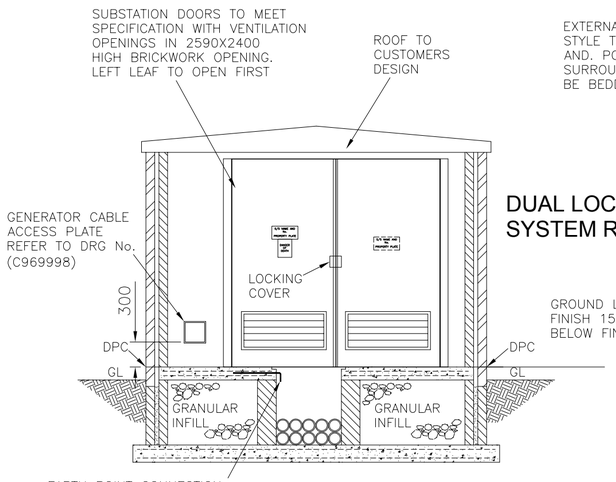
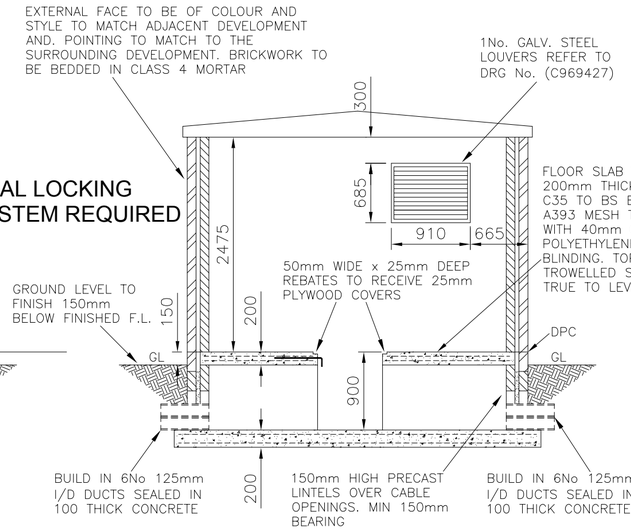
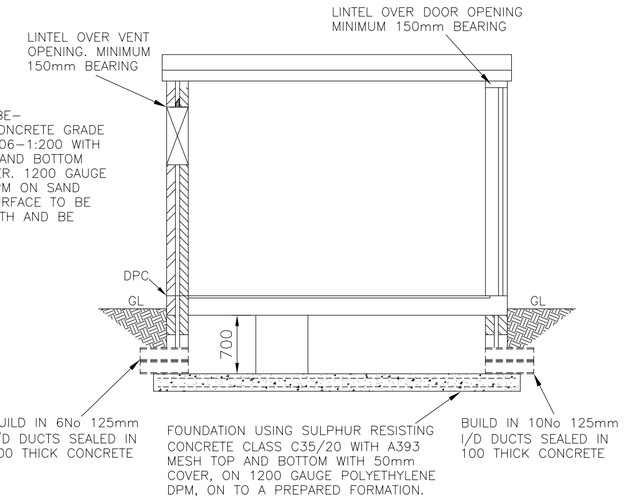


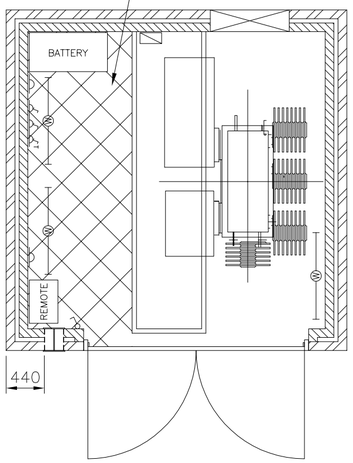
SECTION A–A
SECTIONAL ELEVATION
(VIEWED FROM OUTSIDE)
SCALE 1:50



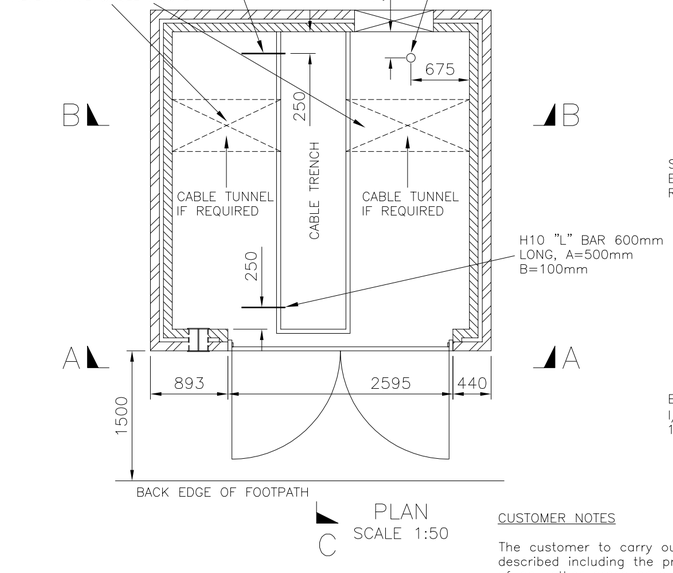
SECTION B–B
SCALE 1:50



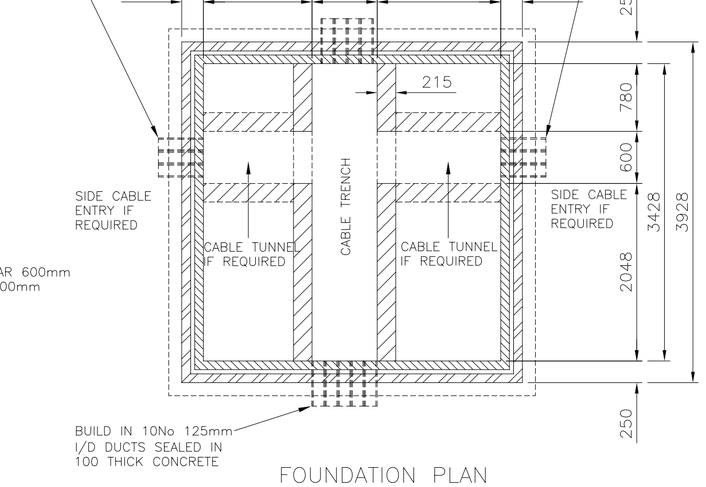
SECTION C–C
SCALE 1:50



ELECTRICAL LAYOUT
SCALE 1:50



C PLAN
SCALE 1:50



FOUNDATION PLAN
SCALE 1:50

FOR INTERNAL POWER AND LIGHTING SPECIFICATIONS SEE DRAWING C1010063 Rev C

CONFIGURATION OF CABLE TUNNELS AND DUCTS TO BE AGREED WITH ELECTRICAL ENGINEER / FPS CoW BEFORE FOUNDATIONS ARE BUILT.

VENTILATION TO BE DESIGNED BY CUSTOMER TO MEET NORTHERN POWERGRID SPECIFICATION

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

INTERNAL CUBIC CAPACITY – 28.4m³

CUSTOMER NOTES

The customer to carry out all necessary lighting and heating installation and building work as described including the provision of the LV supply. The substation shall be wired independently of any other areas or customers accommodation.

Northern Powergrid will not install any equipment until the accommodation is deemed fit for purpose.Customer service will not be made live until completion certificate is issued.

Customer or their agent to obtain all necessary Planning and Building approvals before construction work commences.

This drawing is intended to indicate the minimum requirements for the installation of Northern Powergrid apparatus and is not in any way intended to describe the building to architectural, structural or other requirements.

The customer shall provide full construction drawings minimum 15 days prior to commencement of works, to allow Northern Powergrid to check for compliance with their requirements.

Substation to be designed in accordance with Northern Powergrid flood mitigation policy.

Northern Powergrid Project Engineer to be notified of commencement of site works to enable site inspections to be carried out during construction.

Substation doors to be set back a minimum of 1500mm from back edge of footpath. Any proposed reduction in this clearance to be approved by Northern Powergrid following submission of site specific risk assessment and operational method statement.

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 7.5kNm². Floor to be level, steel float finish concrete, and sealed with approved concrete sealer or concrete paint before equipment installation.
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. 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.

Substation doors to be set back a minimum of 1500mm from back edge of footpath. Any proposed reduction in this clearance to be approved by Northern Powergrid following submission of site specific risk assessment and operational method statement

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 :

C969426 – Door Louvre Details
C969427 – Wall Louvre Details
C969428 – Roof Details (GRP/STEEL)
C969998 – Generator Cable Access Detail
C978643 – Earth Point Connection Details

C1010063 Rev C – Internal Power & Lighting for 315 – 1000kVA Slide in UDE Substation

NORTHERN POWERGRID		Lloyds Court, 78 Grey Street, Newcastle Upon Tyne, NE1 6AF	
Manufacturer Details		315 – 1000kVA SLIDE IN UDE IN MASONRY ENCLOSURE	
Sheet No. 1	Scale AS SHOWN		
Prepared By TM		Document Details STANDARD DISTRIBUTION SUBSTATION DRAWING	
Revised	Grid Reference	Ref No. C993717	Historic Drawing No.
Date Issued 17.05.16	Checked By JJ	Revision B	Notes