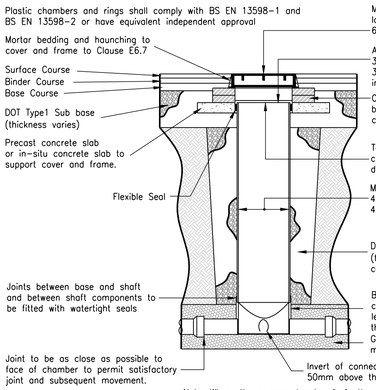
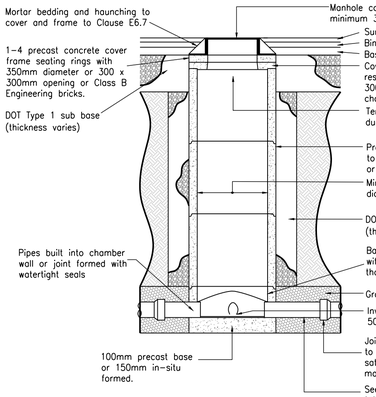


Note: Where the access chamber is in the highway the Highway Authority can have specific requirements.

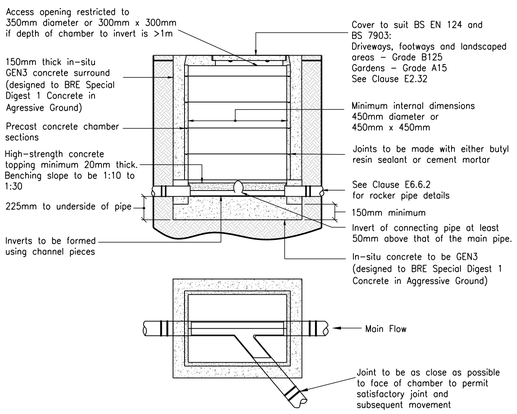
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3 (FLEXIBLE MATERIAL DETAIL)

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



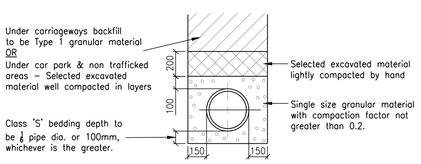
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3 (RIGID MATERIAL DETAIL)

– Maximum depth from cover level to soffit of pipe in areas subject to vehicle loading 3m, non-entry
– Note: Where the access chamber is in the highway the Highway Authority can have specific requirements.



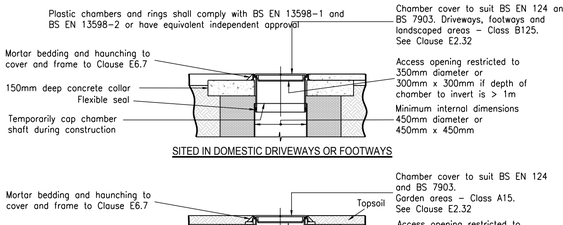
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3 (RIGID MATERIAL DETAIL)

– Alternative maximum depth from cover level to soffit of pipe 3m for areas not subject to vehicle loading or areas subject to light vehicle loading, non-entry
– Note: Where the access chamber is in the highway the Highway Authority can have specific requirements.

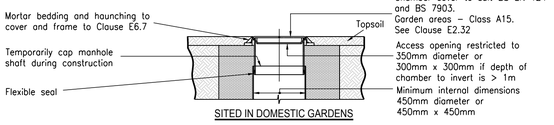


Nominal Pipe Size DN (mm)	Pipe Bedding Aggregate Size Required (mm)
150	14 to 5
225 – 525	20 to 5

CLASS 'S' BEDDING



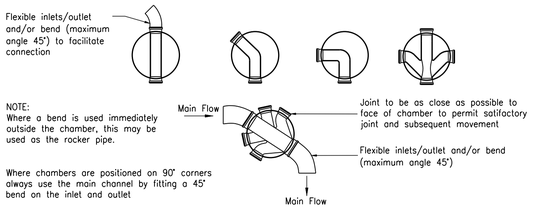
SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS



SITED IN DOMESTIC GARDENS

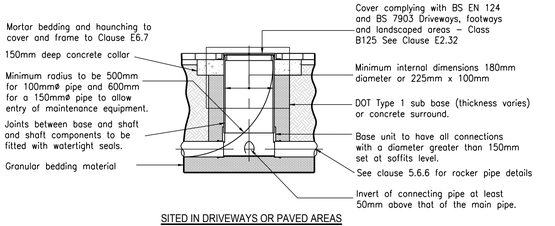
ALTERNATIVE TOP DETAILS FOR TYPE 3 CHAMBERS IN DOMESTIC LOCATIONS

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

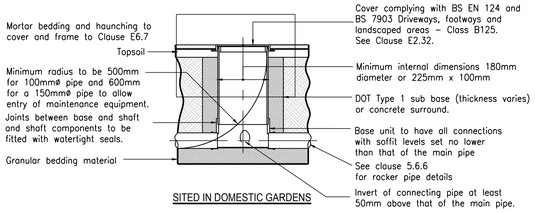


ALTERNATIVE BASE INVERT LAYOUTS FOR TYPE 3 CHAMBERS

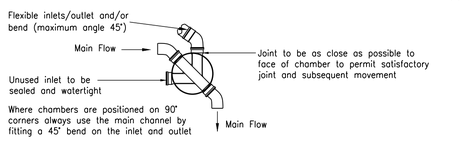
– All connections to be minimum soffit to soffit



SITED IN DRIVEWAYS OR PAVED AREAS

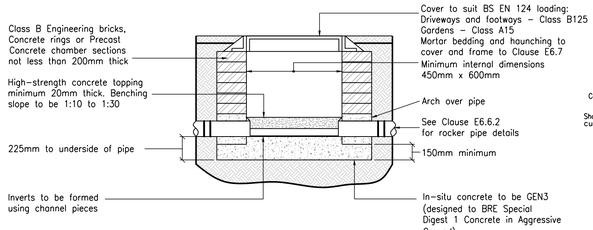


SITED IN DOMESTIC GARDENS

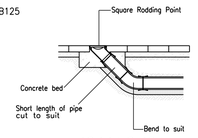


TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4 (FLEXIBLE MATERIAL DETAIL)

– Maximum depth from cover level to soffit of pipe 2m, non-entry
– Plastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 or have equivalent independent approval

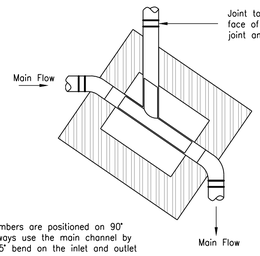


Note: The use of precast concrete manhole units with 150mm grade GEN3 concrete surround (designed to BRE Special Digest 1 Concrete in Aggressive Ground) is permitted.



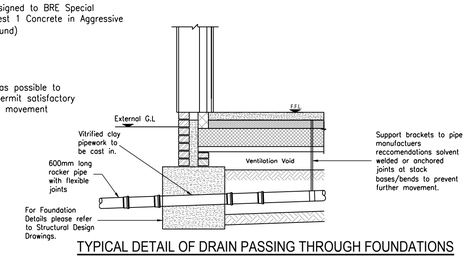
RODDING POINT

NTS

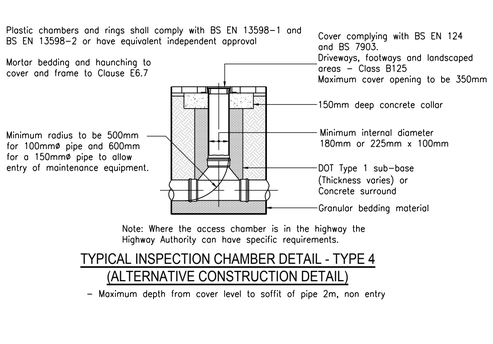


TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4 (RIGID MATERIAL DETAIL)

– Maximum depth from cover level to soffit of pipe 1m, non entry (for areas subject to vehicle loading or areas subject to light vehicle loading)



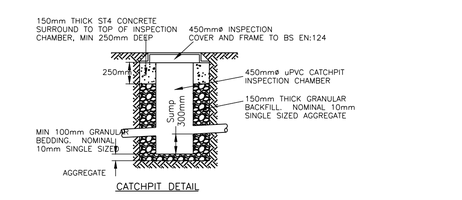
TYPICAL DETAIL OF DRAIN PASSING THROUGH FOUNDATIONS



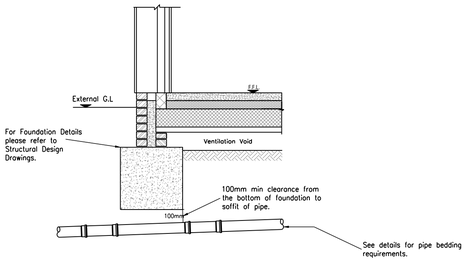
Note: Where the access chamber is in the highway the Highway Authority can have specific requirements.

TYPICAL INSPECTION CHAMBER DETAIL - TYPE 4 (ALTERNATIVE CONSTRUCTION DETAIL)

– Maximum depth from cover level to soffit of pipe 2m, non entry



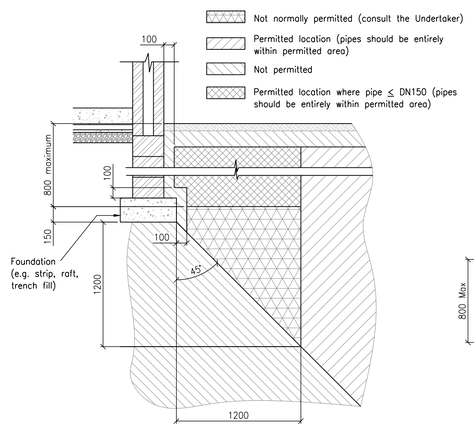
CATCHPIT DETAIL



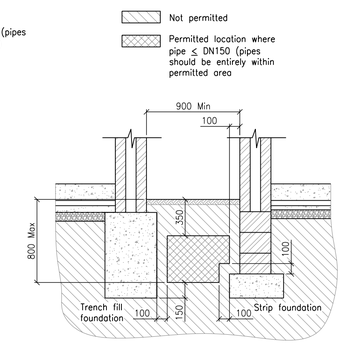
TYPICAL DETAIL OF DRAIN PASSING UNDER FOUNDATIONS

Nominal Pipe Diameter (mm)	Rocker Pipe Length
150 – 600	0.6m
600 – 750	1.0m
Over 750	1.25m

ROCKER PIPE RECOMMENDED LENGTHS



PERMITTED LOCATION OF SEWERS AND LATERAL DRAINS IN PROXIMITY TO BUILDINGS



ADDITIONAL DETAIL - PERMITTED LOCATION OF SEWERS AND LATERAL DRAINS BETWEEN BUILDINGS

DRAINAGE CONSTRUCTION

Scale 1:30

DO NOT SCALE

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NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL DWS DRAWINGS & ALL OTHER RELEVANT ENGINEERS, ARCHITECTS & SPECIALIST DESIGN DETAILS.
2. THE POSITION, LINE, LEVEL AND DIAMETER OF ALL EXISTING DRAINAGE APPARATUS SHOULD BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
4. THE CONNECTION OF FOUL WATER DRAINAGE TO THE EXISTING SEWER SYSTEM SHALL BE SUBJECT TO THE APPROVAL OF THE CONTROLLING BODY.
5. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT BRITISH STANDARDS, BS CODES OF PRACTICE AND BUILDING REGULATIONS.
6. ALL DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH WSA 'SEWERS FOR ADOPTION (7TH EDITION)' AND 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (7TH EDITION)'
7. UPVC PIPES AND FITTINGS TO COMPLY WITH BS EN 1401-1 1998
8. CLAYWARE PIPES AND FITTINGS SHALL COMPLY WITH BS EN 295:1991 PART 1
9. RUBBER JOINT RINGS SHALL BE TYPE D TO BS 2494 AND SHALL BE OBTAINED FROM THE PIPE MANUFACTURER.
10. DRAINAGE TO BS 8301 WITH PIPES OF APPROVED TYPE ON GRANULAR BED AND SURROUND AND ALL LAID IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
11. PIPES UNDER BUILDINGS AND WITH COVER LESS THAN:- 600 UNDER LANDSCAPED AND NON-TRAFFICKED AREAS 900 UNDER CAR PARKING AREAS TO HAVE CONCRETE PIPE PROTECTION APPLIED.
12. ALL PIPES ENTERING EXISTING MANHOLES ARE TO BE CONNECTED WITH PREFORMED BRANCH CHANNEL SECTIONS.
13. FIRST FLEXIBLE JOINT IN PIPES ADJACENT TO A MANHOLE SHALL BE A MAX. 600MM FROM THE INSIDE FACE OF THE MANHOLE, CONNECTING TO A ROCKER PIPE.
14. CHAMBER COVERS AND FRAMES TO BE DUCTILE IRON HEAVY DUTY GRADE D400 DOUBLE TRIANGULAR TO BS EN 124 IN CARRIAGEWAYS AND HEAVY VEHICULAR TRAFFICKED AREAS (150MM THICK). MANHOLE COVERS AND FRAMES TO BE DUCTILE IRON MEDIUM DUTY GRADE B125 CIRCULAR OR RECTANGULAR TO EN 124 IN NON TRAFFICKED AREAS.
15. ALL CEMENT USED IN THE CONSTRUCTION OF MANHOLES SHALL BE ORDINARY PORTLAND CEMENT (OPC) TO THE RELEVANT PROVISIONS OF BS 4027 CESWI SPEC CL 2.15.
16. REFER TO CESWI SPECIFICATION CL2.20 FOR SAND/CEMENT MORTAR GRADES.
17. HIGH STRENGTH GRANOLITHIC CONCRETE TOPPING TO BENCHING TO BE STEEL TROWELLED TO A DENSE SMOOTH FACE NEATLY SHAPED AND FINISHED TO ALL BRANCH CONNECTIONS IN ACCORDANCE WITH CESWI SPECIFICATION CL.4.30.
18. PIPES SHALL BE LAID TO THEIR TRUE LINE AND LEVEL BY LASER OR BY SONING EACH END AND MIDDLE.
19. ALL SOFT SPOTS WITHIN PIPE TRENCHES SHALL BE REMOVED AND FILLED WITH TYPE 1 MATERIAL.
20. NO WATER SHALL BE ALLOWED TO ACCUMULATE IN PIPE TRENCHES DURING CONSTRUCTION.
21. ALL FILL MATERIAL SHALL BE CONSOLIDATED IN LAYERS NOT EXCEEDING 225MM.
22. ALL IN SITU CONCRETE USED IN PIPE PROTECTION TO BE MIN. GEN3
23. COMPRESSIBLE FILLER FOR INTERRUPTION OF CONCRETE PIPE PROTECTION SHALL CONSIST OF BITUMEN IMPREGNATED INSULATING BOARD TO BS1142 PT3 AT EACH PIPE JOINT; THICKNESS IN ACCORDANCE WITH CESWI CLAUSE 2.52.
24. ANY REDUNDANT DRAINS SHALL BE REMOVED OR CONCRETE SEALED.
25. ALL EXISTING SERVICES IN AREA OF DRAINAGE WORKS TO BE IDENTIFIED, LOCATED BY HAND-DUG TRIAL HOLE METHODS AND DISCONNECTED OR DIVERTED AS REQUIRED, IN ACCORDANCE WITH ALL SERVICE PROVIDER APPROVAL AND METHODOLOGY PROCEDURES.

Ref.	Revision	Date	By
C1	Project number updated. Construction Issue.	26.11.20	RAS

Issue

CONSTRUCTION

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Project Title
210 Winsover Road
Spalding

Drawn	Engineer	Checked
KK	RAS	

Scale	Date
1:30 @ A1	NOV 2020

Drawing Title
DRAINAGE CONSTRUCTION DETAILS

Project No.	Drawing No.	Revision
20-16277	0-101	C1