



**Concrete**  
General  
The concrete shall be in accordance with the specification and attain the relevant cub crushing strength at 28 days.  
Foundations (Concrete 40N/mm<sup>2</sup> 28-Day Cube Strength)  
Foundations are to be set on undisturbed inorganic strata that provide the required minimum design safe ground bearing capacity. Minimum bearing capacity to be 75kN/m<sup>2</sup>.

Floor (Concrete 28-Day Cube Strength)  
Floors of substations housing indoor switchgear shall have a visqueen damp proof membrane installed where graded stone infill is used.  
A flat, level and smooth floor surface is essential for installation of plant. Tolerances to finished level expressed as a maximum permissible deviation beneath a straight edge with feet placed anywhere on the floor shall not exceed 1mm in 1m or 3mm in 3m. Floors to be cured, prepared & painted with 2 No. Coats of non-slip floor paint on completion.

**Brickwork**  
**General**  
All brickwork below D.P.C. to be H.D. category 1 min. 7SN/mm1 mean compressive strength and max 7% M.A. and durability designation F2 S2 (Ex. Facing Brickwork Class B) in English bond except for exposed faces.  
External facing brickwork to be H.D. category 1 min. 30N/mm2 mean compressive strength and max 12% M.A. and durability designation FI S1 or better.  
Internal facing brickwork to fair faced smooth textured solid concrete bricks, except for match external facing bricks and with a mean compressive strength of not less than 20N/mm2.  
Class II mortar.

Walls shall be 215mm English garden wall bond or Collar jointed stretcher bond.  
Leaves of collar jointed double stretcher walls to be tied together by means of type 1 or type 2 stainless steel ties laid in every fourth course at 375mm centres and set back 38mm from outer face, ties are to be staggered.

**Doors**  
Details of proposed doors shall be submitted to SPEN for comment, before work commences. Proprietary GRP faced aluminium or steel security doors are the preferred option, unless stated otherwise.  
An alternative option for hardwood doors (see Drg SP4000543 for details) or GRP doors is also available.

**Cable Trench & Slots/Ramp**  
On completion of cabling, cable trench to be filled with dry sand and skimmed with minimum 50mm depth of sand/cement screed over a visqueen membrane (top to be level with FFL).

**Roof**  
Standard Concrete Roofs (Concrete 40N/mm<sup>2</sup> 28-Day Cube Strength)  
Wherever practicable, roofs should be cast in situ reinforced concrete construction with a soffit finish. Slip joints shall be incorporated at walls between polystyrene sealed external thermal insulation faces of concrete to be fair faced. All external faces to be cured, prepared, primed and finished with a two coat high performance (Aliphatic) polyurethane waterproofing system (flat roof grade) with glass fibre mat reinforcement to initial coat, e.g. TNo. Coat of LPL bonding primer then 2No. Coats of LPL Decothane.  
Unsuitable from Liquid Plastics Ltd. 01772 259 781 or Equal System  
All finishes are to be in accordance with the manufacturers recommendations.

Where permanent structural metal soffit shutters are used as part of a composite roof system these shall be corrosion resistant and the Constructor's proposals for screening or tagging for earthing purposes shall be expressly agreed with SPEN prior to construction.

**Ventilation**  
Ventilation shown is typical for a single SOOkVA transformer substation. The typical ventilation indicated may not be adequate in certain supply conditions which might require additional or alternative ventilation arrangements.

Related Typical Deemed to Satisfy Drawings:  
 Hardwood Doors SP4000543  
 Meter Cupboards SP4078901 Vent for Brickbuilt substation SP4000542



Rev B: 8 9 22 Substation doors amended to outward opening;  
substation set back 1m  
Rev A: 6 9 22 Scale bar and site plan added

|         |                                  |             |            |                                                                                                                                                                                                                                                                                                               |                                               |
|---------|----------------------------------|-------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Project | <b>Link Road Site<br/>Huyton</b> |             |            | Drawing<br>Title                                                                                                                                                                                                                                                                                              | <b>Proposed substation<br/>and meter room</b> |
|         |                                  |             |            | Drawing<br>No                                                                                                                                                                                                                                                                                                 | <b>20035 P108</b> rev <b>B</b>                |
| Client  | LINK DEVELOPMENTS (NW) LTD       |             |            |  <p>Damsom Consultancy Limited<br/>Puls, Neal Road Studio<br/>Glasgow, Scotland<br/>G1 3NS<br/>01335 61763</p> <p><a href="mailto:kenny@damsondesign.com">kenny@damsondesign.com</a> architects and landscape design</p> |                                               |
| Status  | PLANNING APPLICATION             |             |            |                                                                                                                                                                                                                                                                                                               |                                               |
| Scale   | 1' 50' & 1' 500'                 | Dwg<br>size | A1         |                                                                                                                                                                                                                                                                                                               |                                               |
| Drawn   | TH                               | Date        | 27 05 2022 |                                                                                                                                                                                                                                                                                                               |                                               |