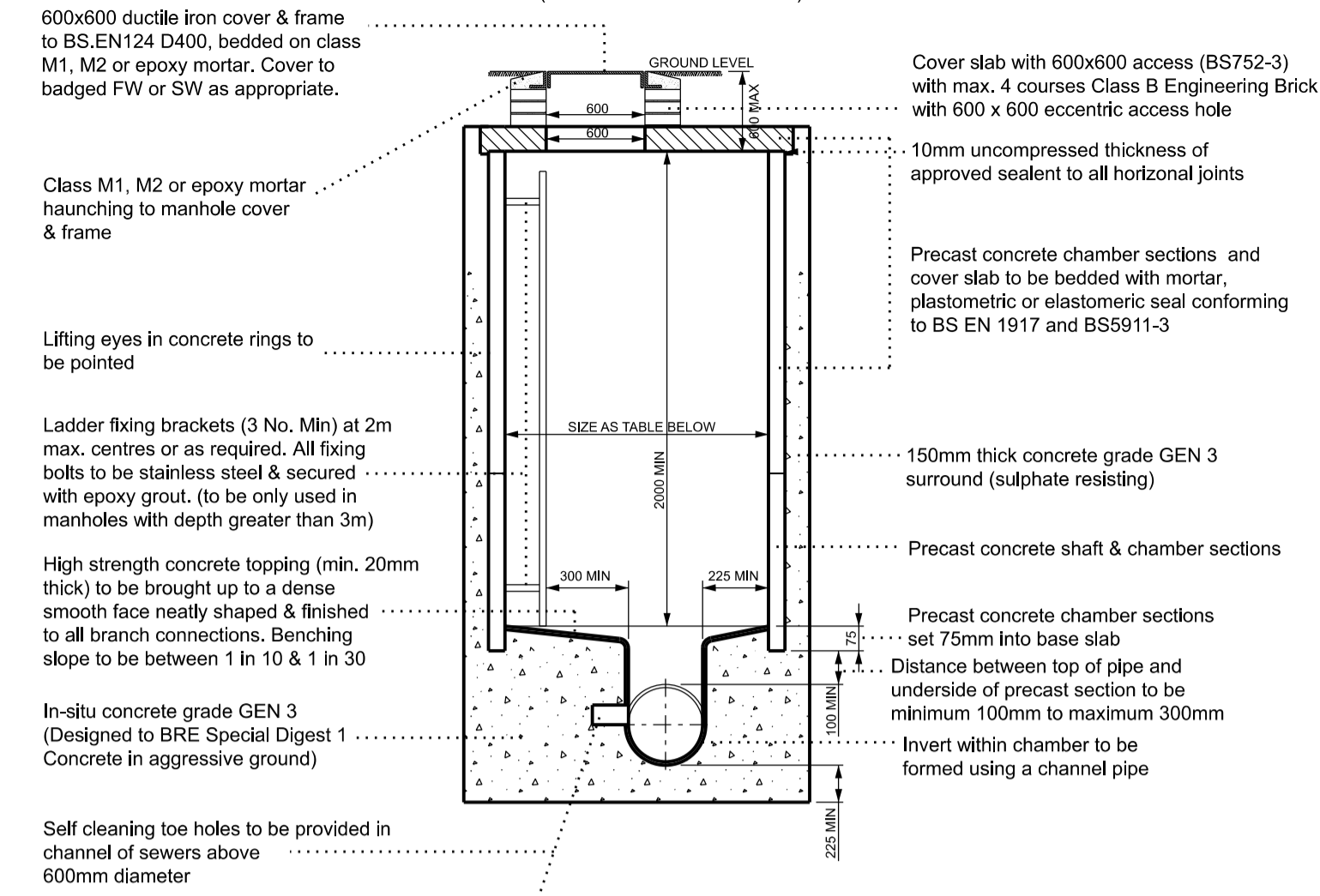


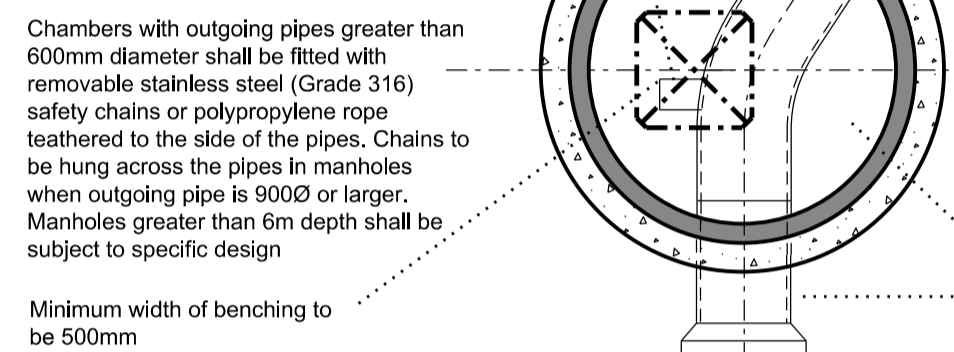
TYPICAL MANHOLE DETAIL TYPE 1B

(DEPTH TO SOFFIT 3m - 6m)



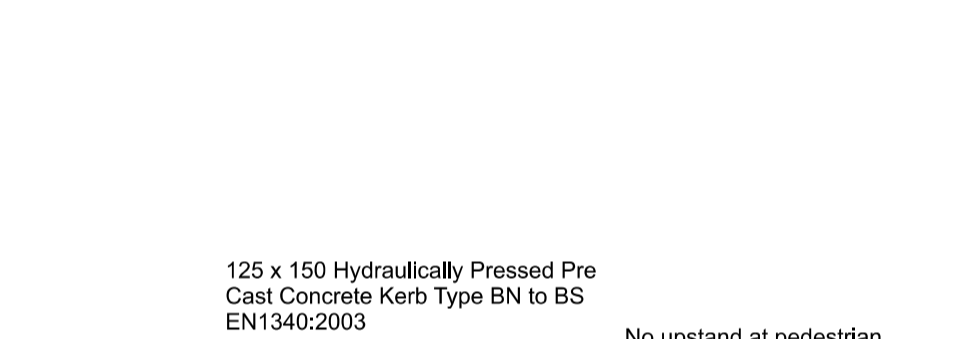
CHAMBER DIAMETERS UNLESS NOTED OTHERWISE

DIA. OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375 TO 700	1500
750 TO 900	1800

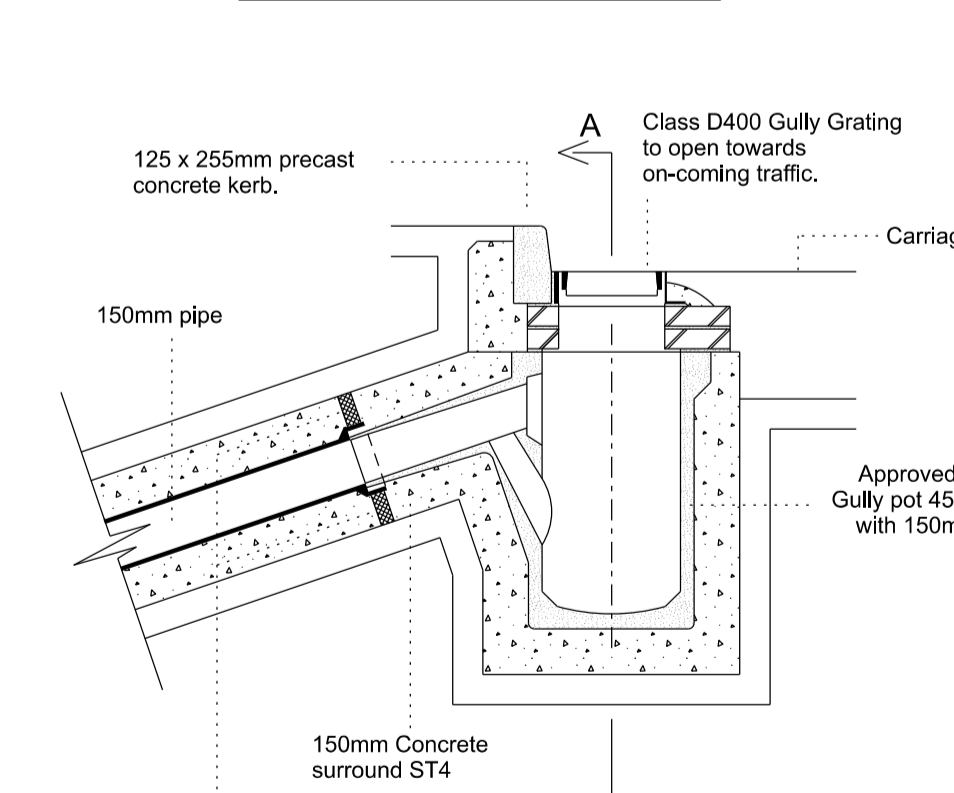


Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

For manholes of 1800 dia or larger. Below 1800 dia chamber rings continue to cover slab (no shaft)



BULL-NOSED KERB (BN)



GULLY DETAIL

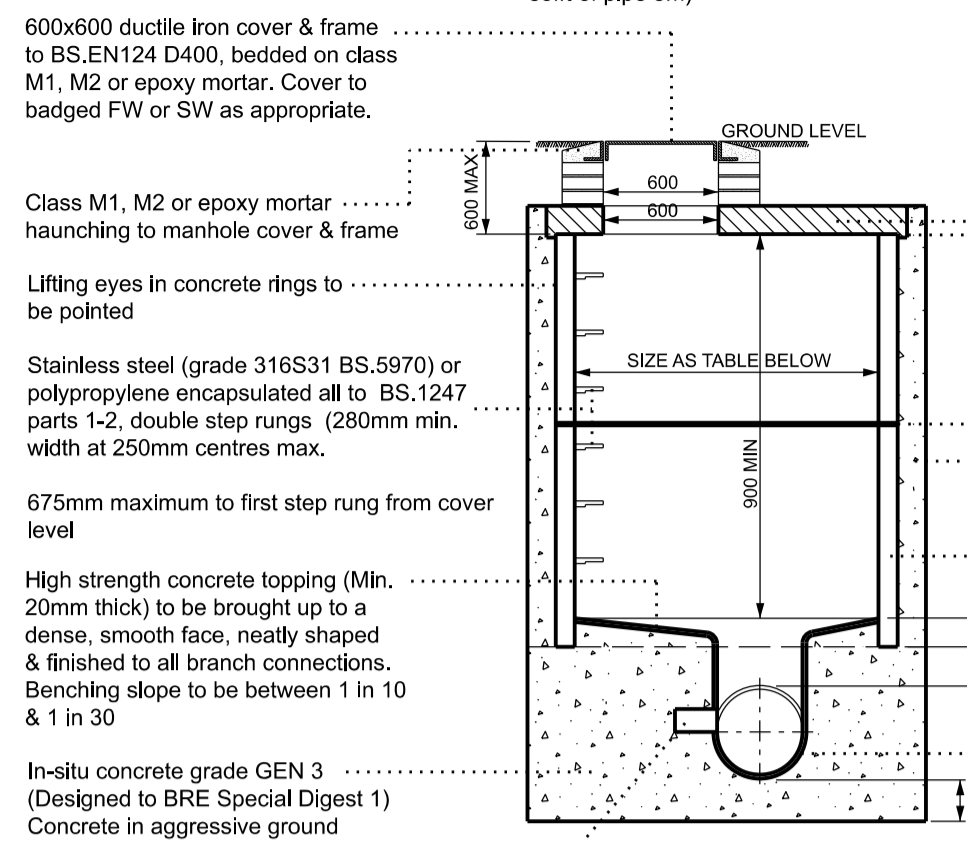
All gully pots to BS 5911 Pt 2. All grates and frames to comply with BS EN 124 450mm in width. They shall be straight bar pattern. Gully grating and frames in access ways to be 325mm in width. The gratings and frames shall be bedded using Designation (i) mortar and set on minimum two courses and a maximum of 4 courses of Class B engineering bricks so that the top of the frames is below the finished channel level within the tolerance of -5mm to -10mm where measured adjacent to the kerbing. The gully frames shall be set to the carriageway gradient. Where the carriageway is constructed to the base course level for use as builders road, the gully frames should initially be set to base course level.

Gully pots shall be 450mm internal diameter by 1050mm deep with 150mm diameter trapped outlet and rodding eye with C.1 stopper and chain. They shall be of an approved manufacture in precast concrete to BS 5911, salt glazed ware or Clayware to BS 65 and shall be laid with 150mm thickness of ST4 concrete. Connections to the sewer shall be by 150mm diameter clay or concrete pipes bedded on 150mm concrete and surrounded with ST4 concrete to a thickness of 150mm when the cover to the pipes is less than 1.2m. Gullies should preferably connect directly into manholes, but, if this is not appropriate, they shall be connected to the main pipe by means of 45 degree oblique angled junctions, and surrounded by ST4 concrete to a thickness of 150mm. Gully connections shall not be longer than 20m.

Class D400 gully grating and frame to open towards on-coming vehicles and be single piece, hinged, non-rock type to BS EN 124 (size 370 x 450mm) minimum waterway area 1000sqcm with straight bar pattern

TYPICAL MANHOLE DETAIL TYPE 2

(Maximum depth from cover level to soffit of pipe 3m)



CHAMBER DIAMETERS UNLESS NOTED OTHERWISE

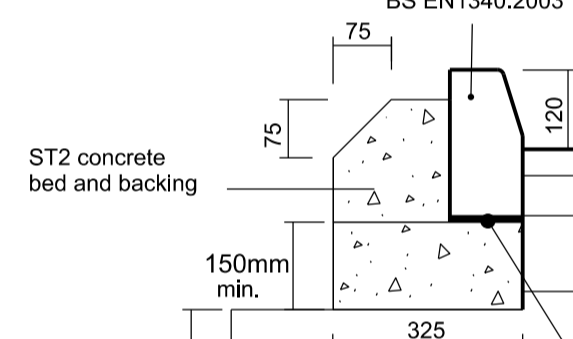
DIA. OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375 TO 700	1500
750 TO 900	1800

SEWER DIAMETER (mm)	EFFECTIVE LENGTH (mm)
150 TO 600	600
601 TO 750	1000
OVER 750	1250

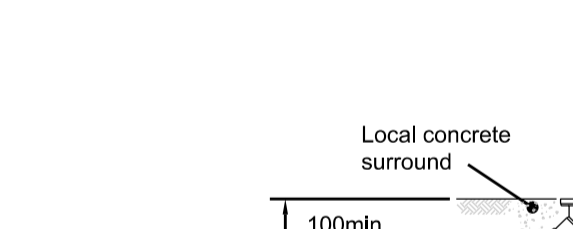


Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

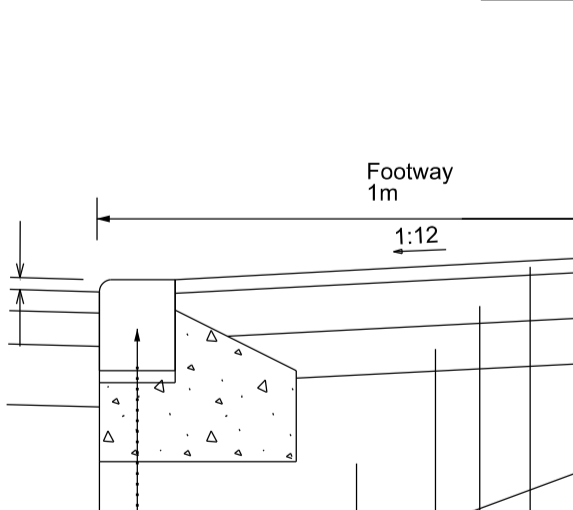
For manholes of 1800 dia or larger. Below 1800 dia chamber rings continue to cover slab (no shaft)



HALF BATTERED KERB (HB2)



RODDING EYE



VEHICULAR CROSSING DETAIL

1. For use on vehicular crossovers from/ to blacktop highways.

Chambers with outgoing pipes greater than 600mm diameter shall be fitted with removable stainless steel (Grade 316) safety chains or polypropylene rope tethered to the side of the pipes. Chains to be hung across the pipes in manholes when outgoing pipe is 900 or larger

Cover slab with 600x600 access (BS752-3) with max. 4 courses Class B Engineering Brick with 600 x 600 eccentric access hole

10mm uncompress thickness of approved sealant to all horizontal joints

Precast concrete chamber sections and cover slab to be bedded with mortar, plasticometric or elastomeric seal conforming to BS EN 1917 and BS5911-3

Lifting eyes in concrete rings to be pointed

Ladder fixing brackets (3 No. Min) at 2m max. centres or as required. All fixing bolts to be stainless steel & secured with epoxy grout. (to be only used in manholes with depth greater than 3m)

High strength concrete topping (min. 20mm thick) to be brought up to a dense smooth face neatly shaped & finished to all branch connections. Benching slope to be between 1 in 10 & 1 in 30

In-situ concrete grade GEN 3 (Designed to BRE Special Digest 1 Concrete in aggressive ground)

Self cleaning toe holes to be provided in channel of sewers above 600mm diameter

Chambers with outgoing pipes greater than 600mm diameter shall be fitted with removable stainless steel (Grade 316) safety chains or polypropylene rope tethered to the side of the pipes. Chains to be hung across the pipes in manholes when outgoing pipe is 900 or larger. Manholes greater than 6m depth shall be subject to specific design

Minimum width of benching to be 500mm

Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

For manholes of 1800 dia or larger. Below 1800 dia chamber rings continue to cover slab (no shaft)

Minimum width of benching to be 225mm

Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

For manholes of 1800 dia or larger. Below 1800 dia chamber rings continue to cover slab (no shaft)

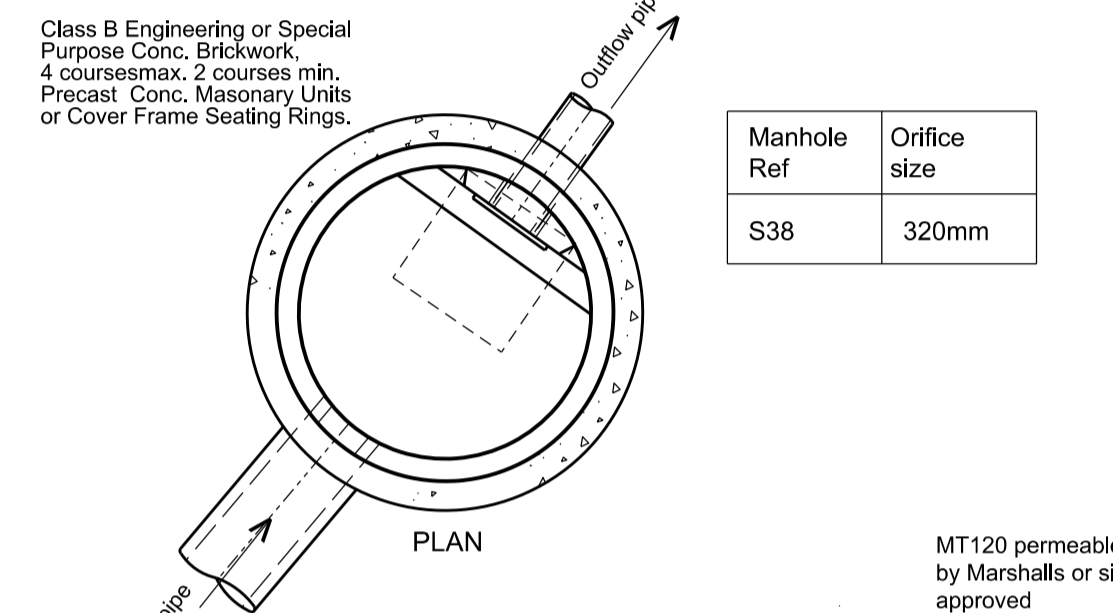
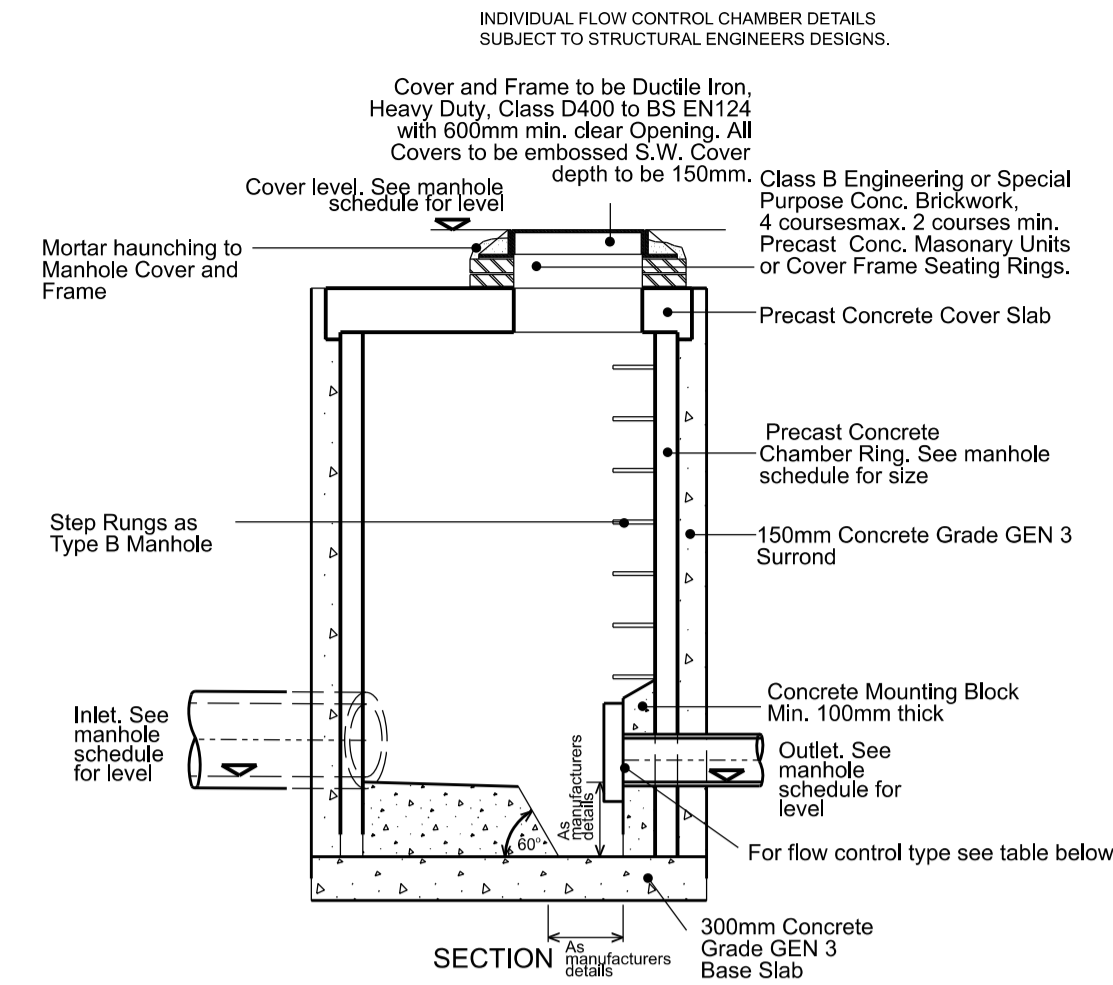
Minimum width of benching to be 225mm

Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

For manholes of 1800 dia or larger. Below 1800 dia chamber rings continue to cover slab (no shaft)

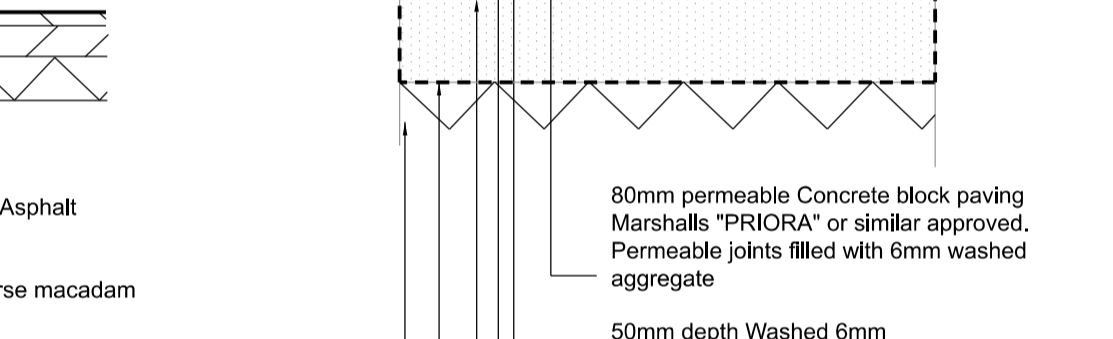
Minimum width of benching to be 225mm

TYPICAL FLOW CONTROL CHAMBER DETAIL



Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

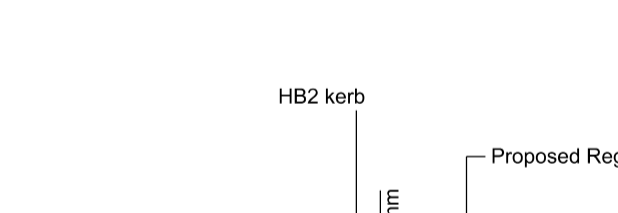
For manholes of 1800 dia or larger. Below 1800 dia chamber rings continue to cover slab (no shaft)



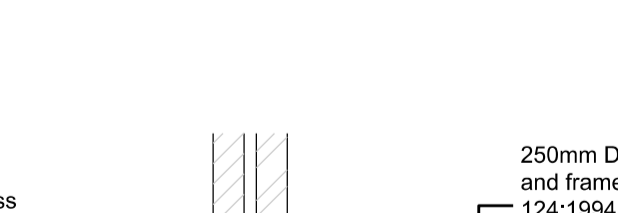
PRIVATE TARMAC DRIVE AND LIGHT DUTY ACCESS ROAD



PRIVATE POROUS BLOCK PAVING DETAIL

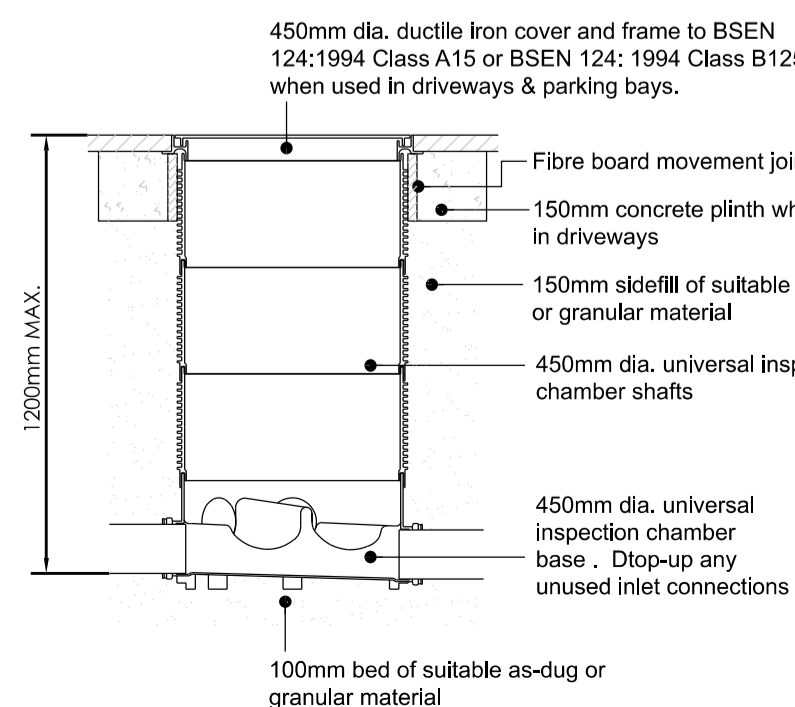


CARRIAGEWAY OVERLAY



SHALLOW INSPECTION CHAMBER

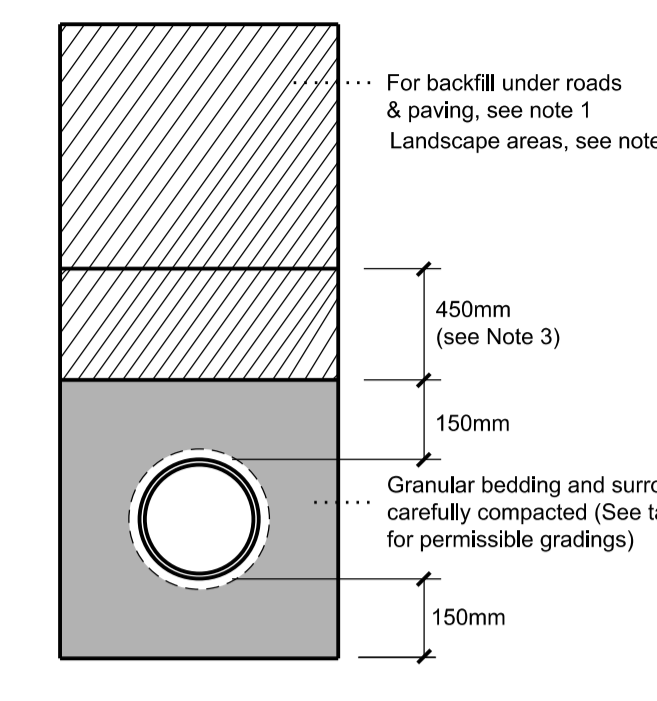
For use in soft areas & driveways only



TYPICAL INSPECTION CHAMBER

For use in soft areas, driveways and parking bays only

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT AUTHORITIES, ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO APPROVAL BEING GIVEN IT IS ENTIRELY AT HIS OWN RISK.



CLASS S BEDDING DETAIL (Rigid Pipes)

For backfill under roads & paving, see note 2

450mm (see Note 3)

150mm

Granular bedding and surround carefully compacted (See table for permissible gradings)

150mm

Min 1500 topsoil

Granular bedding and surround

Min 1500 perforated pipe

varies

150mm

MT120 permeable liner by Marshalls or similar approved

150mm

150mm

150mm

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- Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported to the Architect or Engineer before proceeding. This drawing is copyright
- All works to be undertaken in accordance with Sewers for Adoption 7th Edition

CONCRETE PROTECTION

Slab to span 300mm outside of trench and to be provided with a flexible joint (Flexcoll or similar) at every 6 metres

100mm C20 concrete with A393 reinforcement

300

100

150

150

150

150

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