

rade C20/ST4

Pipe overhang to sump be located min 50mm inside face of manhole

CATCHPIT DETAIL (CP)
NOT TO SCALE

Pipe joint with channel to be located inside face of manhole

of manhole
675mm but
Ild be increased
225mm dia. to
nce each side with
onry units
uit cover

 $\frac{\Delta}{\text{Invert Level.}}$

ım to Invert of pipe

12. All flights of steps to primary level access, with more than 2 steps are to be provided with handrailing, except where the steps are 900mm ar more appart.

retaining walls are to be used in preference to gravel boards for front garden areas.

GRANULAR MATERIAL (SEE TABLE BELOW)

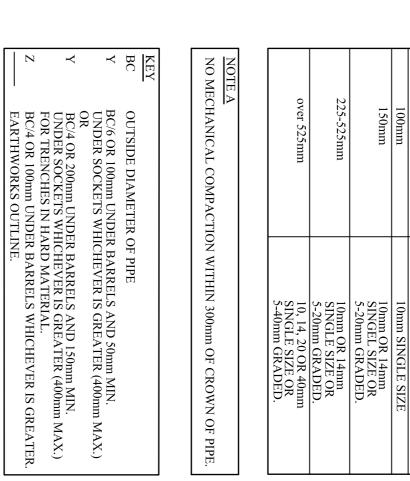
BEDDING & TRENCH DETAILS

PIPE SIZE <300mmØ 300 - 450mmØ

SELECTED CLEAN EXCAVATED MATERIAL TO CLAUSE 505 & 601. CLASS 1, 2, OR 3.

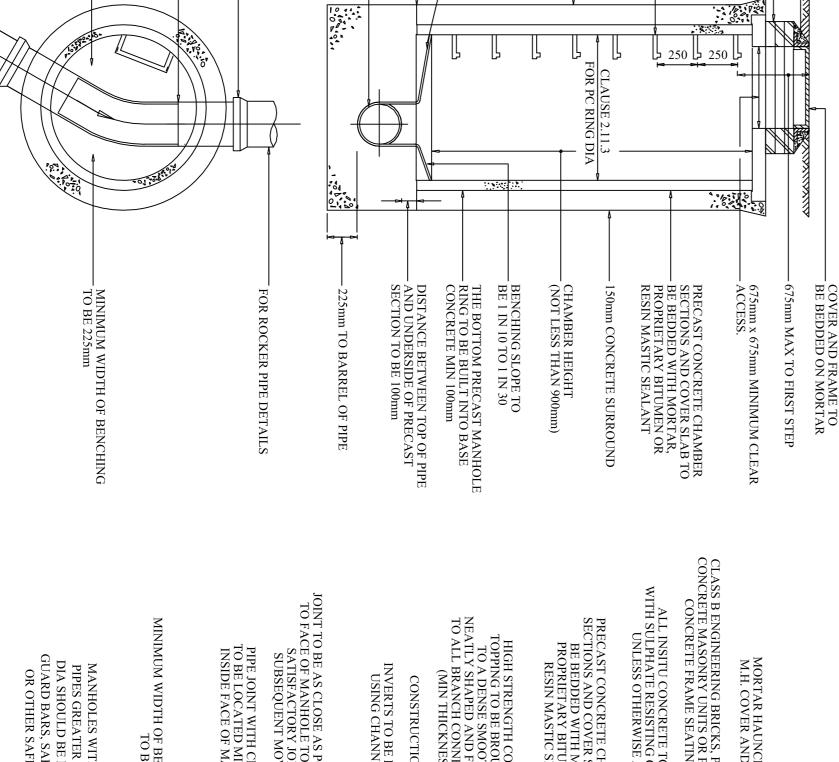
GRANULAR TYPE I MATERIAL DEPOSITED IN LAYERS NOT EXCEEDING 225mm UNCONSOLIDATED THICKNESS AND THEN FULLY COMPACTED.

GRADE ST4 CONCRETE (20mm AGGREGATE)



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

NB: Precast concrete rectangular manhole units with 150mm Grade C20/ST4 concrete surround may be used instead of brickwork.



Stainless Steel ladder (grade 316) to BS970:Pt1 or BS1449:Pt2 or GRP ladder to BS4211 set min. of 230mm off the wall. Distance from cover level to first ladder rung 675mm.
Ladder fixing brackets (3 no. min) at 2m centres or as required.

2000 min

Precast concrete shaft & chamber sections to BS5911 bedded with proprietary bitumen or resin mastic sealant e.g. Tokstrip

slab not to be continue up to

ALL INSITU CONCRETE TO BE ST4 WITH SULPHATE RESISTING CEMENT UNLESS OTHERWISE AGREED

DOUBLE ENCAPSUI STEP RUNGS

slope to be 1

a reducing slab is not to be used. Chamber rings are to be continued up to the cover slab

Heavy duty reinforced concrete cover and reducing slab to BS5911 bedded with mortar, proprietary bitumen or resin mastic sealant e.g. Tokstrip

Class M1, M2 or epoxy mortar bed

Class B Engineering brickwork
4 courses (max)
2 courses (min)

Type 1 cover frame seating ring with 600 x 6 eccentric hole (BS752-3) bedded on mortar.

Cover and frame to BS EN124 D400 having 675mm × 675mm minimum clear and including the BS Kitemark

Cover slab with 750 \times 600mm (BS752-3) bedded on mortar.

CLASS B ENGINEERING BRICKS, PRECAST CONCRETE MASONRY UNITS OR PRECAST CONCRETE FRAME SEATING RINGS

MORTAR HAUNCHING TO M.H. COVER AND FRAME

Depth

CAL MANHOLE to soffit 3 to 6m

DETAIL-

TYPE

Scale:

1/25

High strength concrete topping (benche to class G1 brought up to a dense smooth face neatly shaped and finished to all branch connections (minimum thickness 40mm)

nverts formed using channel pipes

Joint to be as close as practicable to face of manh to permit satisfactory joint and subsequent movement

Rocker pipe (See Table 2)

NOTE:
Chambers with outgoing pipes 600mm dia. & above shall be fitted stainless steel safety chains, detachable at one end fitted across the outlet of each manhole.

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

PIPE JOINT WITH CHANNEL TO BE LOCATED MIN 100mm INSIDE FACE OF MANHOLE

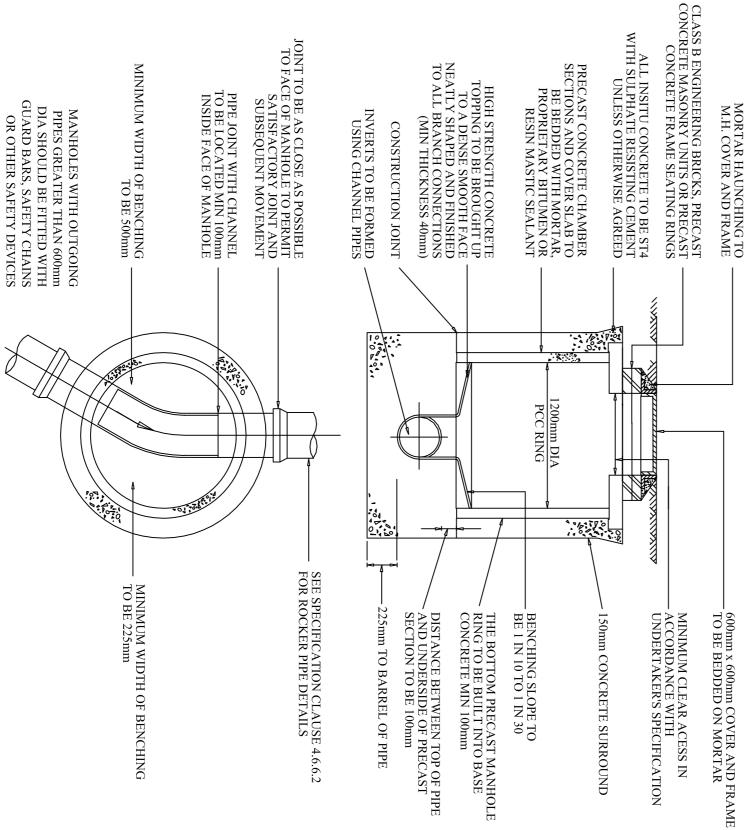
If cleaning toe holes to be benching of sewer where annel exceeds 450mm wide

Distance between top of pipe and underside of PC section to be 100mm

INVERTS TO BE FORMED USING CHANNEL PIPES

CONSTRUCTION JOINT

to barrel of pipe



THE DESIGN OF MANHOLES WILL NEED TO COMPLY WITH THE UNDERTAKER'S SAFETY POLICY

DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 1.0m TO 1.5m TYPICAL MANHOLE DETAIL-TYPE C (PCC RING)

TYPICAL MANHOLE DETAIL-TYPE B

MAX DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 3.0m

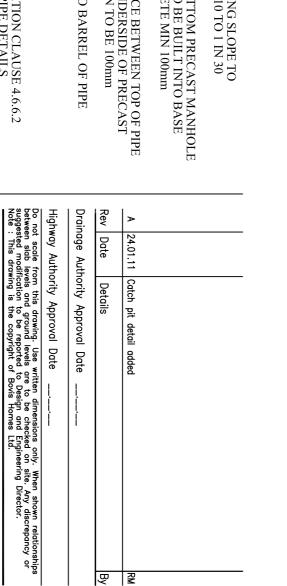
THE DESIGN OF MANHOLES WILL NEED TO COMPLY WITH THE UNDERTAKER'S SAFETY POLICY

Joint to be as close as practicable to face of manh to permit satisfactory joint and subsequent movement

Pipe joint with channel to be located max. 100 inside face of chamber

ALL manholes are to be built using sulphate resisting cement to prevent damage due to septicity to comply with BRE Digest 363, Class 4.

MANHOLES WITH OUTGOING
PIPES GREATER THAN 600mm
DIA SHOULD BE FITTED WITH
GUARD BARS, SAFETY CHAINS
OR OTHER SAFETY DEVICES



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KINGSMERE, KM2 **BICESTER**

TYPICAL DRAINAGE DETAILS

DRAWN BY SCALE: SIN ₽ CHECKED/DATE RH 08.11.10 BICE 7 952

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2. For adoptable roads and sewer details wings 5_500 series

BACKFILL MATERIAL - AS SPECIFIED IN DRAIN DETAIL.

CONCRETE SURROUND.

_ MIX ST2

(USING SULPHATE
RESISTING CEMENT)

CONCRETE BED.

MIX ST2
(USING SULPHATE RESISTING CEMENT)

900mm x 600mm min. cover bedded on morta

Brickwork or precast masonry units to be corbelled to suit cover

CLOSED CELL
POLYETHYLENE
JOINT FILLER.

<u>Building Drainage</u> 3. All connections to adoptable manholes from private building drainage to be 150mm specified. 4. All house drainage to be 100mm dia unless otherwise stated, and laid in accordance with current Building Regulations and BS8301 : 1985.

 Pipes entering and leaving manholes/inspection chambers shall include a rocker pipe, 600mm in length.
 Brickwork to chambers shall be Class B Engineering to BS3921.
 Rainwater pipes are to be sited on side elevations whenever possible. Regrade

11. All retaining walls with a height of 600mm or greater are to include 1.2m high post and rail fencing unless rear gardens. Similar retaining walls in rear gardens are to include 900mm height picket fence. All drainage products are to be Hepworth Supersleve or Osma.
 Pipe bedding material is to be Class B with 150mm minimum thickness surround. 8. Pipe protection of house drainage runs is required in accordance with the Typical House Drainage Details drawing. The contractor shall satisfy themselves and agree with the Site Management the actual extent of pipe protection required. Backfill is to be be with selected fill free of stones larger than 40mm, lumps of clay over 100mm, timber, terial and vegetable matter.

Class B engineering bricks
or precast concrete masonry
units 225mm thick
Arch over pipe

Mortar haunching to M.H. cover and frame