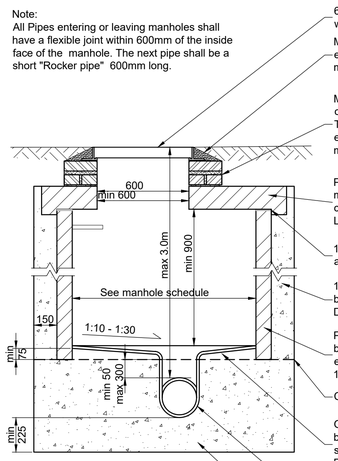
Note:
All Pipes entering or leaving manholes shall have a flexible joint within 600mm of the inside face of the manhole. The next pipe shall be a short "Rocker pipe" 600mm long.



600x600mm clear opening cover to comply with BS EN 124 and BS 7903

Manhole frame to be set to level, bedded and haunched externally over the abase and sides of the frame in mortar, in accordance with the manufacturer instructions.

Min 2 courses Class B Engineering bricks or concrete blocks **or**
Type 1 cover frame seating ring with 600x600 eccentric access hole (BS 752-3) beaded on mortar

Precast concrete cover slab bedded with mortar, plastomeric or elastomeric seal conforming to BS EN 1917 and BS 5911-3. Lifting eyes in concrete to be pointed

10mm uncompressed thickness of approved sealant.

150mm thick in-situ concrete surround to be GEN3 (designed to BRE Special Digest 1 Concrete in Aggressive Ground)

Precast concrete manhole sections bedded with mortar, plastomeric or elastomeric seal conforming to BS EN 1917 and BS 5911-3

Construction joint

Grano Concrete benching (Min 20mm thick) to be brought up to a dense smooth face neatly shaped and finished to all branch connections. Benching slope to be between 1:10 and 1:30.

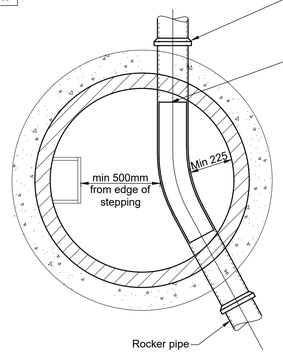
Invert within chamber to be formed using a channel pipes.
Pipes of different diameter entering the manhole should be installed with soffits at the same level.

GEN3 concrete (sulphate resisting)

Typical Manhole Detail
Type 2 - Sewers for Adoption 7th Edition
1:20

Min Manhole Diameters

Largest Pipe Ø in manhole [mm]	Internal Ø of manhole [mm]
Less than 375	1200
375 - 450	1350
500 - 700	1500
750 - 900	1800
Greater than 900	pipe Ø + 900



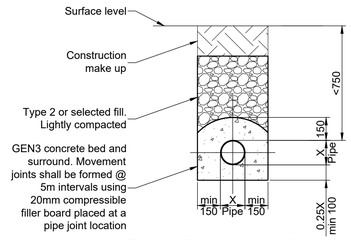
Joint to be as close as possible to face of manhole to permit satisfactory joint and subsequent movement

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

All Pipes entering or leaving manholes shall have a flexible joint within 600mm of the inside face of the manhole. The next pipe shall be a short "Rocker pipe" 600mm long.

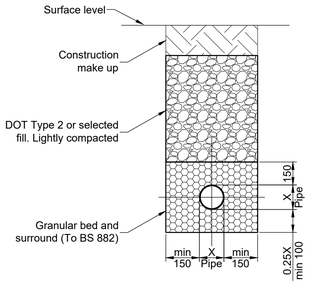
Rocker Pipes

Sewer Diameter [mm]	Effective Length [mm]
150 to 600	600
over 600 to 750	1000
over 750	1250



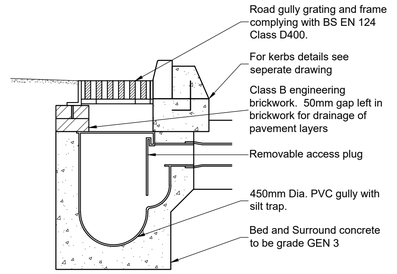
Typical Pipe Bedding With Concrete Bed and Surround
1:20

GEN3 concrete bed and surround to be used under paved areas where the depth between the finished construction level and the Barrel of the drain is less than 750mm.

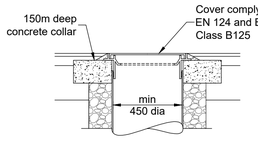


Typical Pipe Bedding With Granular Bed and Surround
1:20

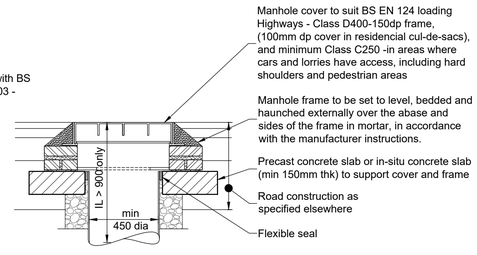
Granular bed and surround to be used where concrete bed and surround are not required.



Typical PVC Gully Detail
1:20



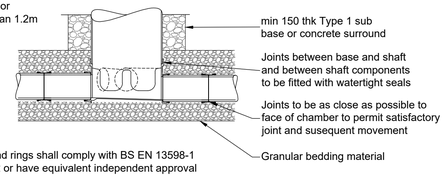
Cover for Driveways, Footpaths and Landscaped Areas
1:20



Min 900mm IL, for shallower chambers use Type 3 (precast concrete rings) or Type 4 (brick manhole)

Cover for Roads and Carparks
1:20

Access opening to be restricted to 350mm diameter or 300x300mm where depth of chamber to inverts is more than 1.2m



Plastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 or have equivalent independent approval

Polypropylene Inspection Chamber (PPIC) Detail
1:20

SAFETY,HEALTH & ENVIRONMENTAL HAZARD INFORMATION BOX.

The hazards noted below are in addition to the normal hazards and risks faced by a competent contractor when dealing with the types of works detailed on this drawing.

CONSTRUCTION RISKS:

DEMOLITION RISKS:

MAINTENANCE / CLEANING RISKS:

Notes:

1. DO NOT SCALE FROM THIS DRAWING.
2. All dimensions are in millimetres Unless Noted Otherwise (u.n.o.)
3. Drawing is to be read in conjunction with all relevant architect's drawings. Any inconsistencies should be reported to PRP immediately.
4. All levels and dimensions are to be checked on site before any work commences.
5. For more information see PRP drawings:
   63364 - 100series - Drainage and External Works
   63364- 200series - Foundations
   63364 - 300series - Superstructure
6. The Health and Safety at Work act is to be complied with at all times. Attention is drawn to the wearing of hard hats, safety boots, reflective clothing, and the use of any other required safety equipment.

Drainage:

1. The position, line, level and diameter of all existing drainage apparatus should be confirmed on site prior to the commencement of the works. Any discrepancies should be reported to PRP immediately.
2. The connection of foul and surface water drainage to the existing public sewer system shall be subject to the approval of the water authority
3. Drainage designed in accordance with the Sewerage Sector Guidance, Design and Construction Guidance ("the Code") Approved Version 2.0, 10 March 2020.
4. All joints between precast manhole components shall have a minimum uncompressed thickness of 10mm of proprietary bitumen or resin mastic sealant.
5. Gully connections are to be laid at gradients of at least 1:100
6. All in-situ concrete shall be minimum grade GEN3.
7. Precast concrete cover & reducing slabs to be heavy duty reinforced concrete to BS 5911.
8. Manhole covers & frames shall be manufactured in cast iron or ductile iron & shall comply with requirements of BS EN 124 & shall be kite marked or equivalent.
9. All completed work shall be suitably protected from damage by construction work. Damaged drainage will not be accepted. It is recommended that no heavy loading or underground work is permitted above or near unprotected drainage, and that dumpers, trucks, fork lifts or other heavy vehicles are not driven along or near pipe runs.
10. Inspection chambers, manholes, catchpits, bypass separators and ACOs to be installed in accordance with manufacturer's instructions

Rev	Date	Description	By / Chk
T1	23/11/2021	Issued for tender	SPT/ HP

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Client:
Paloma I Propco Ltd

Architect:
Darling Associates

Project:
Site 2
Ruscote Avenue
Banbury

Title:
Proposed Drainage Details

Status:
TENDER

Engineer:	SPT	Date:	November 2021
Drawn:	SPT	Scales @ A1:	1:200
Checked:	HP		
Project No:	63364	Drg No: 106	Rev: T1