

1. All areas of live traffic and pedestrian movements shall be subject to appropriate traffic management barriers and signs.
2. Access points onto live public highway.
3. Unauthorised access to the site must be prevented at all times
4. Existing road drainage to be maintained.
5. Be aware of possible live drainage flows and foul effluent during construction. The Contractor shall assess and implement a safe working system and equipment (PPE) as necessary.

Cover to comply with clause E2.32. 600mm x 600mm clear opening
 Mortar haunching to cover and frame to clause E6.7
 Ground Level
 600mm x 750mm cover slab opening
 Min 2, max 4 courses of Class B engineering bricks, or precast concrete cover frame seating rings
 Precast concrete slab complying with E2.30
 1200
 Min 900
 Precast concrete chamber sections complying with Clause E2.29 jointed with elastomeric or plastomeric seals
 Lifting eyes in concrete rings to be pointed with mortar
 230
 Galvanised ms ladder 675 max from cover to first rung
 See schedule
 2000 min
 GEN 3 concrete surround 150mm thick complying with E4.1 and BRE Special Digest 1
 Benching slope to be 1:10 to 1:30. Built up min 75mm above base of precast section.
 High strength concrete topping, min 20 thick to be brought up to dense smooth face neatly shaped and finished to all branch connections. To comply with clauses E4.3 and E6.5
 500 min
 225 min
 75
 Distance between top of pipe and underside of PC chamber to be min 50mm and max 300mm
 Construction joint
 225mm to underside of channel
 GEN 3 concrete base complying with E4.1 and BRE Special Digest 1
 Inverts to be formed using channel pieces

Technical cross-section drawing of a manhole assembly. The drawing shows a precast concrete chamber with a high-strength concrete topping, a construction joint, and a GEN 3 concrete base. The assembly is surrounded by a 150mm thick GEN 3 concrete surround. The drawing includes various dimensions and labels for components and materials.

Labels and Dimensions:

- Cover to comply with clause E2.32. 600mm x 600mm clear opening
- Mortar haunching to cover and frame to Clause E6.7
- 600mm x 600mm clear access
- Min 2, max 4 courses of Class B engineering bricks, concrete blocks or precast concrete cover frame seating rings
- Ground level
- Precast concrete slab complying with E2.30
- 675 mm max from cover to first step
- Selected as dug backfill
- Lifting eyes in concrete rings to be pointed with mortar
- Polypropylene encapsulated ms double step rungs
- See schedule
- Precast concrete chamber sections complying with Clause E2.29 jointed with elastomeric or plastomeric seals
- GEN 3 concrete surround 150mm thick complying with E4.1 and BRE Special Digest 1
- High strength concrete topping, min 20 thick to be brought up to dense smooth face neatly shaped and finished to all branch connections. To comply with clauses E4.3 and E6.5
- 500 Min
- 225 Min
- Benching slope to be 1:10 to 1:30. Built up min 75mm above base of precast section.
- Distance between top of pipe and underside of PC chamber to be min 50mm and max 300mm
- 225mm to underside of channel
- GEN 3 concrete base complying with E4.1 and BRE Special Digest 1
- Construction joint
- Inverts to be formed using channel pieces
- 900 Min
- 75

Technical drawing of a manhole assembly showing various components and their specifications:

- Mortar haunching to cover and frame to Clause E6.7
- 1220mm x 685mm multiple ductile iron cover. Cover to comply with Clause E2.32
- Brickwork or concrete blocks to be corbelled (maximum 30mm per course) to suit cover
- Precast concrete chamber sections complying with Clause E2.29 jointed with elastomeric or plastomeric seals. Chamber wall to be minimum 125mm
- Benching slope to be 1:10 to 1:30.
- High strength concrete topping, min 20 thick to be brought up to dense smooth face neatly shaped and finished to all branch connections. To comply with clauses E4.3 and E6.5
- 1350mm min See manhole Schedule
- 150mm min
- 225mm to barrel of pipe
- GEN 3 concrete base complying with E4.1 and BRE Special Digest 1

Diagram illustrating the internal structure of a manhole chamber, showing the arrangement of the rocker pipe, ladder, and pipe joint with channel.

Key components and dimensions labeled:

- Rocker pipe
- Joint to be as close as practical to face of manhole to permit satisfactory jointing and subsequent movement
- Ladder complying with Clause E2.37
- Pipe joint with channel to be located min 100mm inside face of chamber
- Minimum width of benching for landing area to be 450mm between ladder and channels. See Clause B5.2.29
- Opening to be located centrally over 900mm shaft & offset approx. 200mm for 1200mm dia shaft with ladder.
- Min width of benching to be 225mm
- Rocker pipe
- Rocker pipe

Diagram illustrating the connection of three rocker pipes to a manhole chamber. The diagram shows a cross-section of the chamber with three pipes entering from different directions. The pipes are labeled "Rocker pipe". The joint between the pipes is labeled "Joint to be as close as practical to face of manhole to permit satisfactory jointing and subsequent movement". The landing area is labeled "Minimum width of benching for landing area to be 450mm between steps and channels." The double step rungs are labeled "Double step rungs complying with Clause E2.33". The pipe joint with channel is labeled "Pipe joint with channel to be located min 100 inside face of chamber".

Internal dimension of manhole normally 1350mm but manhole diameter should be increased for pipes larger than 450mm diameter to give 225mm benching in accordance with BS.2.29

Minimum 450mm from edge of stepping

Double step rungs complying with Clause E2.33

Rocker pipe

Minimum width of benching 225mm

Joint to be as close as practical to face of manhole to permit satisfactory jointing and subsequent movement

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