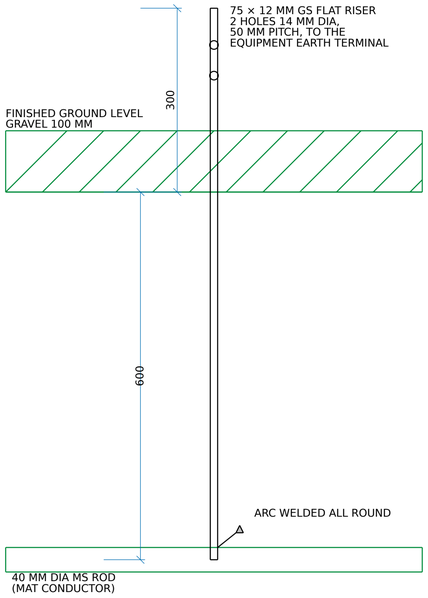
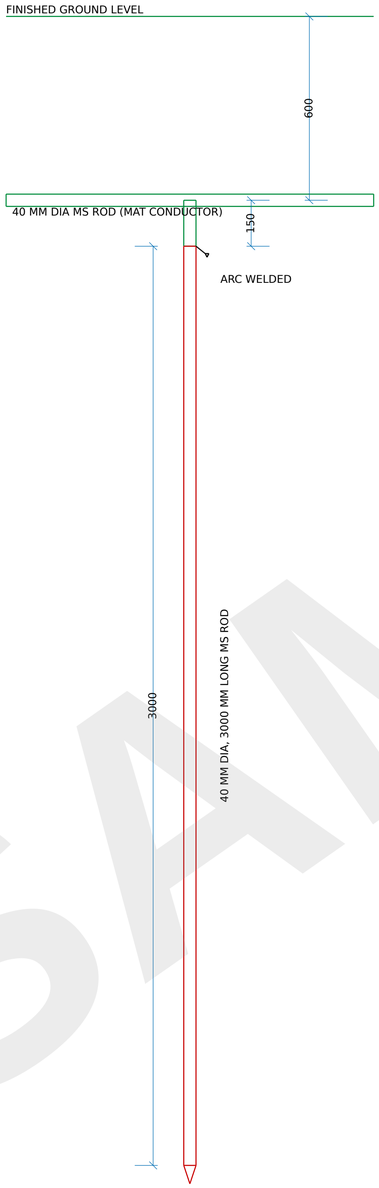
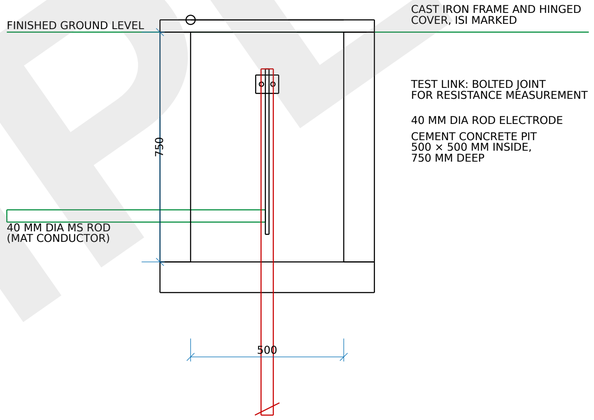
DETAIL A: RISER (SCALE 1:5)




DETAIL B: ROD ELECTRODE (SCALE 1:10)




DETAIL C: ELECTRODE PIT (SCALE 1:10)




## NOTES

1. Earth mat: 40 mm dia MS rod, buried 600 mm below finished ground, as on the earth mat layout.
2. Electrodes: 144 rods, 40 mm dia and 3000 mm long MS, driven vertically, their tops 150 mm below the mat conductor. Where the measured soil resistivity is above 100 Ω·m, the pit is backfilled with treated earth (CBIP Publication 311 §5.3).
3. Risers and above-ground conductors: 75 × 12 mm GS flat, 300 mm above finished ground at the equipment earth terminal.
4. Buried connections arc welded all round and coated with bitumen. Above-ground connections bolted with galvanised fasteners.
5. One electrode pit per test point: cement concrete, 500 × 500 mm inside and 750 mm deep on a 100 mm base, cast-iron frame and hinged ISI-marked cover at ground level, a bolted test link for the annual resistance test.
6. Dimensions in mm. Scales as shown under each detail.

SAMPLE

SubstationLayout

| REV | DATE | DESCRIPTION | BY |
|---|---|---|---|
| 0 | 2 Nov 2026 | Issued | Sample engineer |
| | | | |
| | | | |

| | |
|---|---|
| PROJECT | Sample 220/33 kV pooling substation |
| CLIENT | Sample client |
| LOCATION | Sample site |
| TITLE | EARTH MAT TYPICAL DETAILS<br>220/33 kV POOLING SUBSTATION, 250 MW |

| | NAME | DATE |
|---|---|---|
| DRAWN | Sample engineer | 2 Nov 2026 |
| CHECKED | Sample engineer | 2 Nov 2026 |
| APPROVED | Sample engineer | 2 Nov 2026 |

| | | | |
|---|---|---|---|
| DRG. NO. | SSL-E-EAR-002 | REV. | 0 |
| SCALE | AS SHOWN | SIZE A1 | Sheet 1 of 1 |

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