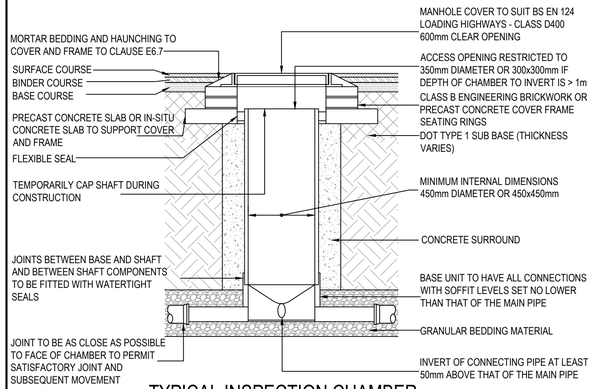


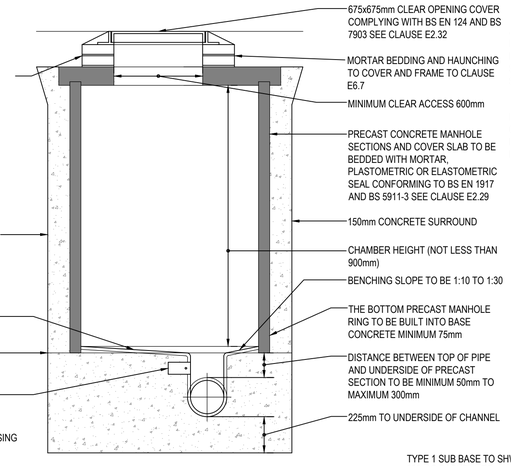
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3

(REFER TO FIG. B.16 OF SEWERS FOR ADOPTION 7th ED)
(DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3m)
(FLEXIBLE MATERIAL DETAIL)

PIPE DIA.	ROCKER PIPE LENGTH
100 - 600	0.60m
675 - 750	1.00m
OVER 750	1.25m

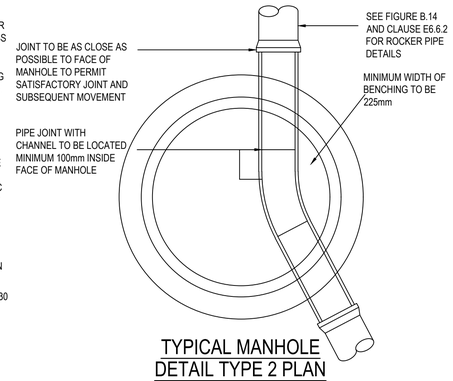
ROCKER PIPE DETAILS

MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING 3m, NON-ENTRY. PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL



TYPICAL MANHOLE DETAIL TYPE 2

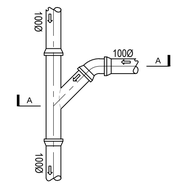
(REFER TO FIG. B.12 OF SEWERS FOR ADOPTION 7th ED)
(MAXIMUM DEPTH FROM COVER TO SOFFIT LEVEL OF PIPE - 3.0m) SCALE 1:20



TYPICAL MANHOLE DETAIL TYPE 2 PLAN

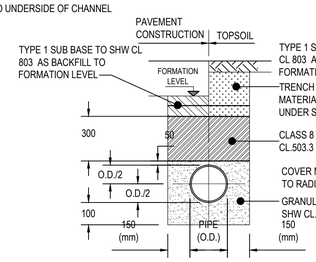
SCALE 1:20

SECTION A-A
Scale 1:20



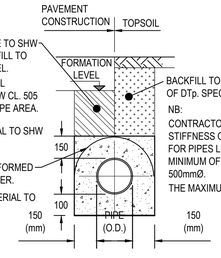
PREFORMED 'Y' BRANCH CONNECTION

Scale 1:20



TYPE S BEDDING

GRANULAR BED AND SURROUND UNDER ROAD
(BEDDING FACTION = 2.2)
SCALE 1:20



TYPE Z BEDDING

CONCRETE BED AND SURROUND
(BEDDING FACTION = 2.6)
SCALE 1:20

BEDDING NOTES:
1. REFER TO SHW TABLE 5/3 AND SHW TABLE 6/1

2. BEDDING BENEATH AND AT SIDES OF THE PIPE TO BE WELL COMPACTED IN ACCORDANCE WITH CL 505.

3. CONCRETE CRADLES AND ARCHES MAY BE EXTENDED TO THE SIDES OF THE TRENCH.

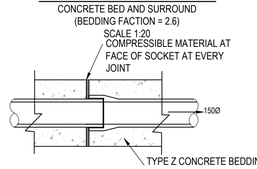
4. GEOTEXTILES MAY BE USED WHERE DIRECTED OR APPROVED BY THE ENGINEER TO CONTAIN BEDDING MATERIAL IN CERTAIN SOILS EG. RUNNING SAND.

5. IN VERY WET CONDITIONS, WHERE DIRECTED OR APPROVED BY THE ENGINEER A TEMPORARY LAND DRAIN MAY BE LAID WITHIN THE GRANULAR BED.

NOTES: (TYPE Z ONLY)

6. WHERE PIPES WITH FLEXIBLE JOINTS ARE USED, THE CONCRETE PROTECTION IS TO BE INTERRUPTED OVER ITS FULL CROSS SECTION AT INTERVALS NOT EXCEEDING 5 METRES (OR AS DIRECTED BY THE ENGINEER) BY A SHAPED FORMER OF BITUMEN IMPREGNATED MIN. 18mm COMPRESSIBLE FILLER. THESE INTERRUPTIONS SHALL COINCIDE WITH PIPE JOINTS. (SEE TABLE E5 IN SFA 7th EDITION.

7. CONCRETE TO BE FND4 WHERE FLEXIBLE PIPES ARE USED. CARE MUST BE TAKEN TO PREVENT THE PIPES FROM FLOATING.

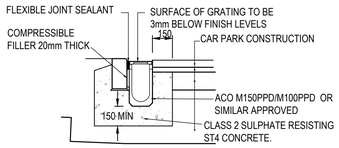


TYPE Z BEDDING ELEVATION

CONCRETE BED AND SURROUND
SCALE 1:20

BEDDING DETAILS

SCALE 1:20

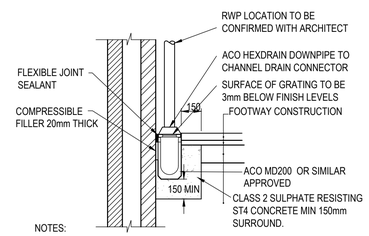


NOTES:

1. DRAINAGE CHANNELS TO BE ACO M150PPD OR SIMILAR APPROVED
2. FOUNDATION FOR CHANNELS TO BE LAID ON A ROLLED SUB-BASE OF 150mm MINIMUM THICKNESS.
3. GRATING LOAD CLASSIFICATION TO BE C250/ D400

DRAINAGE CHANNEL DETAIL

SCALE 1:NTS

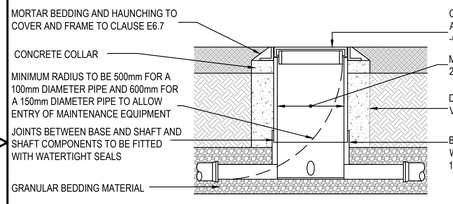


NOTES:

1. DRAINAGE CHANNELS TO BE ACO MD200 OR SIMILAR APPROVED WITH CONSTANT CHANNEL DEPTH 265-365mm.
2. FOUNDATION FOR CHANNELS TO BE LAID ON A ROLLED SUB-BASE OF 150mm MINIMUM THICKNESS.
3. GRATING LOAD CLASSIFICATION TO BE C250/ D400
4. RWP'S TO HAVE ACO HEXDRAIN CONNECTORES TO CHANNEL GRATINGS - REFER TO MANUFACTURERS GUIDELINES

RAINWATER PIPE/DRAINAGE CHANNEL CONNECTION DETAIL

SCALE (NTS)



TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4B WITHIN LANDSCAPE AREAS

(REFER TO FIG. B.21 OF SEWERS FOR ADOPTION 7th ED) SITED IN DOMESTIC GARDENS
(FLEXIBLE MATERIAL DETAIL)
SCALE 1:20

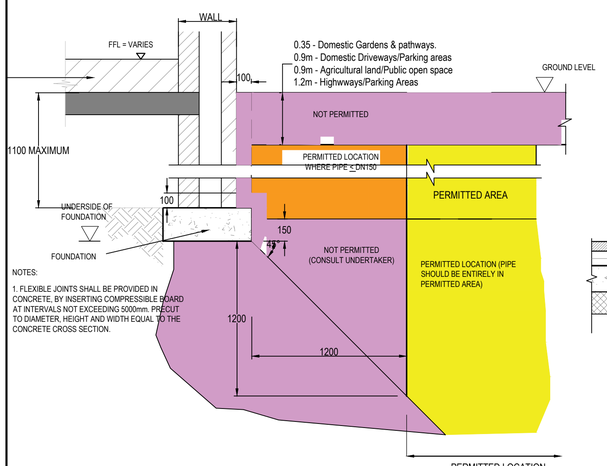
ROAD GULLY DETAIL

SCALE 1:20

GULLY TOP SHALL COMPLY WITH BS EN 124: 1994 FOR INSTALLATION WITHIN AREAS SUBJECTED TO PEDESTRIAN AND/OR VEHICULAR TRAFFIC. GULLY TOP SHALL BE OF APPROPRIATE CLASS AND BE DEPENDANT UPON THE PLACE OF INSTALLATION WITH THE ADDITIONAL PROVISION THAT ALL GULLY TOPS LOCATED IN AREAS WHERE VEHICLES CAN ACCESS (VERGES ETC.) SHALL BE CLASS D400 MINIMUM. ALL GULLY TOPS SHALL BE SINGLE PIECE, CAPTIVE HINGED, NON-ROCKING AND FREE FROM DEFECTS WHICH MAY IMPAIR THEIR FITNESS FOR USE. THE SLOT DIMENSIONS IN THE GULLY GRATING SHALL BE SELECTED HAVING REGARD OF THE HYDRAULIC CAPACITY AND SHALL BE EVENLY DISTRIBUTED OVER THE CLEAR AREA. THE WATER CLEAR AREA AS GIVEN IN THE MANUFACTURER'S CATALOGUE. NORMAL WIDTH OF GULLY GRATING SHALL BE 450mm MINIMUM AREA OF WATERWAY SHALL BE 1000cm CLEANSING ACCESS – THE OPENED UNIT SHALL PROVIDE A RECTANGULAR CLEAR OPENING 400mm x 250mm.

IF SLOT ORIENTATION TO DIRECTION OF TRAFFIC IS BETWEEN 00 & 450 & 1350 TO 1800, THE MAX LENGTH OF SLOT IS WIDER THAN 16mm. ALL COVERS, GRATINGS AND FRAMES SHALL BEAR APPROPRIATE MARKINGS TO COMPLY WITH CLAUSE 9: BS EN 124: 1994 AND SHALL BE CERTIFIED BY CERTIFICATION BODIES APPROVED BY THE AUTHORITY AND SHALL BE BEDDED ON CLASS B ENGINEERING BRICK TO BS 3921 (CLASS 1 MORTAR 12MM THICK) - 2 COURSE MIN - 4 COURSE MAX. BRICKWORK TO BE 225mm THICK ENGLISH BOND. WITHOUT EXCEPTION, GULLY POT SHALL BE PRECAST CONCRETE CONSTRUCTION TO BS 5911: PART 230: 1994: TABLE 2 WITH 150mm DIAMETER TRAPPED OUTLET, HAVING A GALVANISED METAL CHAIN AND CONCRETE STOPPER.

GULLY POT TO BE BEDDED AND SURROUNDED WITH 150mm CONCRETE CLASS 20/25. DIMENSION "A" TO BE 900mm MINIMUM BELOW CARRIAGEWAY TO ALLOW FOR SERVICES TO CLEAR GULLY CONNECTIONS AND REDUCE THE RISK OF DAMAGE TO PIPES USE TO SETTLEMENT. WHERE DEPTH OF RUN IS BELOW 1.2M BELOW FINISHED C/WAY LEVEL A FLEXCELL JOINT IS TO BE USED AT EVERY JOINT.

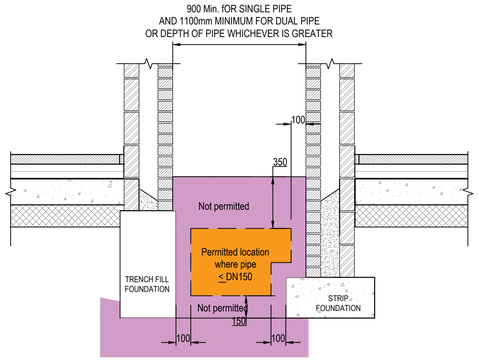


NOTES:

1. FLEXIBLE JOINTS SHALL BE PROVIDED IN CONCRETE. BY INSERTING COMPRESSIBLE BOARD AT INTERVALS NOT EXCEEDING 5000mm. PRECUT TO DIAMETER, HEIGHT AND WIDTH EQUAL TO THE CONCRETE CROSS SECTION.

TYPICAL DRAINAGE DETAIL IN CLOSE PROXIMITY OF FOUNDATIONS

(DETAIL IN ACCORDANCE WITH SFA FIGURE B1)



TYPICAL DRAINAGE DETAIL IN CLOSE PROXIMITY OF FOUNDATIONS

(DETAIL IN ACCORDANCE WITH SFA FIGURE B2 (WHERE FIGURE B1 IS NOT APPICABLE ONLY)

NOTES:

1. MH COVERS AND FRAMES TO CONFORM TO BS EN 124:
-HIGHWAYS AND FOOTWAYS TO FRONT OF BUILDINGS (D400)
-FOOTWAYS TO REAR OF BUILDINGS (C250)

2. TYPE S BEDDING AND SURROUND TO ALL PIPES EXCEPT IN THE FOLLOWING CIRCUMSTANCES, IN WHICH TYPE Z BEDDING AND SURROUND ARE TO BE USED:
-IN BACK GARDENS OF HOUSES WHERE DEPTH TO CROWN OF PIPE IS LESS THAN 0.35m.
-IN AREAS OF THE REAR OF FLATS AND PARKING WHERE DEPTH TO CROWN IS LESS THAN 0.9m.
-IN AREAS OF ROAD WHERE DEPTH IS LESS THAN 1.2m.

3. ALL EXISTING MANHOLE INVERTS TO BE CHECKED AND REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF DRAINAGE WORKS. EXISTING PIPE CONNECTIONS ARE TO BE CCTV SURVEYED AND INSPECTED BY THE ENGINEER AND LOCAL AUTHORITY. IF THE PIPE CONNECTION IS FOUND TO BE DAMAGED OR IN DISTRESS, THE CONTRACTOR IS TO CARRY OUT REMEDIAL WORKS OR PROVIDE A NEW CONNECTION TO THE EXISTING SEWER (PIPE SIZE AND GRADIENT TO BE DETERMINED BY THE ENGINEER.

4. ALL ADOPTABLE THERMOPLASTIC STRUCTURED WALL SEWER PIPE SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 13476-1 AND WIS 4-35-01 AND BS EN 13476-2 OR BS EN 13476-3. PIPES SHALL BE BSI KITEMARKED OR HAVE EQUIVALENT THIRD PARTY CERTIFICATION. PIPES LESS THAN OR EQUAL TO 500mm DIA. SHALL HAVE A SHORT-TERM RING STIFFNESS OF NOT LESS THAN 8kN/m² (SN8).

5. ALL JOINTING IN ACCORDANCE WITH MANUFACTURERS TECHNICAL ADVICE & SPECIFICATION.

6. ALL NON ADOPTABLE DRAINAGE TO BE THE STANDARD UPVC 110mm, 160mm DRAINAGE AND MANUFACTURED TO BS-EN 1401 AND BS 4660 UNLESS NOTED OTHERWISE.

7. ALL STORM WATER DRAINAGE TO BE A MINIMUM OF 150mm DIAMETER UNLESS OTHERWISE NOTED.

8. SOIL & VENT PIPE LOCATION AND NUMBER TO BE CONFIRMED WITH ARCHITECT.

9. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS DRAWINGS, TOGETHER WITH THEIR LATEST SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER (VALE CONSULTANCY) AS SOON AS POSSIBLE.

10. FIGURED DIMENSIONS ONLY TO BE USED. ANY QUERIES OR DISCREPANCIES TO BE REFERRED TO THE ENGINEER (VALE CONSULTANCY) IMMEDIATELY.

11. PRIOR TO ORDERING ANY MATERIALS THE CONTRACTOR IS TO CONFIRM MANUFACTURER/PIPE MATERIAL AND GRADE PROPOSED WITH WATER AUTHORITY.

12. TEMPORARY WORKS DESIGN BY OTHERS.

13. DESIGN RISK ASSESSMENTS AND METHOD STATEMENTS ARE TO BE PROVIDED TO THE PRINCIPLE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORKS.

14. ARCHITECT TO CONFIRM EXTERNAL LEVELS TO ALL AREAS PRIOR TO THE COMMENCEMENT OF WORKS.

15. FOR HIGHWAY RAIN GARDEN DETAILS REFER TO DRAWING 23218/705, 706 & 707.

16. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG No. 23218_501, 502, 503 & 504.

PRELIMINARY

rev.	drawn	chkd.	approvd.	date	description
01	RGP	NRC	MJ	17.02.26	PRELIMINARY

Client
ADEPT CONSULTANTS

Project
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Title
PLOT SPECIFIC
DRAINAGE CONSTRUCTION DETAILS
SHEET 1

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date	drawn	checked		approved	
17.02.26	RGP	NRC	17.02.26	MJ	17.02.26

scale @ A1	project no.
AS SHOWN	23218

status	drg. no.	rev.
P	23218_510	01

DRAWING STATUS
A - Approval, AB - As-Built, C - Construction, D - Draft, P - Preliminary, T - Tender