

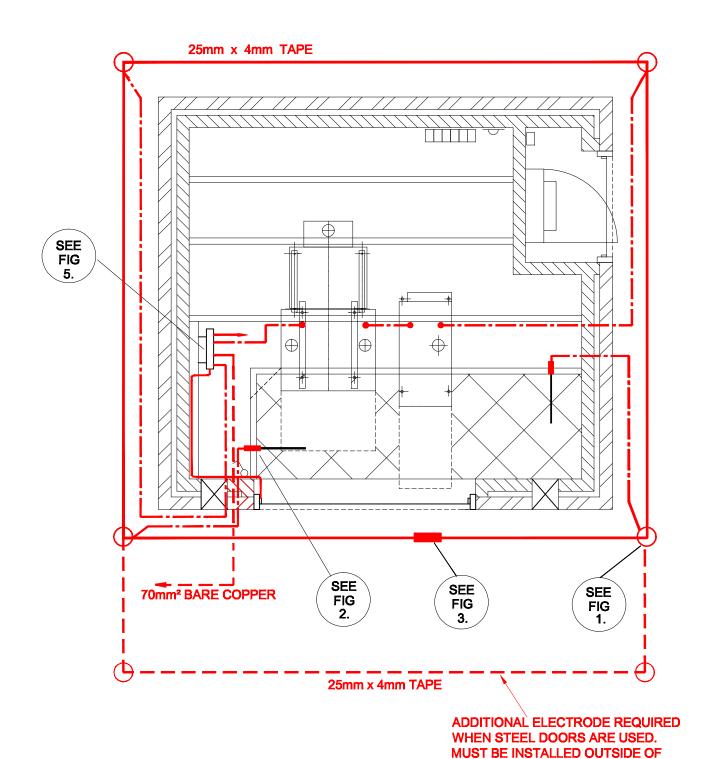
COLD Site - (Combined Site)

- The external earth electrode is to be laid for a minimum of 80M out with the incoming cables or length of the HV trench if less than 80M. (Conductor to be 70mm2 CSA Bare Cu). Note: To be installed on a COLD Site only.
- Perimeter electrode to be installed in direct contact with the soil at a depth of 0.6M to 1.2M on the outer edge of the foundation. (25mm x 4mm Copper earth tape to be used with 'Property of Northern Powergrid' engraved on tape).
- Earth rods to be installed at a depth of 1.2M (2.4M in Rural Environments).
- Bonding from perimeter nest to switchgear, transformer, LV cabinet and rebar to be 95mm2 Cu Black PVC covered conductor.
- Bonding from metal door frame to switchgear to be 16mm2 Cu Green / Yellow PVC covered conductor.
- All external joints to be covered with denso mastic tape.
- Substations with metal doors will require additional perimeter earth electrode at the front of the substation, see additional layout on drawing.
- The maximum resistance value for the combined HV / LV earth electrode must be less than 200hms.

Use this drawing in conjunction with Northern Powergrid policy – IMP/010/011 Code of Practice for Earthing LV Networks and HV Distribution Substations and supplementary drawing C978643 (Earth Point Connection Details).

For cold site substations that are integral to a building where a full perimeter electrode cannot be installed, the earthing should be installed to drawing C1065495.

Steel Kiosk Substationswill require additional perimeter earth electrode; these will be considered on an individual basis.



Lloyds Court, 78 Grey Street, Newcastle Upon Tyne, NE1 6AF NORTHERN **POWERGRID** 11KV RMU AND METERING UNIT WITH OPTIONAL Manufacturer Details **EXTENSIBLE SW EARTHING ARRANGEMENT COMBINED SITE (COLD)** Sheet No. N.T.S. Prepared By PLANT DIAGRAMS WIRING Barbara.Gordon Grid Reference Revised Historic C1010827 Ref No. | C1010827 05/01/17 Drg.No. Date Issued Checked By $\underline{\text{Revision } C}$ Notes DOC C1011099 26/06/12 S. CRAWFORD

DOOR SWING AREA.