

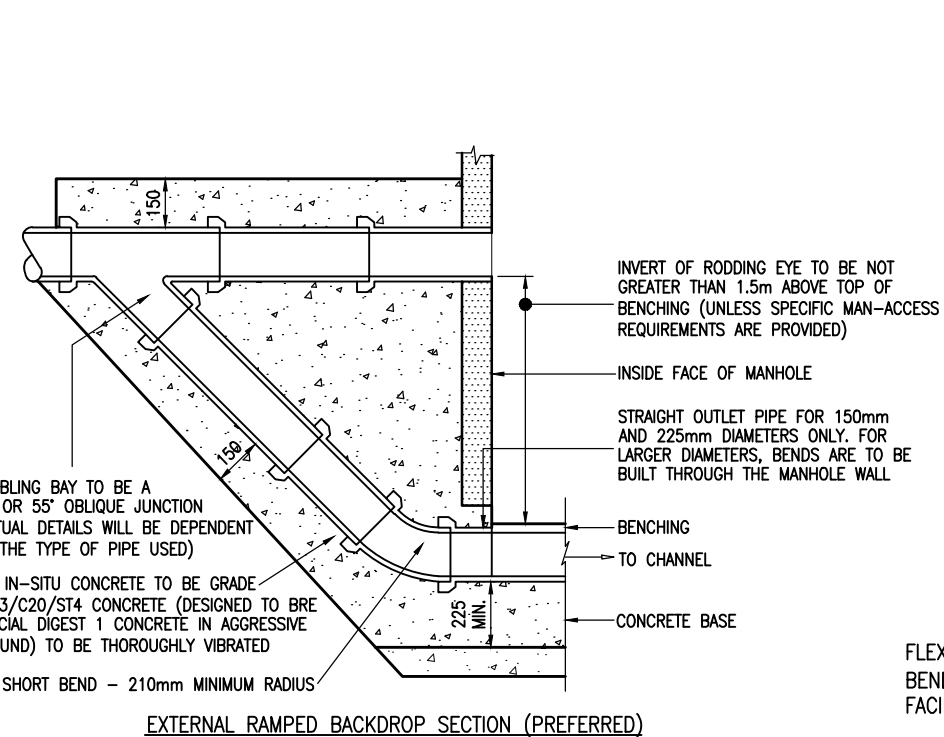
DO NOT SCALE

NOTES

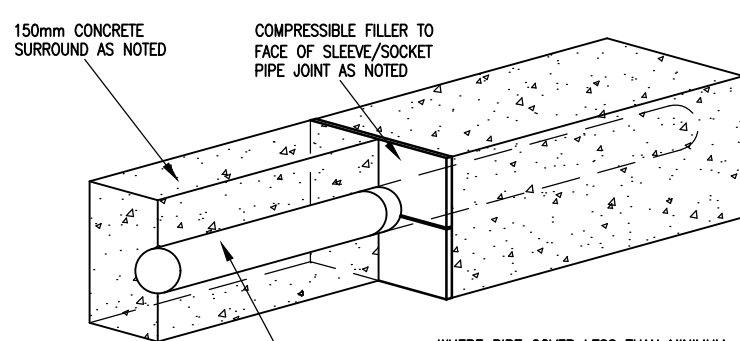
1. MANHOLES WITH OUTGOING PIPES GREATER THAN 600mm DIAMETER SHALL BE FITTED WITH GUARD BARS, SAFETY CHAINS OR OTHER SAFETY DEVICES – REFER TO ENGINEER.
2. PIPES TO BE LAID WITH THEIR SOFFITS LEVEL.
3. IF TWO (OR MORE) PIPES ENTER THE MANHOLE, THE CHAMBER DIAMETER SHALL BE OF SUFFICIENT DIAMETER TO ACCOMMODATE ADEQUATE BENCHING.
4. NO ROCKER PIPES REQUIRED FOR NOMINAL DIAMETER GREATER THAN 750mm.

TYPICAL MANHOLE DETAIL – TYPE 1B

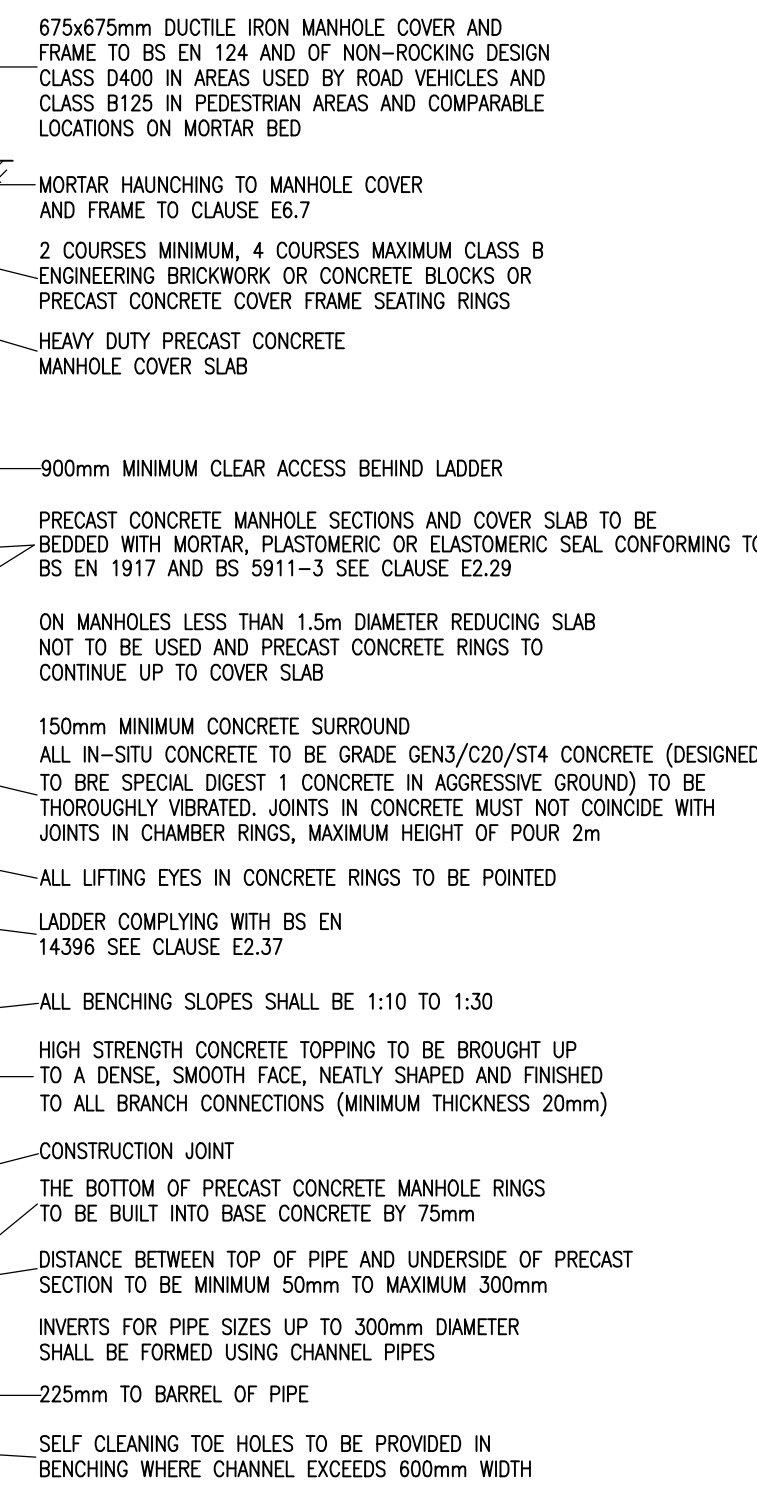
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3m TO 6m



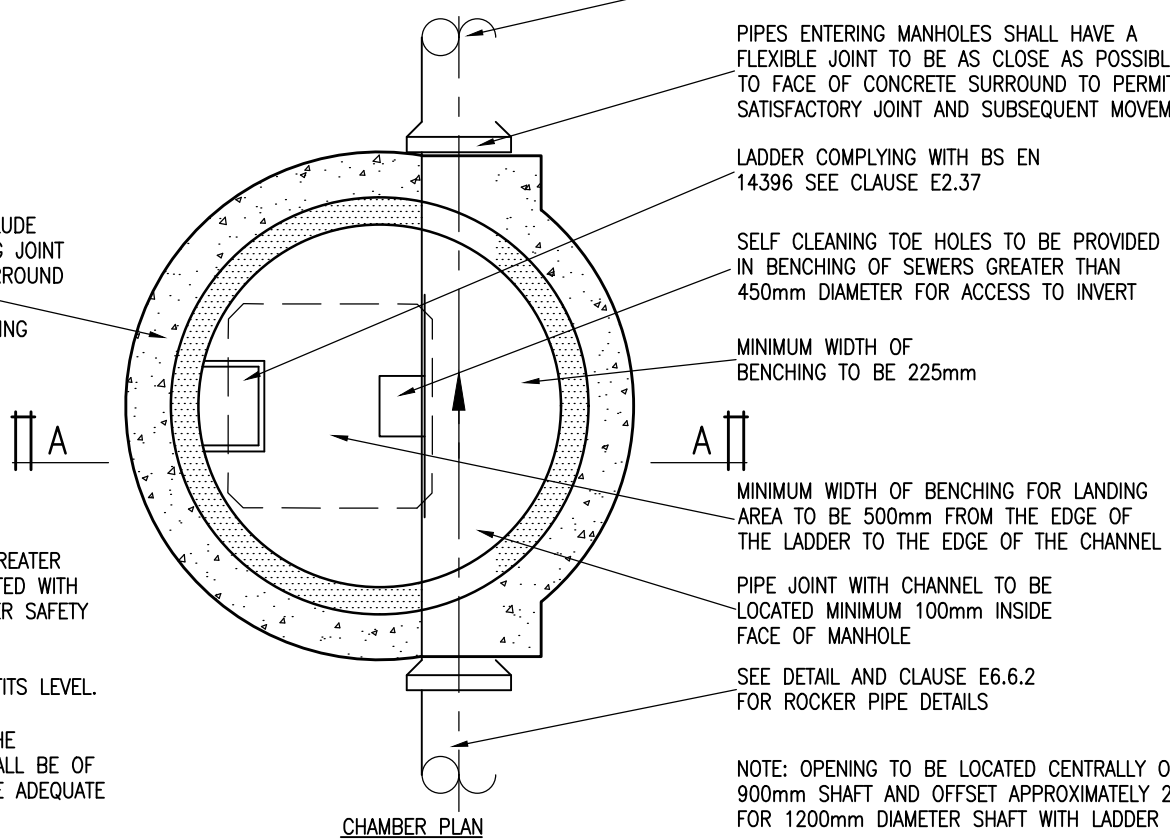
TYPICAL RAMPED BACKDROP SECTION DETAILS



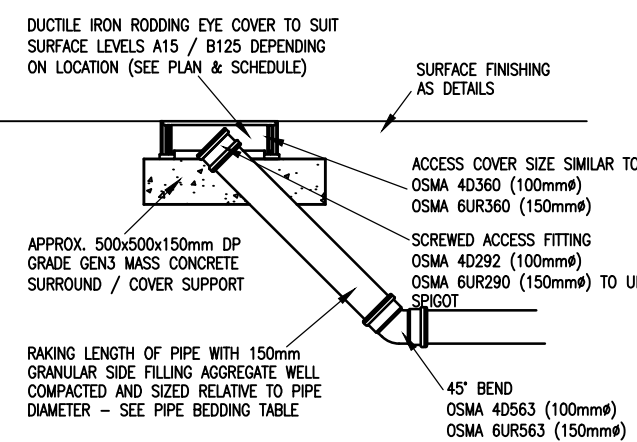
TYPICAL FLEXIBLE JOINT IN CONCRETE SURROUND (ISOMETRIC)



CHAMBER SECTION A-A

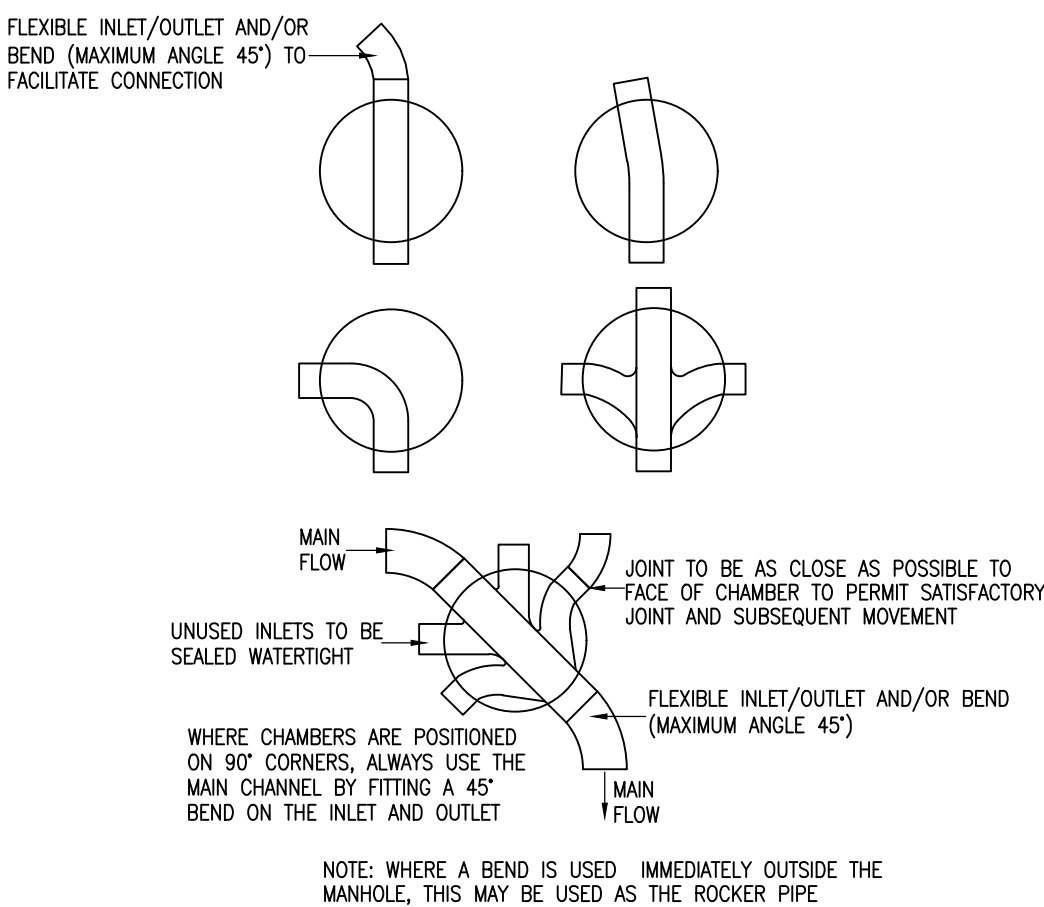


CHAMBER PLAN



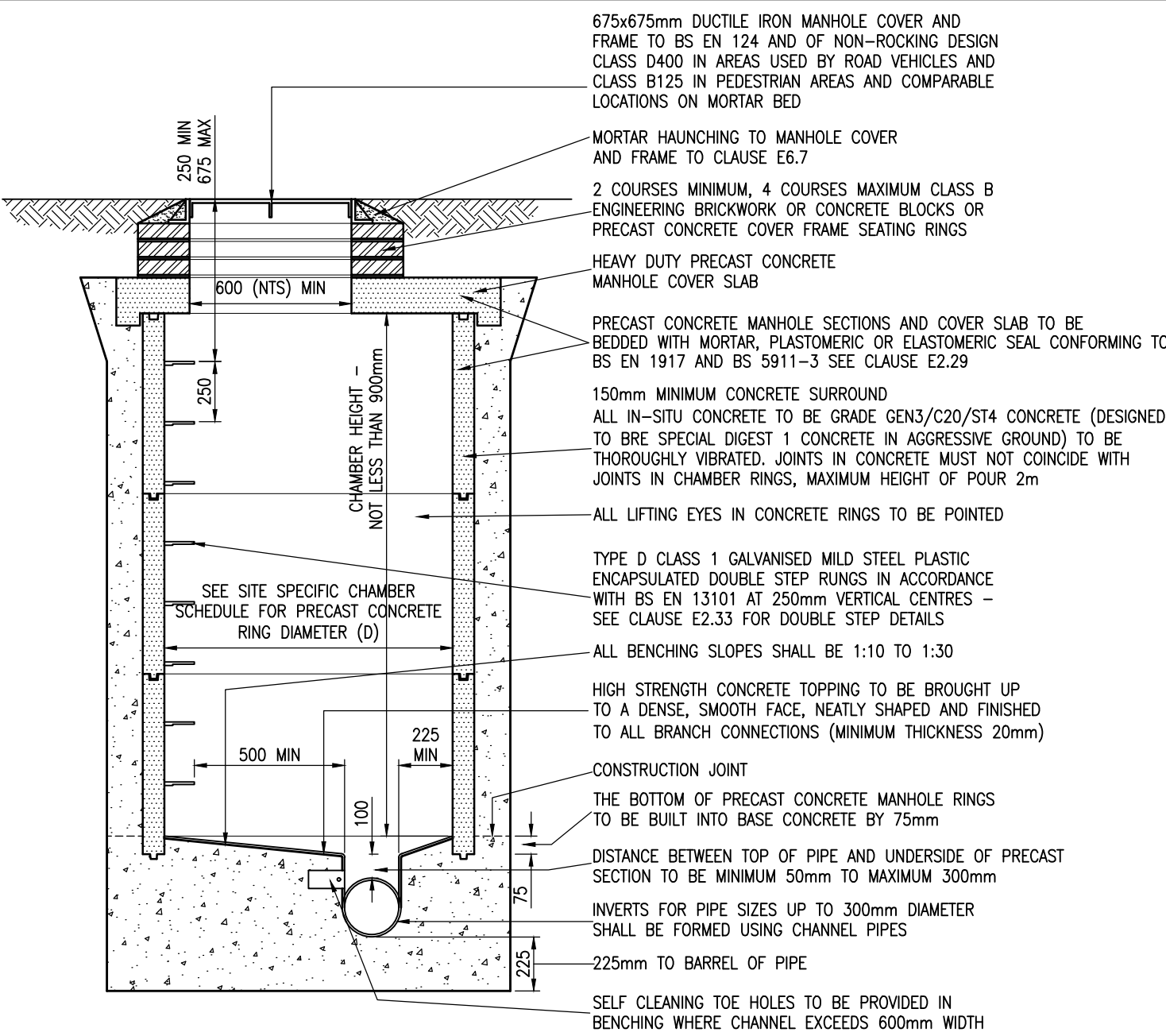
TYPICAL RODDING ACCESS POINT DETAIL

FIGURE B.20 ALTERNATIVE BASE LAYOUTS FOR TYPE 3 CHAMBERS

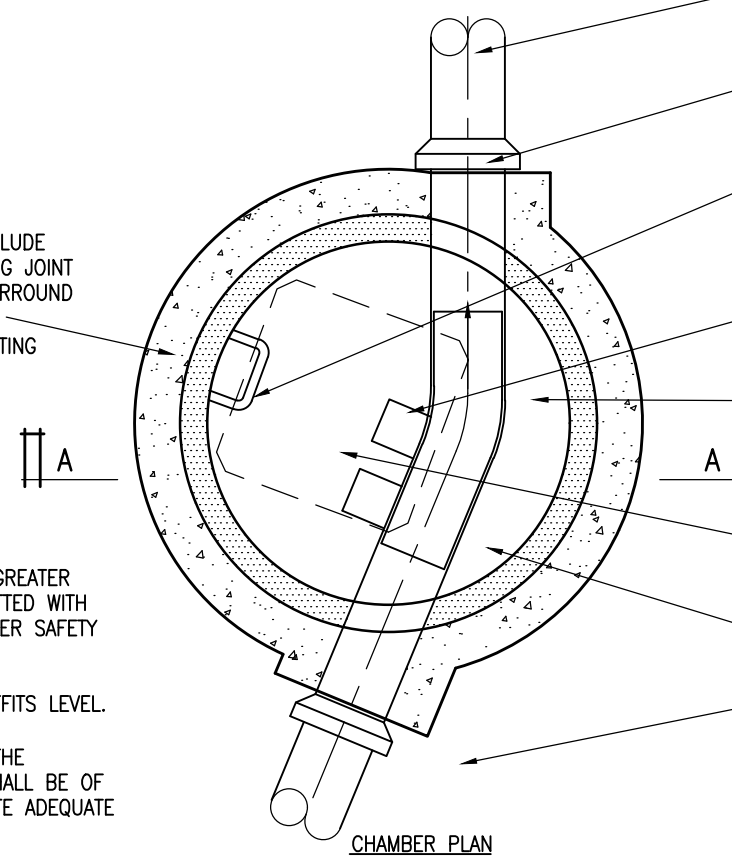


NOMINAL DIAMETER (mm)	EFFECTIVE ROCKER PIPE LENGTH (m)
150 – 600	0.600
601 – 750	1.000
OVER 750	1.250

TYPICAL ARRANGEMENT OF PIPE JUNCTIONS WITHIN MANHOLES



CHAMBER SECTION A-A



CHAMBER PLAN

TYPICAL MANHOLE DETAIL – TYPE 2

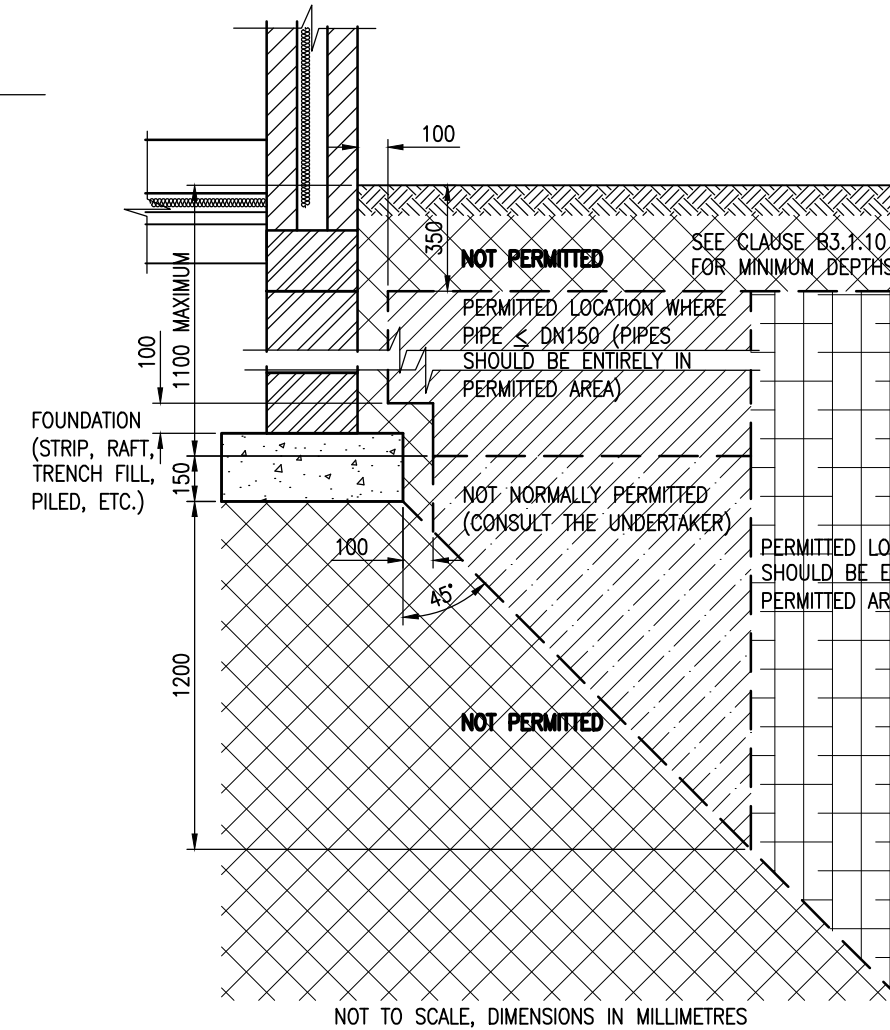
MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3m

NOTES

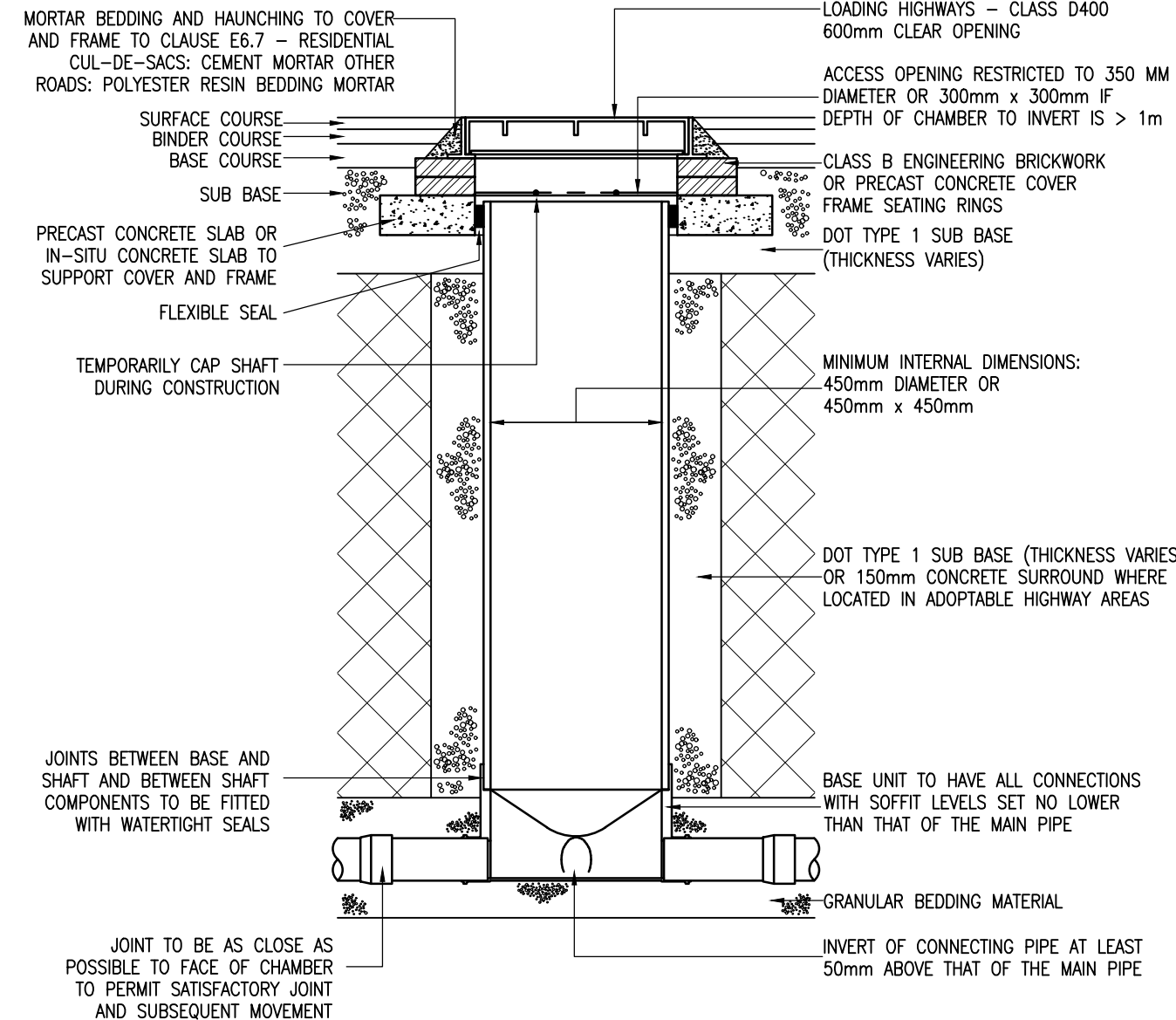
1. MANHOLES WITH OUTGOING PIPES GREATER THAN 600mm DIAMETER SHALL BE FITTED WITH GUARD BARS, SAFETY CHAINS OR OTHER SAFETY DEVICES – REFER TO ENGINEER.
2. PIPES TO BE LAID WITH THEIR SOFFITS LEVEL.
3. IF TWO (OR MORE) PIPES ENTER THE MANHOLE, THE CHAMBER DIAMETER SHALL BE OF SUFFICIENT DIAMETER TO ACCOMMODATE ADEQUATE BENCHING.
4. NO ROCKER PIPES REQUIRED FOR NOMINAL DIAMETER GREATER THAN 750mm.

1. THIS DRAWING IS COPYRIGHT AND SHOULD BE READ IN CONJUNCTION WITH ALL OTHER RCA AND ARCHITECTS DRAWINGS AND SPECIFICATIONS RELATING TO THIS PROJECT AND SEWERS FOR ADOPTION 7th EDITION, DOWN ADDENDUM DOCUMENTS, SPECIFICATION FOR HIGHWAY WORKS AND PONTY COUNTY COUNCIL TECHNICAL SPECIFICATIONS.
2. ALL DIMENSIONS SHALL BE CHECKED PRIOR TO CONSTRUCTION OR MANUFACTURE. ANY DISCREPANCY TO BE REPORTED TO THE ENGINEERS IMMEDIATELY.
3. DO NOT SCALE THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY – IF IN DOUBT ASK.
4. ALL DIMENSIONS ARE IN mm (MILLIMETRES) UNLESS OTHERWISE STATED.
5. MATERIALS AND WORKMANSHIP – ALL WORK SHALL COMPLY WITH THE CURRENT RELEVANT BRITISH STANDARDS, BUILDING REGULATIONS, HEALTH & SAFETY REGULATIONS, SEWERS FOR ADOPTION AND THE SPECIFICATIONS SHOWN.
6. PREWORK TO CONFORM TO THE FOLLOWING – PLASTIC PVC-U DRAINAGE SYSTEMS WITH FLEXIBLE JOINTS TO BS6461.
7. FLEXIBLE JOINTS SHALL BE PROVIDED TO ALL PIPES WITHIN 600mm OF INNER FACE OF MANHOLE. PROJECTING PIPES SHALL BE SURROUNDED WITH 150mm GRADE GEN3/C20/ST4 CONCRETE CAST MONOLITHICALLY WITH THE MANHOLE BASE.
8. PIPES SHALL HAVE GRANULAR BED AND SURROUND UNLESS OTHERWISE DETAILED. GRANULAR MATERIAL SHALL CONFORM TO BS882 (TABLE 1) AND SHOULD BE CAREFULLY PLACED AND CONSOLIDATED BY HAND IN THIN LAYERS.
9. ALL PREWORK CONNECTIONS AT MANHOLES SHALL BE SOFFIT TO SOFFIT, AHEAD FROM AT OFFLINE ATTENDED STORAGE – SEE LONGITUDINAL SECTIONS / CHAMBER SCHEDULES.
10. MANHOLE COVERS SHALL BE CO-ORDINATED WITH THE SURROUNDING AREA AND SHALL BE AS SPECIFIED ON THE DRAWINGS.
11. TOLERANCES – COVERS SHALL BE SET AT, OR NOT MORE THAN 5mm BELOW THE SURROUNDING LEVEL. IN PAVED AREAS, INVERTS SHALL BE WITHIN 5mm OF GIVEN LEVEL, AND MAY NOT CAUSE THE AS-LAID GRADIENT OF THE PIPES TO VARY FROM THAT GIVEN ON THE DRAWING BY MORE THAN 10%.
12. ADAPTABLE SEWERS LAID IN NON-ADAPTABLE AREAS I.E. GARDENS SHALL BE WITHIN AN EASEMENT ZONE AS PLANNED. NO BUILDING SHALL BE CONSTRUCTED WITHIN THIS EASEMENT ZONE.
13. SPURIES CONSTRUCTED FOR FUTURE DEVELOPMENTS TO BE 'STOPPED UP' AT BLANK END TO PREVENT GROUND WATER INFILTRATION.

FIGURE B.1 PERMITTED LOCATION OF SEWERS AND LATERAL DRAINS IN PROXIMITY TO BUILDINGS



NOTE: PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL.



TYPICAL INSPECTION CHAMBER DETAIL – TYPE 3 (FLEXIBLE MATERIAL DETAIL)

MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING 3m, NON-ENTRY

FIGURE B.17 ALTERNATIVE TOP DETAILS FOR LIGHT VEHICLE LOADING AND LANDSCAPED AREAS - TYPE 3 (Flexible material detail)

Maximum depth from cover level to soffit of pipe in areas subject to vehicle loading 3 m, non-entry

SITED IN DOMESTIC DRIVEWAY OR FOOTPATHS

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7

SITED IN DOMESTIC GARDENS

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

MORTAR BEDDING AND HAUNCHING TO COVER AND FRAME TO CLAUSE E6.7

FLEXIBLE SEAL

TEMPORARILY CAP SHAFT DURING CONSTRUCTION

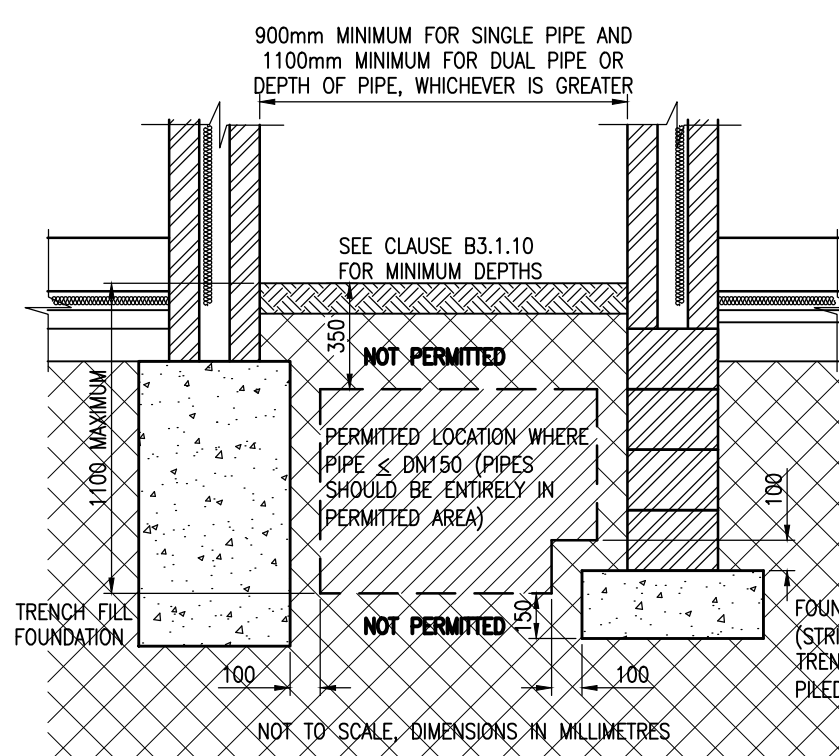
Note: Where the access chamber is in the highway the Highway Authority can have specific requirements

WISMA ROAD CATEGORY	DESCRIPTION	MINIMUM FRAME DEPTH (mm)
I	TRUNK ROADS AND DUAL CARRIAGEWAYS	150
II	ALL OTHER A ROADS	150
III	BUS SERVICES	150
IV	ALL OTHER ROADS EXCEPT RESIDENTIAL CUL-DE-SACS	150
	RESIDENTIAL CUL-DE-SACS	100

NOMINAL PIPE DIAMETER (mm)	THICKNESS OF COMPRESSIBLE FILLER (mm)
LESS THAN 450	18
450 – 1200	36
EXCEEDING 1200	54

PIPE DIAMETER (mm)	GRANULAR MATERIAL SIZE (mm)
100	10 NOMINAL SINGLE SIZE
150	10 OR 14 NOMINAL SINGLE SIZE
150 – 500	10, 14 OR 20 NOMINAL SINGLE SIZE
OVER 500	10, 14, 20 OR 40 NOMINAL SINGLE SIZE

FIGURE B.2 ADDITIONAL DETAIL - PERMITTED LOCATION OF SEWERS AND LATERAL DRAINS BETWEEN BUILDINGS (where Figure B.1 is not applicable only)



ORIGINAL DRAWING A1
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NOTES:

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WORK TO FIGURED DIMENSIONS IN PREFERENCE TO SCALING.

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THE DEVELOPER MUST SELF-VET AND CERTIFY THAT THE DESIGN CRITERIA, MATERIAL STANDARDS AND WORKMANSHIP SPECIFICATIONS FOR THE PROPOSED POTENTIALLY ADAPTABLE SEWERS ARE IN ACCORDANCE WITH THOSE SET OUT IN "SEWERS FOR ADOPTION – A DESIGN AND CONSTRUCTION GUIDE FOR DEVELOPERS" 7th EDITION AND CONFIRM THE SAME IN WRITING TO THE ADOPTION AUTHORITY.

THIS DRAWING INDICATES MINIMUM STANDARD REQUIREMENTS FOR ADAPTABLE DRAINAGE SYSTEMS IN TERMS OF MANHOLE DIAMETERS / SIZES, ETC. – REFER TO SITE SPECIFIC MANHOLE SCHEDULE – IF IN DOUBT ASK.

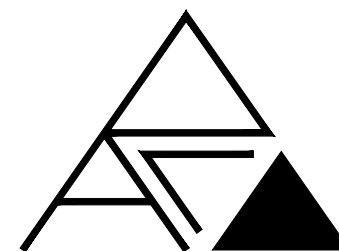
SEWERS MUST BE LAID AT A MAXIMUM GRADIENT OF 1:5 AND A MINIMUM GRADIENT OF 1:80 WHERE 10 OR LESS DWELLINGS ARE CONNECTED, WHERE 11 DWELLINGS OF MORE ARE CONNECTED THE MINIMUM SEWER GRADIENT SHALL BE 1:150.

IMPORTANT – UNTIL TECHNICAL ACCEPTANCE AND/OR APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITY, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS & DETAILS ISSUED ARE PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR COMMENCE SITE WORK PRIOR TO TECHNICAL ACCEPTANCE AND/OR APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK. INFRASTRUCTURE SUBJECT TO A SECTION 104 ADOPTION AGREEMENT SHALL NOT BE CONSTRUCTED UNTIL SUCH TIME THAT THE SECTION 104 ADOPTION AGREEMENT HAS BEEN LEGALLY COMPLETED BETWEEN THE DEVELOPER AND THE STATUTORY UNDERTAKER

REV	DESCRIPTION	DRAWN	CHECK	DATE
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DRAWING STATUS:

Technical Acceptance



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DR DESIGN
LLANDEILO

PROJECT:

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FORMER CLUN PRIMARY SCHOOL,
CLYNE, NEATH SA11 4BW

DRAWING TITLE:

DRAINAGE CONSTRUCTION DETAILS

DRAWN BY:	DESIGN BY:	CHECKED BY:	DATE:
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PWJL	PWJL	RSC	25/07/2019
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SCALES:	DRAWING No.	REVISION:
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