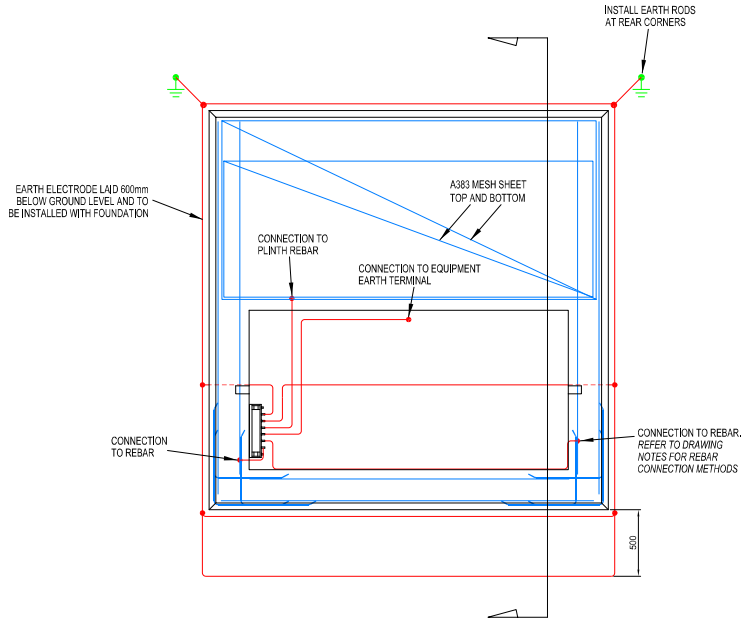
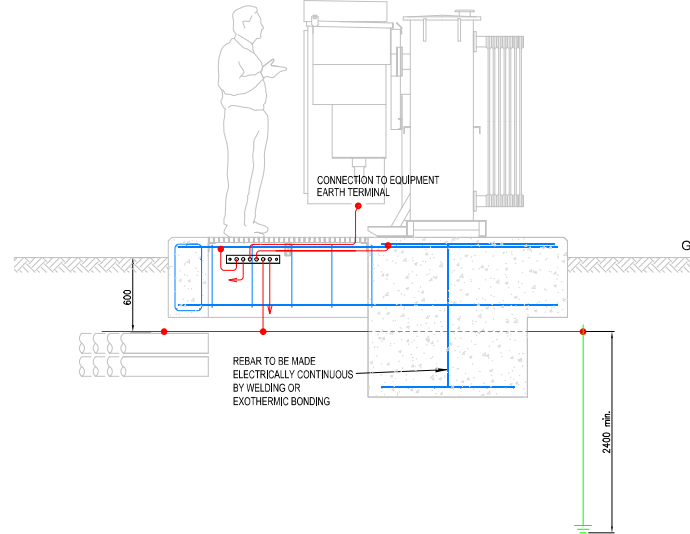
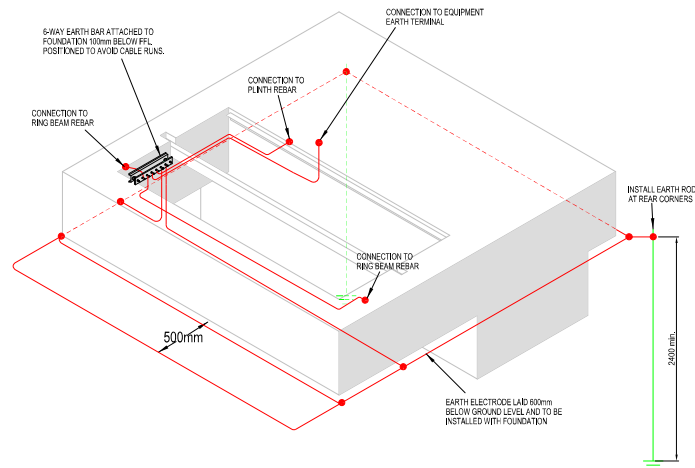




PLAN VIEW



SECTION VIEW



ISOMETRIC VIEW

**GENERAL NOTES**

- THIS DRAWING SHALL NOT BE SCALED AND NO VARIATION TO THE STATED DIMENSIONS OR MATERIALS SPECIFIED SHALL BE PERMITTED WITHOUT PRIOR WRITTEN CONSENT FROM UK POWER NETWORKS.
- ALL DIMENSIONS ARE IN MILLIMETRES.
- THE EARTHING SYSTEM SHALL BE PROVIDED BY THE DEVELOPER/CONTRACTOR UNLESS STATED OTHERWISE BY UK POWER NETWORKS.
- WHEREVER POSSIBLE THE EARTHING SYSTEM SHOULD BE INSTALLED IN ASSOCIATION WITH THE GROUND WORKS TO ENSURE THAT EARTH ELECTRODES ARE CORRECTLY POSITIONED PRIOR TO PLACEMENT OF CONCRETE.

**REBAR/MESH REINFORCEMENT**

- THE CONNECTION TO THE REINFORCEMENT WITHIN THE PLINTH SHALL USE EXOTHERMIC WELDING OR SUITABLE CLAMPS.
- ALL CONNECTIONS TO THE REINFORCEMENT SHALL USE A MINIMUM OF 70mm<sup>2</sup> STRANDED HARD DRAWN COPPER CABLE OR 25mm x 3mm COPPER TAPE.

**EARTH CONDUCTOR, ELECTRODE & RODS**

- THE EARTH RODS SHALL BE COPPER CLAD WITH APPROPRIATE FITTINGS, DRIVEN TO A MINIMUM DEPTH OF 2.4m.
- ALL EARTH ELECTRODE CONDUCTOR AND ELECTRODE SHALL BE AS FOLLOWS:
  - FOR EARTH FAULT LEVELS UP TO 8kV USE 70mm<sup>2</sup> BARE STRANDED HARD DRAWN COPPER CABLE OR 25mm x 3mm COPPER TAPE.
  - FOR EARTH FAULT LEVELS UP TO 12kV USE 120mm<sup>2</sup> OR 2 x 70mm<sup>2</sup> BARE STRANDED HARD DRAWN COPPER CABLE OR 25mm x 4mm COPPER TAPE.
  - FOR EARTH FAULT LEVELS UP TO 19kV USE 2 x 70mm<sup>2</sup> BARE STRANDED HARD DRAWN COPPER CABLE OR 25mm x 6mm COPPER TAPE.

**EARTH RESISTANCE**

- THE MAXIMUM RESISTANCE OF THE STANDALONE EARTHING SYSTEM SHALL BE SPECIFIED BY THE UK POWER NETWORKS DESIGNER.
- WHERE THE EARTHING SYSTEM IS INSTALLED BY A DEVELOPER OR CONTRACTOR CERTIFICATION CONCERNING THE RESISTANCE OF THE STANDALONE EARTHING SYSTEM SHALL BE PROVIDED TO UK POWER NETWORKS PRIOR TO EQUIPMENT INSTALLATION.

**BONDING**

- NOT ALL EQUIPMENT BONDING IS SHOWN ON THE DRAWING. ALL EQUIPMENT SHALL BE BONDED IN ACCORDANCE WITH EDS 06-02/23.

**OTHER**

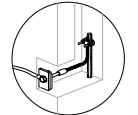
- A 6-WAY EARTH BAR SHALL BE PROVIDED IN THE POSITION SHOWN ATTACHED TO THE PLINTH AROUND 100mm BELOW FFL.
- THE EARTHING SYSTEM IS INSTALLED FOR UK POWER NETWORKS' SOLE USE AND SHALL NOT BE INTERCONNECTED WITH ANOTHER EARTHING SYSTEM OR USED FOR ANY OTHER PURPOSE WITHOUT PERMISSION FROM UK POWER NETWORKS.

**FURTHER INFORMATION**

- FOR FURTHER DETAILS ON THE CONSTRUCTION OF THIS EARTHING SYSTEM INCLUDING MATERIALS, CONNECTIONS, LABELLING ETC. REFER TO EDS 06-02/23.
- FOR INFORMATION ON SECONDARY SUBSTATION EARTHING DESIGN REFER TO EDS 06-00/14.

**NOTE:** THIS DRAWING ONLY SHOWS THE EARTHING ASSOCIATED WITH THE GROUND WORKS. ADDITIONAL EARTHING MAY BE REQUIRED TO ACHIEVE THE EARTH RESISTANCE VALUE AND TO ENSURE THE SUBSTATION IS SAFE. REFER TO THE RELEVANT EARTHING STANDARD FOR THE COMPLETE EARTHING AND BONDING REQUIREMENTS.

**REBAR/EARTH CONNECTION METHOD  
DETAIL**



EARTH POINT CONNECTED TO REBAR OR REINFORCEMENT MESH WITH CLAMPS OR EXOTHERMIC WELDING.

| EARTHING KEY |                 |
|--------------|-----------------|
|              | EARTH ROD       |
|              | EARTH ELECTRODE |
|              | CONNECTION      |

|                                                                                                  |          |             |                 |          |
|--------------------------------------------------------------------------------------------------|----------|-------------|-----------------|----------|
| A                                                                                                | 26-10-18 | ORIGINAL    | UA              | RDH      |
| Version                                                                                          | Date     | Description | UA              | UKPN     |
|                                                                                                  |          |             | Checked         | Em.      |
|                                                                                                  |          |             | Approved        | Designed |
| <div></div> |          |             |                 |          |
| TITLE<br>UNIT OR PADMOUNT<br>SUBSTATION IN A GRP<br>ENCLOSURE<br>EARTHING LAYOUT                 |          |             |                 |          |
| SCALE NTS @A1                                                                                    |          |             | APPROVED        |          |
| DRAWING NO.<br>EDS 07-3102.01                                                                    |          |             | Sht 2 of 3      |          |
| SITE                                                                                             |          |             | SECONDARY SITES |          |