and a minimum ground bearing pressure of 80kN/m²
2. The foundations shown are for a substation built on natural ground, if ground is unsuitable the foundations are to be adjusted to structural engineers instructions.
3. Floor slab shall be designed to carry a minimum load of 7.5kN/m². Floor to be level, steel float finish concrete, and sealed with approved concrete sealer or concrete paint.
4. Earthed area of floor slab reinforcement shown hatched (on electrical layout) to be inspected by Northern Powergrid clerk of works prior to pouring concrete.
5. Trench covers to be 25mm exterior quality WBP ply, maximum width 1200mm, each cover to have 2 No. 35mm diameter finger holes, covers to be painted two coats silver gloss paint both sides and all edges
6. Floor to be cast to front face of door opening, providing solid threshold. External level to be 150mm below finished floor level, allow unrestricted access for gear, and have a level landing area.
7. External paving and site finishes shall be provided as agreed with Northern Powergrid representative on site. As a minimum this shall consist of paving to full width of substation doors x 1200mm deep, with paving linking nearest highway path

ROOF:

8. Substation construction to provide 0.25 W/m² °C to roof.
9. Ceiling height to be minimum 2400mm, maximum 2800mm, and to give one hour fire protection. Ceiling to be concrete, plasterboard, fireboard or similar on suitable timber framework where required
10. Roof to be non fragile, waterproof membrane to have minimum life expectancy of 15 years Timber roofs to have 18mm minimum ply decking. Pitched tile or slate roofs to have 18mm ply sarking to prevent access, with counter battens and sarking felt over ply. tile or slate roofs to be underdrawn with 12mm ply to prevent access. On sloping or tiered sites, measures shall be incorporated to prevent access on to roof.
11. All roofs to be secured to walls via proprietary fixings or straps (explosion relief devices not acceptable) to be designed to BS6399 part 3. Pitched roofs shall have gable restraint straps fixed to roof framework.

BRICKWORK:

12. Masonry below ground level to be 7N/mm² dense concrete block or brick.
13. Walls to be 250mm cavity walls with blockwork or brick inner leaf. Internal walls minimum 100mm thick 7N concrete block or brickwork. Leafs to be tied together with stainless steel double triangle wall ties to BS1243 at 450mm centres vertical and 900mm centers horizontal.
14. 215mm trench walls to be fair faced and flush pointed dense concrete block or brick.

DOORS:

15. Doors must be to Northern Powergrid specification. Each substation site will be given a security rating by Northern Powergrid, standard, enhanced or high, the minimum door specification shall match or exceed this site specific security rating. Door details must be submitted for approval prior to placing an order with the supplier.
16. Doors to include ventilation where required via steel door louvres to Northern Powergrid specification and approval.
17. Door reveals & lintel soffits to be closed, closure to provide minimum 1hour fire protection.

Substations attached to or enclosed within other buildings to have minimum one hour fire compartmentation. Irrespective of other requirements imposed by L.A. fire officer.

Trenches and cable routes linked to customer's accommodation to be closed off after cable installation. Closure to prevent physical access into substation and provide one hour fire protection.

No structural steel within substation to be exposed. Steel doors shall be fixed to masonry and not to steel structural frame of building.

The position of the louvred ventilators should be such that they do not create a customer noise complaint.

Care is to be taken to ensure that access to cable openings is not impaired.

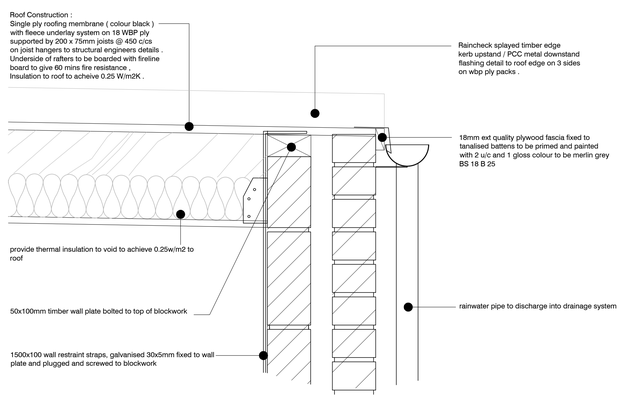
No Gas, Sanitary, Water or other Services to run through or under the substation.

REFERENCE DRAWINGS :

C969423 - Standard Steel Door Details (use Door Type B)
C969426 - Door Louvre Details
C969427 - Wall Louvre Details
C969998 - Generator Cable Access Detail
C970643 - Earth Point Connection Details

REFERENCE DOCUMENTS :

NPS/006/002 - Technical Specification for Distribution Substation Enclosures.
IMP/003/001 - Code of Practice for the Construction and Building Design of Ground Mounted Secondary Substations.
NPS/006/001 - Technical Specification for the Construction of Ground Mounted Secondary Substations.



DETAIL A 1:5 SCALE

Unit A - Sub-Station

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Notes

INTERNAL CUBIC CAPACITY - 28.4m ³

CONFIGURATION OF CABLE TUNNELS AND DUCTS TO BE AGREED WITH ELECTRICAL ENGINEER

VENTILATION TO BE DESIGNED BY CUSTOMER TO MEET NORTHERN POWERGRID SPECIFICATION

MAX ROOM TEMP 30 °C
MAX TRANSFORMER HEAT OUTPUT 12kW

Revisions

Rev	Date	Description

BUILDING MANAGEMENT SERVICES LTD

Huddersfield Road
Elland, West Yorkshire
HX5 9BW
TELEPHONE : ELLAND (01422) 371616
FAX No : (01422) 376717
email : mail@bmselland.com

Building Management Services

Client

Commercial Development Projects Ltd

Project

Industrial Development
Capitol Park, Capitol Close,
Barnsley.

Sheet

Sub-Station details - Unit A.

Drawn	Date
DCH	April 17

Scale 1:25 & 1:5 @ A0.

Status Planning

Drawing No. M3016-25

Revision