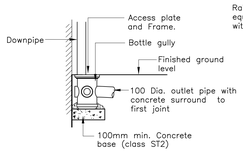
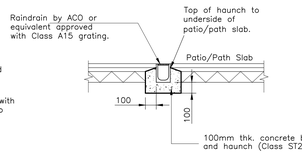
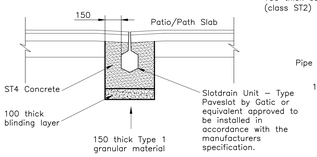


Rainwater Pipe Detail

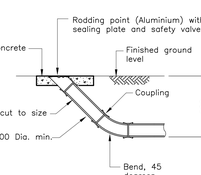


Grated Drainage Channel Detail

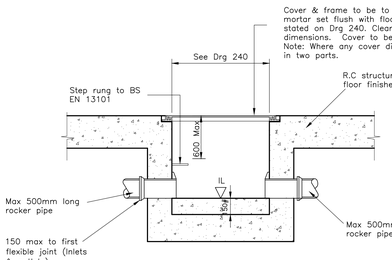
Pedestrian Area

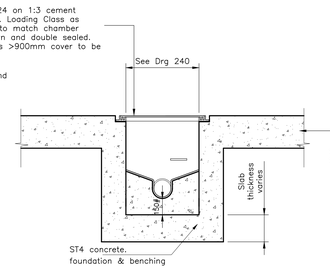


Slotdrain Detail



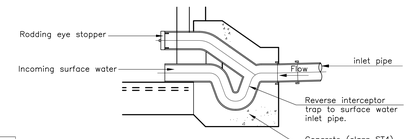
Rodding Eye Detail





Internal Rectangular Manhole

– Level difference between stated pipe invert and SSL to be minimum 150mm.

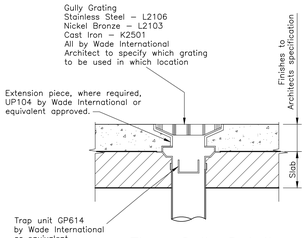


Reverse Interceptor Detail

Use at surface water connections into combined drainage at locations shown on Drgs 201 & 202.

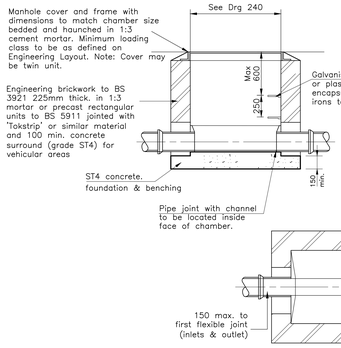
General Notes

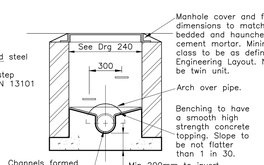
1. All manhole covers and frames are to be in accordance with BS EN124.
2. All dimensions are in millimetres unless otherwise stated.
3. Pipes and channels to be either:
   Concrete to BS EN 1916 & BS 5911
   Extra Strength Vitrified Clay to BS EN 295
   Unplasticised PVC to BS EN 1401
4. All concrete used in drainage works shall comply with BRE Special Digest SD1 for the following aggressive conditions in the ground:
   - Design sulphate class DS–1
   - Aggressive chemical environment class AC–2z
   - Design concrete class DC–2z
   - No additional protective measures required.
5. All drainage to be constructed in accordance with BS EN 752.
6. Proprietary products shown on drawing shall be installed entirely in accordance with the manufacturer's specification
7. Where a proprietary product is specified a "equivalent approved" product may be utilised following submission to and approval by the Engineer. It should be noted that use of alternative products may result in various dimensional changes to adjacent elements of the works.
8. The Contractor shall provide adequate protection to all drainage works from potential construction plant loading prior to achievement of final proposed surface levels.
9. All drainage is to be CCTV surveyed and a copy of the findings issued to the Employer prior to final hand–over.



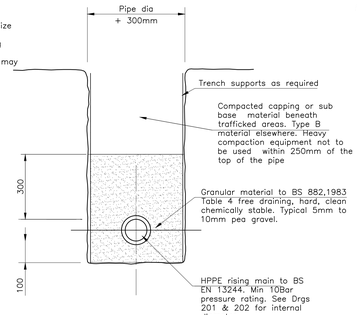
Floor Gully Detail

All product references are Wade International equivalent approved may also be used, See General notes 6 and 7.

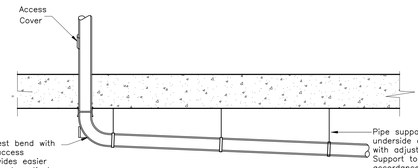




Typical External Rectangular Manhole Detail – Foul Drainage

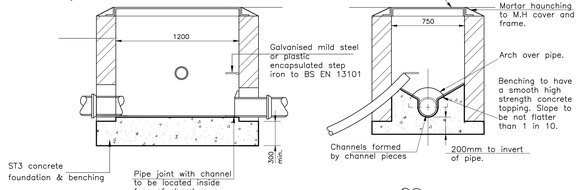


Pumped Main Typical External Section

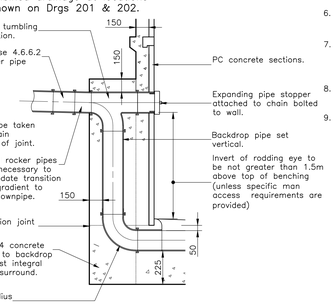


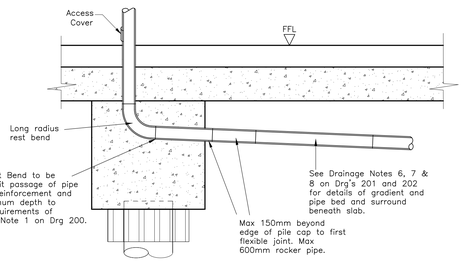
Suspended Drainage Detail

Suspended pipes, fittings and supports to be as 'Ensign' Saint–Gobain or similar approved manufactured in accordance with BS EN 877.
All pipework shall be installed in accordance with BS EN 12056.
All pipework to be 100mmø unless otherwise stated.
Min gradients: Rainwater 1n80, Foul 1in60.
Rodding access points shall be provided at all bends and junctions.

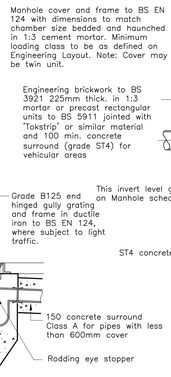


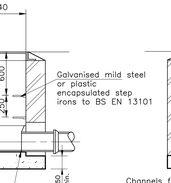
Typical Vertical Backdrop Detail.

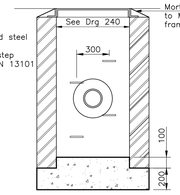


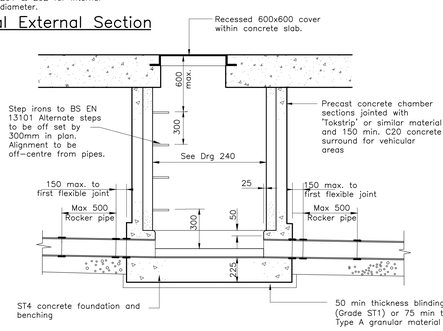


Typical Detail of Rest–Bend Through Ground Beam or Pile Cap



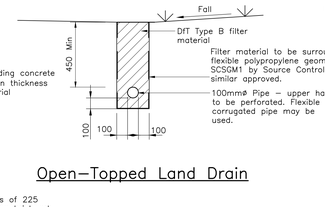


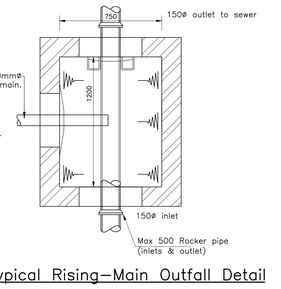


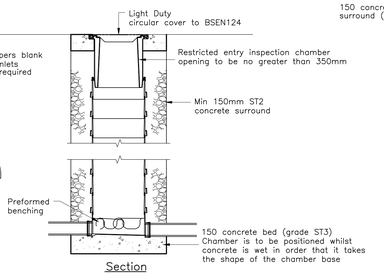


Precast Concrete Ring Inspection Chamber with Recessed Cover

(For use with foul drainage)



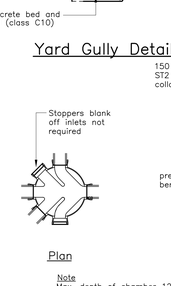


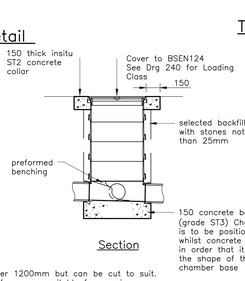


Note: Use suitable proprietary product according to depth and installed in accordance with manufactures instructions. Osma Tegra 600 or Hepworth TPPIC or similar approved

Deep Non–Entry Inspection Chamber Detail (Polypropylene)

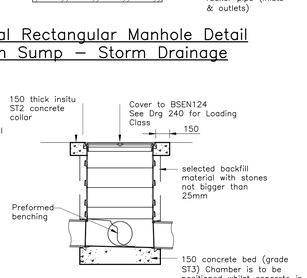
Suitable for depths ranging from 1.2m–5m deep
See Drg 240 for further details



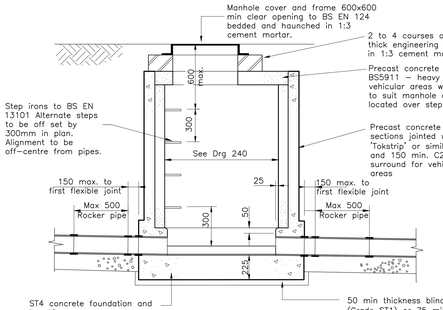


Note
Max. depth of chamber 1200mm but can be cut to suit.
Cl cover and plastic frame are suitable for use in 'situations where wheel loads do not exceed 1.5 tonnes'.

Yard Gully Detail

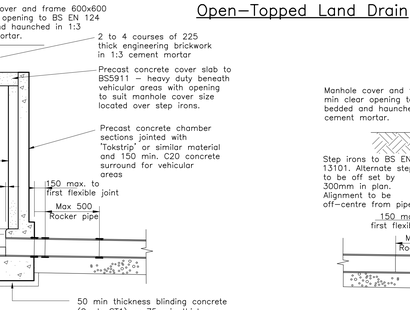


Typical Rectangular Manhole Detail with Sump – Storm Drainage



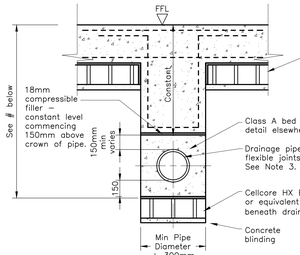
Typical Precast Concrete Ring Inspection Chamber

(For use with foul drainage)



Typical Precast Concrete Ring Inspection Chamber

(For use with surface water Drainage)



Precast Concrete Ring Inspection Chamber with Sump (For use with Surface water Drainage)

NOTE:
Cellcore HX where depth of concrete ≤ 900mm.
Cellcore HG where depth of concrete 900–1940mm.

Pipe Bedding Detail Beneath Basement Slab – Where Ground Heave Protection Is Required – See also 9100–DRG–34YY–00201 & 9100–DRG–34YY–00202

#The recommended maximum permissible load applied by the wet concrete as associated with the heave protection material shall not be exceeded. Where necessary the concrete shall be placed in stages so as not to exceed this load.

Pipe Bedding & Sidefill Materials.

Type A bedding material shall be aggregates conforming to BS EN 13242, or BS EN 1047, nominal single–size or graded complying with the recommendations of WIs No. 4–08–01 as follows :–

TABLE 1 :

Pipe dia. (minimum)	Single–size.	Graded.
Over 100 to 150	10mm nominal single–size.	
Over 150 to 500	10 or 14mm nominal single–sized.	14mm to 5mm graded
Over 500	10,14 or 20mm nominal single–sized.	14 or 5mm graded or 20mm to 5mm graded.

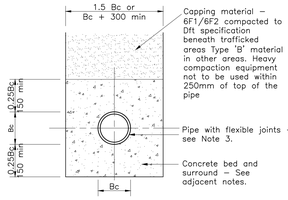
Type B material shall be selected excavated or imported material consisting of uniform, readily compactible material, free from vegetable matter, building rubbish and frozen material, or materials susceptible to spontaneous combustion, and excluding clay of liquid limit greater than 80 and/or plastic limit greater than 55 and materials of excessive high moisture content. Clay lumps and stones retained on 75mm and 37.5mm sieves respectively shall be excluded from the fill material.

Pipes Laid with a Concrete Bedding Surround

Class A concrete surround to be minimum cube strength 2 at 28 days of 20N/mm for non–aggressive soils. For aggressive soil conditions the concrete mix shall be in accordance with the requirements of BRE Digest 250, or BRE paper CP23/77 as appropriate. The backfill, other than the first 150mm of cover, should not be placed before the compressive strength of the site concrete has reached 14N/mm . The concrete mix should be so designed that this is reached without A compressible filler shall be placed throughout the concrete surround at all pipe joints. This shall consist of bitumen impregnated insulating board to B.S 1142, or other equally compressible material. The thickness of compressible filler shall be as follows :–

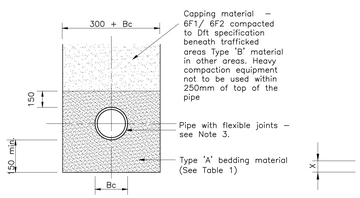
Nominal diameter of pipe (mm)	Thickness of Compressible filler (mm)
Less than 450	18
450 – 1200	36
Exceeding 1200	54

Compressible packing for use between pipes and precast concrete setting blocks shall consist of bitumen damp– proof sheeting complying with B.S 743.



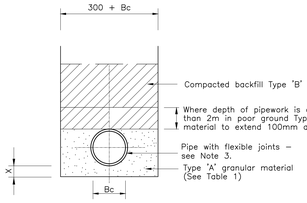
CLASS 'A'

Use where depth to pipe soffit <1200 beneath external trafficked areas, and <600mm beneath all other areas.



CLASS 'S'

Use beneath external trafficked areas where depth to pipe soffit is >1200mm.



CLASS 'F'

Use beneath non–trafficked areas only where depth to pipe soffit is > 600mm

NOTE
X = 50mm but in rocky ground or very soft or wet ground bedding to be increased to 100mm
Pipe bedding to be in accordance with BS 8301

Typical Private Pipe & Bedding Details

Polypropylene Inspection Chamber Details

Where located within 1m of a trafficked area (including a footway) chamber to have 150mm min. concrete surround

600ø Polypropylene Inspection Chamber Details

Where located within 1m of a trafficked area (including a footway) chamber to have 150mm min. concrete surround

AS BUILT DRAWING
This drawing has been provided as an 'As Built' drawing based on information provided by MOUNT ANVIL.

REV	DATE	DESCRIPTION	BY	CHK'D
AB1	19.09.18	Issued 'As Built',	JW	SFK
C2	27.03.17	Internal manhole detail amended with information regarding benching.	JSR	SFK
C1	14.02.17	Open–topped land drain detail added.	JSR	SFK
–	21.12.16	First issue under amended drawing number, previous drawing No. 9100–DRG–28YY–DE280. Pipe bedding detail beneath basement slab added.	JSR	SFK

MOUNTANVIL

TITLE:
Private Drainage Details
Sheet 1 of 2
PROJECT:
Project No:11581
Kidderpore Avenue
SCALE: 1:20@A0 DATE: June 2016 DRAWN: JSR CHK'D: SFK
DRG NO. 9100–DRG–34YY–DE280AB1 REV.

Tully De'Ath consultants
Engineering at its Best
T: 01342 828 000
E: info@tullydeath.com
W: www.tullydeath.com