

See Figure B.13 and Clause E6.6.2 for

Joint to be within chamber wall to

Minimum width of benching to be

surround

permit satisfactory joint and subsequent movement

rocker pipe details

450 mm minimum from edge of stepping

(See Clause B5.2.29)

Manhole Type B

600mm wide

Inverts to be formed using channel

Depth from cover level to soffit of pipe 1.5m to 3m Alternative rigid material construction with concrete surround - Mortar benching and haunching to cover and frame to Clause E6.7 Cover complying with Cause E2.32. 600 mm x 600 mm clear opening Minimum 1 course of Class B engineering bricks or precast concrete cover frame seating rings Minimum clear access 600 mm Precast concrete slab complying with 675 mm maximum to first ladder rung E2.30 from cover level Chamber height (not less than 900mm) Lifting eyes in concrete rings to be pointed Precast concrete chamber sections complying with Clause E2.29 jointed Insitu GEN3 concrete complying with with mortar, elastomeric or E4.1 and BRE Special Digest 1 plastomeric seals. → 150 mm concrete surround DN/ID to Clause B5.2.12 — Benching slope to be 1:10 to 1:30 Minimum 20mm thick high-strength concrete topping complying with Clauses E4.3 and E6.5 neatly shaped and finished to all branch connections The bottom precast manhole ring to be built into base concrete Construction joint. minimum 75 mm Self-cleaning toe holes to be Distance between top of pipe and provided where channel exceeds underside of precast section to be

4 A

Precast concrete chamber sections

complying with Clause E2.29 jointed

with mortar, elastomeric or

the in-situ base by 75mm

Chamber wall to be minimum

Lowest ring to be embedded into

Construction joint with hydrophylic

Distance between top of pipe and

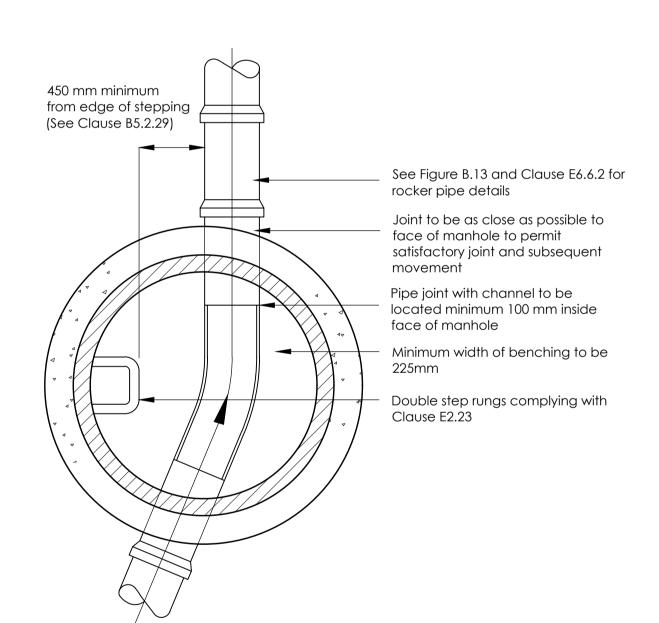
underside of precast section to be

minimum 50mm to maximum

225mm to underside of channel

plastomeric seals.

125mm



minimum 50mm to maximum

E4.1 and BRE Special Digest 1

225mm to underside of channel

Insitu GEN3 concrete complying with

300mm

GENERAL NOTES:

1. Access cover grades to BS EN 124 as follows:

Class D 400 - Carriageways of roads (including pedestrian streets), hard shoulders and parking areas.

Class B 125 - Footways, pedestrian areas and comparible locations

2. Manhole covers and frames shall be ductile iron with a minimum suare opening of 675 x 675mm. Covers shall be double triangle for 675mm square openings and be provided with loose bolted connections. Frame depth shall be typically be 150mm but shall in all cases conform to Sewer for Adoption 6th Edition clause 5.2.32 and table 5.7.

3. Opening to be located centrally over 900mm shaft and offset approximately 200mm for 1200mm diameter shaft with rungs/ladder.

4. Permissible chamber diameters for manhole types A and B are as

Diameter of largest pipe in manhole (mm)	Chamber section diameter (mm)
Less than 375	1200
375 - 450	1350
500 - 700	1500
750 - 900	1800
Greater than 900	Pipe diameter + 900

5. Pipes built into manholes shall have a flexible joint as close as feasible to the external face of the structure and the length of the next pipe (rocker pipe) away from the structure shall be as follows:

Nominal Diameter (mm)	Effective Length (m)
150 - 600	0.60
601-750	1.00
Greater than 750	1.25

6. Where a future connection in shown in the manhole schedule the pipe shall be effectively sealed with an end cap.

7. The minimum size of sewer where guide bars, safety chains, or other safety devices are required in manholes shall be 375mm diameter.

8. Manholes less than 3m deep must have double encapsulated step rungs. Manholes greater than 3m deep must have access ladder, 230mm clearance wall to ladder.

9. The use of ladders or steps in manholes, wet wells and valve chambers shall comply with the following;
Steel plastic encapsulated manhole single steps shal not be used in manholes of a greater depth than 1.0m. Galvanised mild steel plastic encapsulated double steps may be provided in manholes up to 3.0m in depth. Galvanised mild steel or stainless steel ladders shall be provided in accordance with BS 4211 in manholes between 3.0 & 6.0m deep. Manholes greater than 6.0m deep shall be specially designed and have intermediate landings. Access holes in intermediate landings shall be provided with galvanised mild steel gratings to prevent persons falling through. The design of deep manholes shall permit the use of a winch or lifting gear mounted at

10. Only low carbon steel or stainless steel ladders for vertical fixing to manholes will be acceptable.

11. All ironwork to be kite marked by BSI or certificated by equal inspection authority.

12. DI pipes, fittings and joints shall comply with the reavant provisions of BS EN 598.

13. Manhole frames shall be set to level, bedded and haunched externally over the base and sides of the frame in mortar, in accordance with the manufacturer's instructions. The frame shall be seated on at least 2 courses of Class B Engineering bricks, on precast concrete masonry units or on precast concrete cover frame seating rings to regulate the distance between the top of the cover and the top rung to no greater then 675mm. A mortar fillet shall be provided where the corners to an opening in a slab are chamfered and the brickwork is not flush with the edges of the opening.

14. All type A, B and E manholes should have concrete surround. Concrete rings shall be sealed using "Tokstrip" (or similar approved proprietary bitumen or resin mastic sealant) and lifting eyes pointed with resin modified mortar.

PL01 19/04/24 Planning issue GG/MG Rev Date Description Drn/Chk Drawing revision denotes the following stages; P - Preliminary, T - Tender, C - Construction, R - Record/As Built. P L A N N G

Civil & Structural
Chartered Engineers
Hems Court, Longbrook Street
Exeter, Devon, EX4 6AP
T. 01392 421600
sands@sands-consultants.co.uk
www.sands-consultants.co.uk

Client

NOTES:

and specifications

to commencement

1. DO NOT SCALE from this drawing as liable to distort

2. This drawing is to be read in conjunction with all other

3. Any variations with line, level or specification of the

relevant Engineers, Architects and Specialists drawings

proposed works should be reported to the Engineer prior



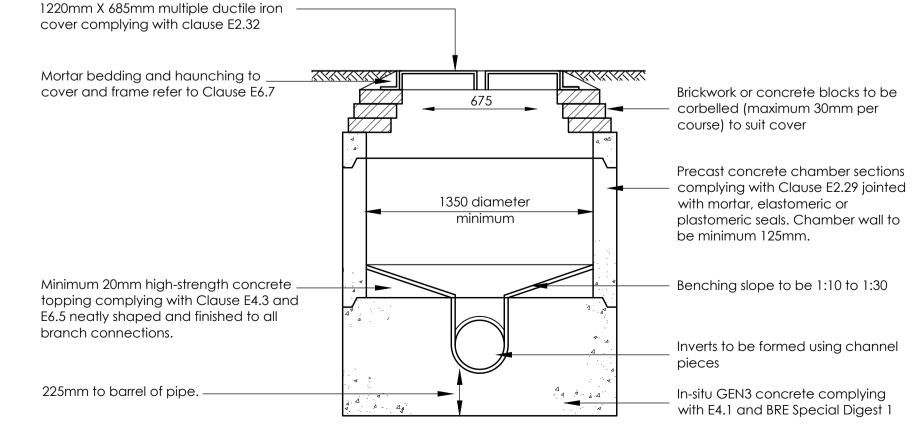
Project Title

PROPOSED DEVELOPMENT AT
REDHILLS
EXETER
DEVON

Drawing Title

STANDARD PRECAST MANHOLE DETAILS - SHEET 2

Scale/Size	Date
N.T.S/A1	February 2024
Drawn	Checked
George Gardner	Max Gavaghan
Sands Project No.	Client Project No.
2023.318	-
Drawina No.	Revision



Manhole Type C

Depth from cover level to soffit of pipe less than 1.5m. Maximum pipe size 450mm diameter. Rigid material construction

Drawi

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Double step rungs complying with Clause E2.23

Pipe joint with channel to be located minimum 100 mm inside face of manhole

Manhole Type B

where channel exceeds 600mm wide

Inverts to be formed using channel pieces

Insitu GEN3 concrete complying with E4.1 and BRE Special Digest 1

Alternative base detail for Type B manholes without concrete

150mm -

Minimum 20mm thick high-strength

Clauses E4.3 and E6.5 neatly shaped

Self-cleaning toe holes to be provided

concrete topping complying with

and finished to all branch

connections