

2. The type of sealing systems used shall be agreed with the Purchaser and shall be selected and installed with due regard to environmental and hazardous area requirements. The type of sealing systems used shall be selected from the following options:
 - a) Approved water, gas and fire sealing transit units with fillers and insert blocks fitted to suit all cables and conduits;
 - b) Approved oil based, non-setting, reusable sealing compound inserted into the duct or opening around all cables and conduits; or
 - c) Approved fire retardant and gas and watertight sealing system, comprising split insert sleeves to ensure cable separation and a silicone based sealant; or
 - d) Polyurethane expanding foam. This shall only be used if there is no requirement to seal the duct/building opening against the ingress of harmful or flammable gases or smoke and fire. Foam shall not be used as a seal between different hazardous zones.
3. If 'long-haul' telemetry cables between sites enter and leave a duct in a drawpit, the entries and exits shall be left unsealed, if agreed with the Purchaser.

7.4.4 Trenches, Ducts and Drawpits

7.4.4.1 Trenches

1. The proposed trench route shall be surveyed for the presence of underground cables and/or services before digging commences.
2. Machine digging shall not be permitted within 1 m of suspected cable positions.
3. Lines of trenches shall be kept as straight as possible.
4. Trenches shall have vertical sides, supported to avoid subsidence. If a change in ground level is necessary, the bottom of the trench shall rise or fall gradually.
5. To ensure that trench bottoms are firm, smooth and free of loose stones and debris, they shall be lined with approximately 75 mm of sand or other approved material.
6. The trench backfill shall be compacted in layers of a maximum thickness of 150 mm and the surface reinstated to a condition not inferior to that of the surrounding ground.
7. 150 mm wide, yellow, PVC marker tape, marked 'DANGER ELECTRIC CABLE' shall be laid over the centre of each 300 mm width of the trench, 150 mm below ground level.
8. Proprietary concrete cable markers shall be placed at a minimum of 50 m intervals, changes in trench direction and at road crossings.

7.4.4.2 Installation of Direct Buried Cables

1. Cables shall be installed in ducts if trenches pass under roads, footpaths and foundations.