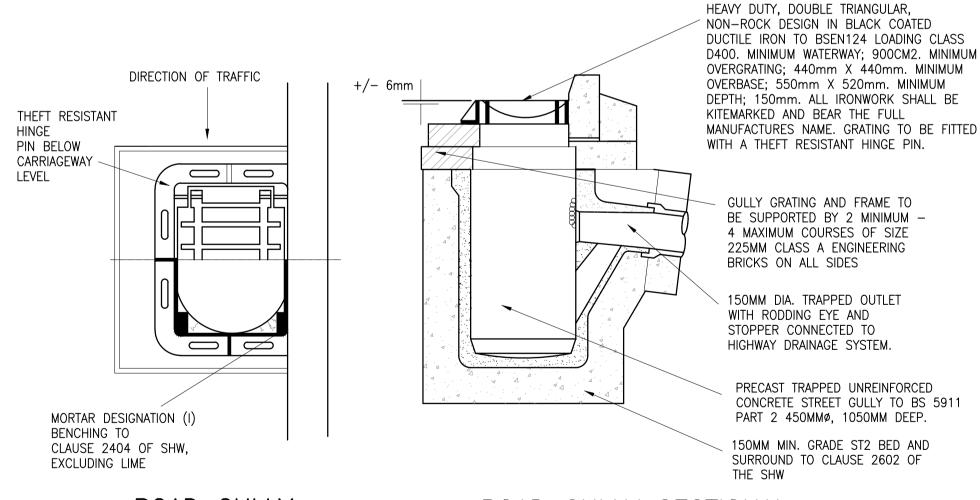


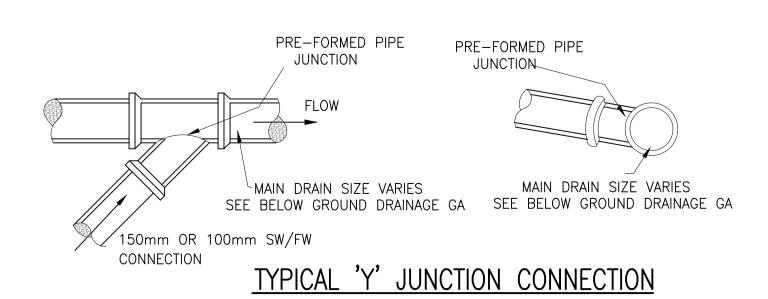
# TYPICAL MANHOLE DETAIL - TYPE 1B DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3m TO 6m

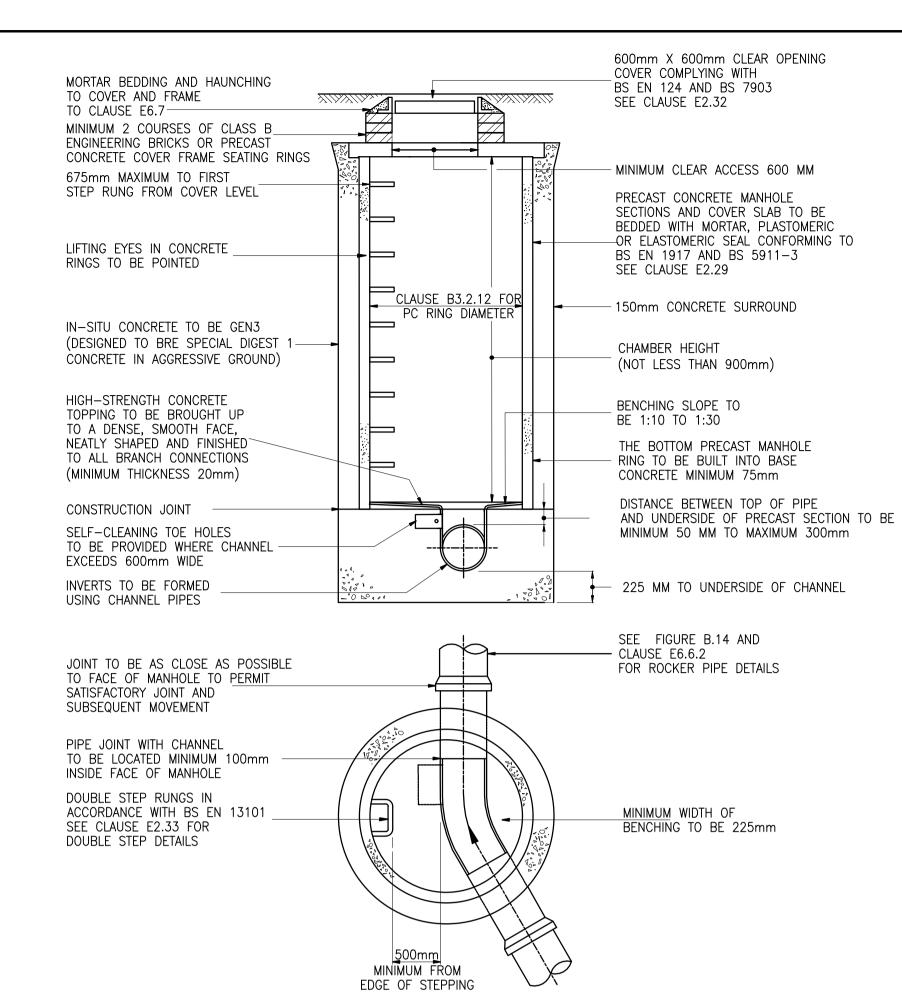


# ROAD GULLY PLAN ELEVATION

# ROAD GULLY SECTIONAL SIDE ELEVATION

HINGED ROAD GULLY GRATING AND FRAME:





## FIGURE B.12 TYPICAL MANHOLE DETAIL - TYPE 2

MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3.0m

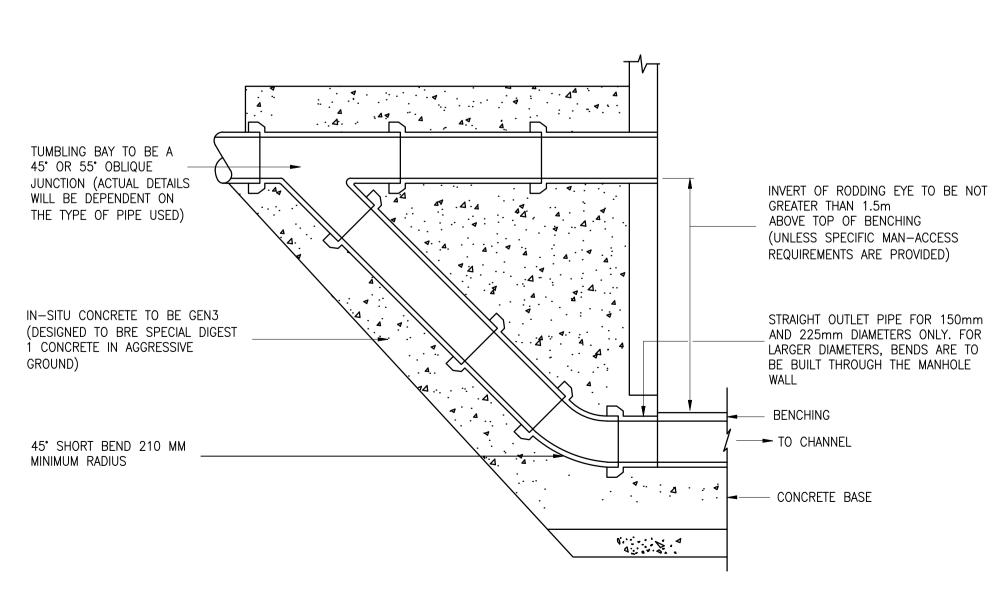


FIGURE B.15 TYPICAL EXTERNAL RAMPED BACKDROP DETAIL

## TABLE A

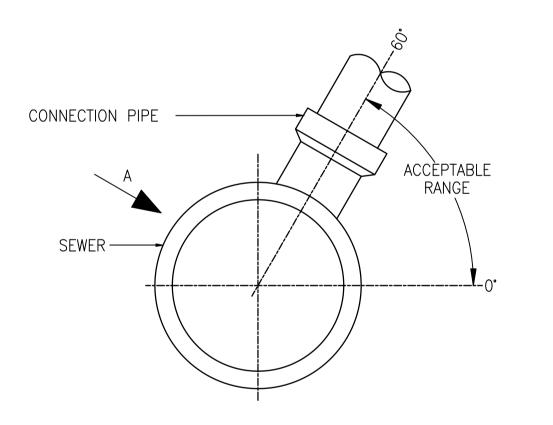
DIAMETER OF LARGEST PIPE IN MANHOLE (MM)	INTERNAL DIAMETER OF MANHOLE (MM)
LESS THAN 375	1200
375 – 700	1500
700 – 900	1800

#### TABLE B

PIPE DIAMETER (MM)	ROCKER PIPE LENGTH (M)
150 — 600	0.6
OVER 600 - 750	1.0
OVER 750	1.25

### TABLE C

PIPE DIAMETER (MM)	THICKNESS OF COMPRESSIBLE MATERIAL (MM)	
LESS THAN 450	18	
450 — 1200	36	
EXCEEDING 1200	56	



CROSS-SECTIONAL VIEW OF SEWER

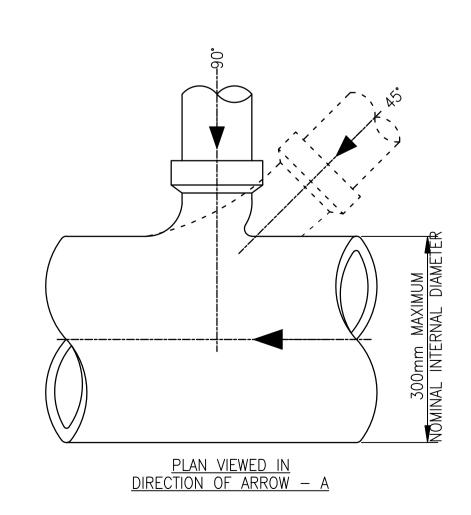


FIGURE B.24 CONNECTIONS TO SEWER

**GENERAL:** 

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE STATUTORY UNDERTAKERS, PRIOR TO THE COMMENCEMENT OF THE WORKS, TO ESTABLISH THE EXACT POSITION OF THEIR PLANT, WHICH SHALL BE CONFIRMED BY HAND DUG TRIAL PITS.

3. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH WATER SERVICES ASSOCIATION, 'SEWERS FOR ADOPTION', 7th EDITION, DEPARTMENT OF TRANSPORTS 'SPECIFICATION FOR HIGHWAY WORKS' PUBLISHED BY HMSO AND TO THE SATISFACTION OF BUILDING REGULATIONS PART H.

4. ALL CONCRETE AND CONCRETE PRODUCTS BELOW GROUND LEVEL SHALL BE SULPHATE RESISTING PORTLAND CEMENT CLASS GEN3 IN ACCORDANCE WITH BRE SPECIAL DIGEST 1.

5. ALL PIPE CONNECTIONS SHALL BE MADE SOFFIT TO

6. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE DRAINAGE WORKS FOR THE DURATION OF THE CONTRACT.

7. DRAINS TO BE CONSTRUCTED USING FLEXIBLY JOINTED VITRIFIED CLAY PIPES TO BS 65:1991 "SUPER STRENGTH" SPECIFICATION AND BS EN 295-1:1995 (HEPWORTH SUPERSLEVE OR SIMILAR APPROVED) OR FLEXIBLY JOINTED CONCRETE PIPES TO BS 5911-1:2002 OR UPVC BUILDING DRAINAGE SYSTEM PIPE WORK TO BS EN 1401:2009. BEDDED AND BACK FILLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL TESTED IN ACCORDANCE WITH BS EN 1610:1998.

8. PRIVATE FOUL WATER AND SURFACE WATER DRAINAGE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE BUILDING REGULATIONS PART H (BS 8301:1985), BS EN 752:2008 AND RELEVANT AGREEMENT CERTIFICATES. ALL TESTED IN ACCORDANCE WITH BS EN 1610:1998.

9. ALL MANHOLE COVERS SHALL BE BADGED 'SW' FOR SURFACE WATER AND 'FW' FOR FOUL WATER ACCORDINGLY.

10. GULLY POTS SHALL BE PROVIDED WITH A HOT DIP GALVANISED STOPPER AND CHAIN WITH A BAYONET TYPE FIXING WITH A 150mmø OUTLET PIPE.

11. THE GULLY GRATING AND FRAME SHALL BE SET AT A LEVEL OF +/-6mm BELOW THE FINISHED GROUND

12. ALL GULLY CONECTIONS MUST BE AIR TESTED IN ACCORDANCE WITH CL. 509 OF SHW.

13. RIGID PIPES ENCASED IN CONCRETE SHALL HAVE A MOVEMENT JOINT CONSISTING OF 13mm COMPRESSIBLE BOARD AROUND THE SPIGOT NEXT TO THE SOCKET. EITHER AT EACH JOINT OR NOT EXCEEDING 5 METRE INTERVALS.

14. CONCRETE COVER TO ANY OF THE PIPES MAY BE FORMED TO A RADIUS BATTER OR HORIZONTAL SURFACE.

15. REINFORCED IN-SITU CONCRETE TO CL. 1700 OF UNREINFORCED IN-SITU CONCRETE TO CL. 2602 OF

16. CEMENT MORTAR FOR BRICKWORK AND HAUNCHING TO MANHOLE COVERS AND FRAMES TO BE DESIGNATION

17. 'TOKSTRIP' SEALANT OR SIMILAR APPROVED TO BE USED IN ALL PRECAST JOINTS.

(i) TO CL. 2404 OF SHW.

MC GW 06.04.11

Dm: Chk: Date: P1 ISSUED FOR INFORMATION

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BELOW GROUND DRAINAGE DETAILS SHEET

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