

P30 TRENCHES/PIPEWAYS/PITS FOR BURIED ENGINEERING SERVICES

To be read with Preliminaries/General conditions.

GENERALLY

- 110 ROUTES OF SERVICES BELOW GROUND:
- Locations of new service runs and pipeducts: Submit proposals.
 - Temporary marking: Indicate new service runs and pipeducts with 75 x 75 mm softwood posts painted white and projecting not less than 600 mm above ground level, or with clear waterproof markings on hard surfaces.
- 115 EXISTING ROADS AND PAVINGS:
- Excavation and backfilling: To Highways Authorities and Utilities Committee (Stationery Office) 'Specification for the reinstatement of openings in highways'.
- 120 IN SITU CONCRETE:
- In situ concrete for buried engineering services: To Spec Ref E.05.
- 125 CUTTING TREE ROOTS IN SERVICE TRENCHES:
- Protected area: The larger of the branch spread of the tree or an area with a radius of half the tree's height, measured from the trunk.
 - Roots in protected area: Do not cut.
 - Roots exceeding 25 mm diameter: Give notice and do not cut without permission.
 - Cutting:
 - Use a hand saw to make clean smooth cuts.
 - Minimise wound area and ragged edges.
 - Pare cut surfaces smooth with a sharp knife.
 - Unintentionally severed roots: Give notice and form a new clean cut slightly nearer the trunk.
- 130 TRENCHES:
- Width: As small as practicable.
 - Trench sides: Vertical.
 - Trench bottoms: Remove mud, rock projections, boulders and hard spots. Trim level.
 - Give notice: To inspect trench for each section of the work.

PIPEDUCTS

- 215 SPLIT PIPEDUCTS FOR EXISTING SERVICES IN THE GROUND:
- Material: PVC.
 - Jointing/securing methods: socketed.
 - Colours: as dictated by the service.
 - Sizes: 100mm.
 - Warning marker tape: As clause 280.
- 220 LAYING PIPEDUCTS
- General: Lay straight to line, true to gradient or level on an even continuous bed.
 - Bedding thickness: 150mm.
 - Clearance between pipeducts where they cross (minimum): 50 mm.
 - Drawlines: During laying, thread through pipeducts.
 - Material, strength and length: As specified by service undertaker.
 - Protection: Protect from ingress of debris. During construction, temporarily seal all exposed ends.
 - Inspection: Before backfilling, allow service undertakers to inspect installation.
 - Surround material: Lay and compact to a level not less than 150 mm above pipeduct crown.

- 230 **BEDDING/SURROUND FOR PIPEDUCTS - SELECTED AS DUG MATERIAL:**
- General: Selected material, free from vegetable matter, rubbish, frozen soil and excluding lumps and stones retained on a 40 mm sieve. Thoroughly compact by hand in 150 mm maximum layers.
- 231 **BEDDING/SURROUND FOR PIPEDUCTS - GRANULAR MATERIAL:**
- General: Single size 10 mm granular material to BS 882. Compact uniformly in 100 mm maximum layers.
- 245 **CONCRETE SURROUND FOR SHALLOW PIPEDUCTS UNDER BUILDINGS:**
- Applicable where: Pipeduct crowns are less than 300 mm below underside of slab.
 - Trench: Excavate after hardcore has been laid and compacted.
 - Concrete blinding: 25 mm thick over full width of trench. Allow to set.
 - Concrete mix: As clause 120 or same as slab.
 - Pipeducts: Lay at least 100 mm above blinding on folded wedges of compressible board.
 - Concrete surround: Cast integral with slab. Extend surround to within 150 mm of nearest flexible joint.
 - Concrete mix: Same as slab.
- 255 **CONCRETE SURROUND FOR PIPEDUCTS:**
- Concrete blinding: 25 mm thick over full width of trench. Allow to set.
 - Concrete mix: As clause 120 or same as slab.
 - Pipeducts: Lay at least 100 mm above blinding on folded wedges of compressible board.
 - Gaps between spigots and sockets: Fill with resilient material to prevent entry of concrete.
 - Concrete surround: Encase pipeducts to 150 mm above crown. Place and compact concrete to full width of trench.
 - Concrete mix: Same as slab.
 - Vertical construction joints in surround: Form at face of flexible pipeduct joints.
 - Joint material: 18 mm thick compressible board precut to pipeduct profile.

BACKFILLING

- 260 **BACKFILLING GENERALLY:**
- Backfill from top of pipeduct surround: Material excavated from the trench.
 - Backfilling: Lay and compact in 300 mm maximum layers. Do not use heavy compactors before backfill is 600 mm deep.
- 265 **BACKFILLING UNDER ROADS AND PAVINGS:**
- Backfill from top of pipeduct surround: Granular sub-base material to Highways Agency Specification for highway works, clause 803 (Type 1).
 - Backfilling: Lay and compact in 150 mm maximum layers.
- 275 **TEMPORARY BRIDGES:**
- Construction traffic: After backfilling, provide temporary bridges over trenches to prevent damage to pipeducts or services.
- 280 **WARNING MARKER TAPES:**
- Type: Continuous colour coded, heavy gauge polyethylene identification tapes.
 - Installation: During backfilling, lay along the route of all services
 - Location, depth, colour and markings: To requirements of service undertaker.