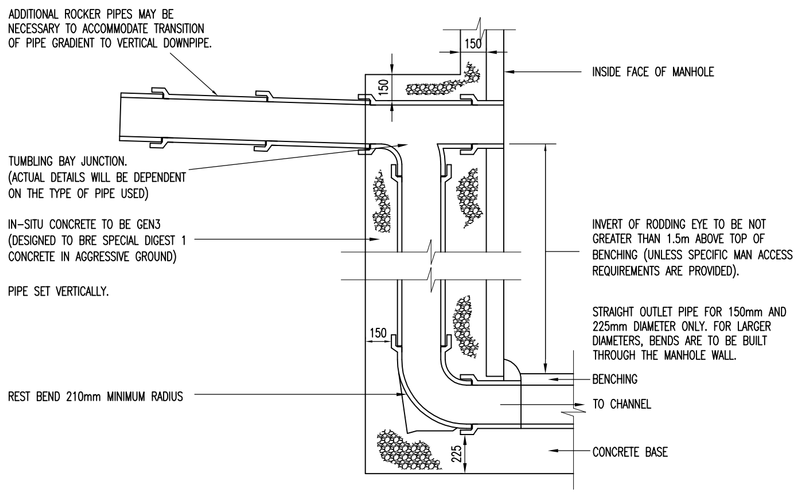
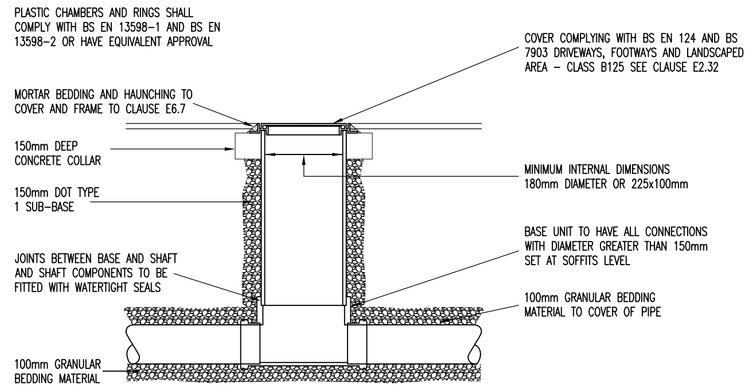


EXTERNAL VERTICAL BACKDROP

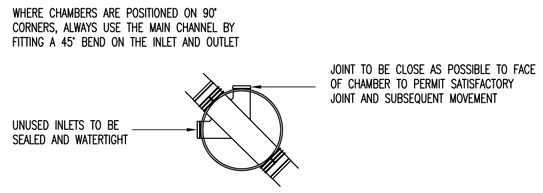
NOTE: STEEPER GRADIENTS ARE PREFERRED TO THE USE OF BACKDROPS. TYPE OF BACKDROP TO BE USED TO BE AGREED WITH UNDERTAKER

NOTE: WHERE THE BACKDROP IS NOT EXCESSIVE A 45 DEGREE DROP PIPE MAY BE USED.

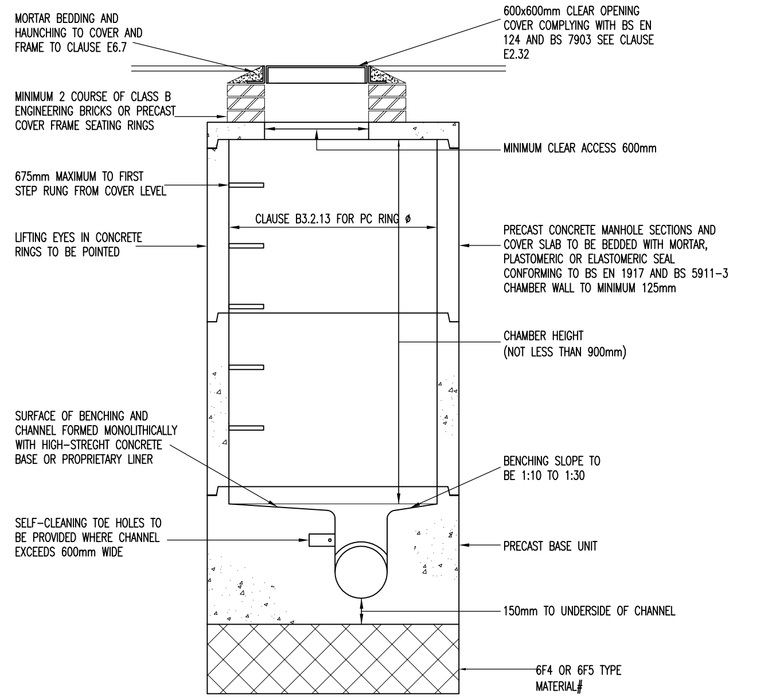


INSPECTION CHAMBER (TYPE 4 FLEXIBLE MATERIAL DETAIL)

MAX DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 2m, NON-ENRTY



SECTION



TYPE 2 MANHOLE DETAIL

MAX DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3m

CAPPING MATERIAL TO BE TAKEN TO SILT LEVEL BELOW 'LAND FILL MATERIAL'#

1) THIS DRAWING IS COPYRIGHT.

2) ALL DIMENSIONS TO BE CHECKED PRIOR TO CONSTRUCTION OR MANUFACTURE. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEERS IMMEDIATELY.

3) DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY

4) MATERIALS AND WORKMANSHIP:–
ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH GOOD SITE PRACTISE AND THE FOLLOWING STANDARDS;
A) BRITISH STANDARDS CODE OF PRACTISE FOR BUILDING DRAINAGE
B) CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY
C) SEWERS FOR ADOPTION 7TH EDITION AND DWR CYMRU WELSH WATER ASSOCIATED ADDENDUMS
D) CURRENT BUILDING REGULATIONS
E) RELEVANT MANUFACTURER'S SPECIFICATIONS AND DETAILS FOR MATERIALS AND RELATED CONSTRUCTION METHODS

5) ALL ADOPTABLE WORKS ARE SUBJECT TO THE INSPECTION BY THE ENGINEER AND DCWW'S INSPECTORS. ANY INSTRUCTIONS ISSUED VARYING THE WORKS DETAILED MUST BE FORWARDED TO THE ENGINEER FOR CONFIRMATION/APPROVAL.

6) FLEXIBLE JOINTS SHALL BE PROVIDED TO ALL PIPES WITHIN 600mm OF INNER FACE OF MANHOLE. PROJECTING PIPES SHALL BE SURROUNDED WITH 150mm GRADE C20 CONCRETE CAST MONOLITHICALLY WITH THE MANHOLE BASE

7) WHERE PIPES ARE ENCASED IN CONCRETE A 20mm COMPRESSIBLE FIBRE BOARD AT MAXIMUM 3m CENTRES AND AT THE CENTRELINE OF EVERY JOINT

9) ALL PIPEWORK CONNECTIONS AT MANHOLES TO BE SOFFIT TO SOFFIT UNLESS OTHERWISE NOTED

10) MANHOLE COVERS AND FRAMES TO COMPLY SEWEWRS FOR ADOPTION 7TH EDITION.

11) COVERS SHALL BE SET AT OR NOT MORE THAN 5mm BELOW THE PROPOSED COVER LEVELS STATED ON THE SCEHDULES/LONG SECTIONS. INVERTS SHALL BE WITHIN 5mm OF THOSE STATED.

a. FLEXIBLE JOINT SHALL BE PROVIDED AS CLOSE AS IS FEASIBLE TO THE OUTSIDE FACE OF ANY STRUCTURE INTO WHICH A PIPE IS BUILT. THE DESIGN OF THE JOINTS SHALL BE COMPATIBLE WITH ANY SUBSEQUENT MOVEMENT.

b. THE RECOMMENDED LENGTH OF THE NEXT PIPE (ROCKER PIPE) AWAY FROM THE STRUCTURE SHOULD BE AS SHOWN IN THE TABLE BELOW:

PIPE DIAMETER (mm)	EFFECTIVE LENGTH (m)
150 to 600	0.600
675 to 750	1.000
OVER 750	1.250

c. STUB PIPES INTO STRUCTURES SHALL BE OF RIGID MATERIAL.

12) MANHOLE DIAMETERS SHOULD BE IN ACCORDANCE WITH THE TABLE BELOW:

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375–450	1350
500–700	1500
750–900	1800
> 900	CONSULT UNDERTAKER

13. THE FIRST MANHOLE UP STREAM FROM THE CONNECTION TO THE EXISTING PUBLIC SEWER SHOULD, WHEN CONSTRUCTED, BE FITTED WITH A SCREEN IN ORDER TO PREVENT DEBRIS ENTERING THE PUBLIC SEWER. THE SCREEN SHOULD NOT BE REMOVED UNTIL IMMEDIATELY PRIOR TO THE OCCUPATION OF PREMISED TO BE SERVED BY THE SEWER.

14. ALL MANHOLES DEEPER THAN 1.5M TO BE CONNECTED WITH DOUBLE ROCKER PIPES.

15. GULLY GRATINGS TO BS EN 124 CLASS D400 DUCTILE IRON, ANTI-THEFT WITH CAPTIVE HINGE.

16. CONCRETE SURROUND TO BE PROVIDED FOR THE FOLLOWING COVERS.
<1200mm UNDER ADOPTED ROAD CONSTRUCTION
<900mm UNDER PRIVATE ROAD CONSTRUCTION
<600mm IN LANDSCAPED AREAS
TYPE 'S' BEDDING DETAIL TO BE USED ELSEWHERE.

17. ALL INVERT LEVELS ARE TO BE CHECKED PRIOR TO CONSTRUCTION TO ENSURE SOFFIT TO SOFFIT CONNECTIONS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.

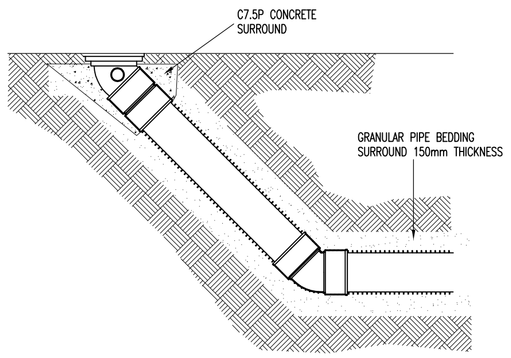
18. ALL THERMOPLASTIC PIPES ARE TO COMPLY WITH WIS 4-35-01 'SPECIFICATION FOR THERMOPLASTICS STRUCTURED WALL PIPES SUPPLEMENTARY TEST REQUIREMENTS'

19. MANHOLE PAD/BASE – OPTION B

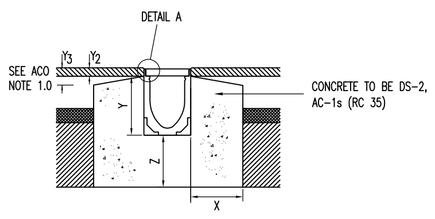
UNDERLYING GROUND TO BE REMOVED TO SILT BAND & REPLACED WITH COMPACTED 6F2 MATERIAL. 6F2 TO BE COMPACTED IN ACCORDANCE WITH SPECIFICATION FOR HIGHWAY WORKS.

20. GEO SEPARATOR BETWEEN PIPE BEDDING AND SURROUNDING MATERIALS TO BE TERRAM 1000 OR SIMILAR APPROVED BY THE ENGINEER.

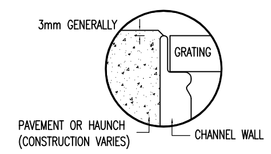
FIBRE=TYPE-NON-WOVEN
MIN LIFE EXPECTANCY=40 YEARS
PORE SIZE=150MICROMETRES
MEAN TENSILE STRENGTH=8.0KN/M
MAXIMUM AXIAL STRAIN= 28%



RODDING EYE HEAD OF DRAIN ACCESS



ACO LINEAR CHANNEL

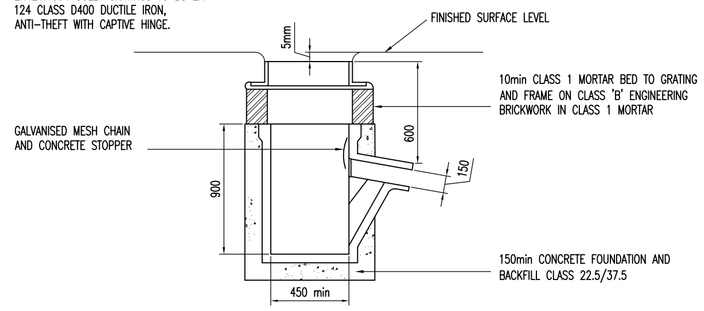


DETAIL A

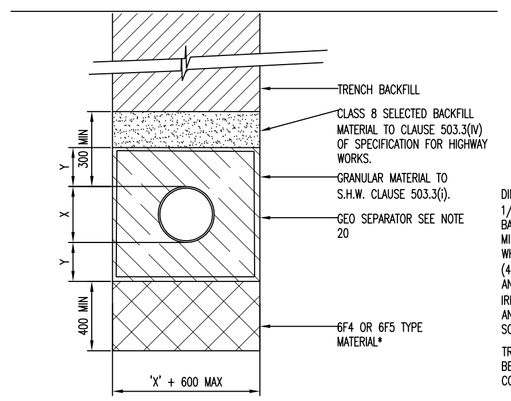
1.0 Minimum Dimensions of Concrete Surround

Load Class		A15	B125	C250	D400*
MINIMUM DIMENSIONS (mm)	X	100	150	150	200
	Y	FULL CHANNEL HEIGHT (LESS Y_3 WHERE NECESSARY)			
	Z	100	150	150	200
MAXIMUM DIMENSIONS (mm)	Y_2+	35	35	35	35
	Y_3	100	60	60	60

* E.G. PARKING AREAS FOR ALL TYPES OF ROAD VEHICLE. NOT SUITABLE FOR CARRIAGEWAY OF ROADS OR INDUSTRIAL AREAS.
+ NOTE DASHED LINE PRINTED ON EDGE RAILS 35mm BELOW TOP.



ROAD GULLY DETAIL

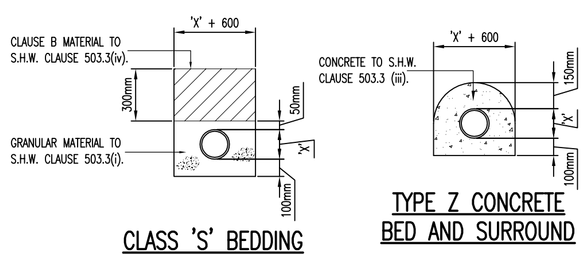


DIMENSION Y=MINIMUM OF 1/6X OR 150MM UNDER BARREL AND 100MM MINIMUM UNDER SOCKETS WHICHEVER IS GREATER (400MM MAX) IN ROCK AND IRREGULAR SOIL USE 1/4X AND 150MM UNDER SOCKETS.

TRIM TRENCH BOTTOM BEDDING TO BE HAND COMPACTED IN LAYERS

CLASS 'AX' BEDDING

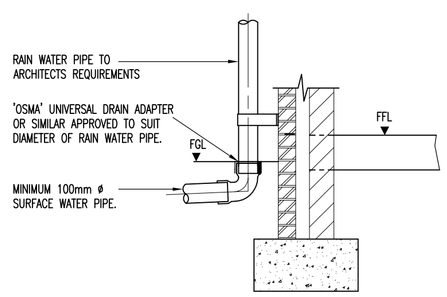
*** CAPPING MATERIAL TO BE TAKEN TO SILT LEVEL BELOW 'LAND FILL MATERIAL'***



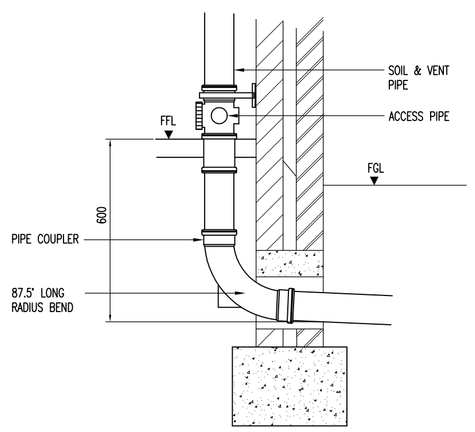
CLASS 'S' BEDDING

TYPE Z CONCRETE BED AND SURROUND

NOTE: CLASS 'S' AND 'Z' BEDDINGS TO BE USED WITHIN INDIVIDUAL PLOTS AT SHALLOW DEPTH.



RAINWATER PIPE THROUGH GROUND



SVP TO DRAIN CONNECTION

Notes:

0mm 50mm A1 original sheet size

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1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
5. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
6. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
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8. IF IN DOUBT, ASK.

Rv	Date	By	Ch	Revisions
–	–	–	–	–

Client: PENNAF HOUSING

Project: RESIDENTIAL DEVELOPMENT
GLAN GORS
WREXHAM

Drawing Title: EXTERNAL WORKS

Drawing Status	Scale	Date	Design By	Drawn By	Checked	Job No:	Drawing No.	Rev.
TENDER ISSUE	1:200@A1	29.05.13	NL	NL	NC	6503	105	/

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