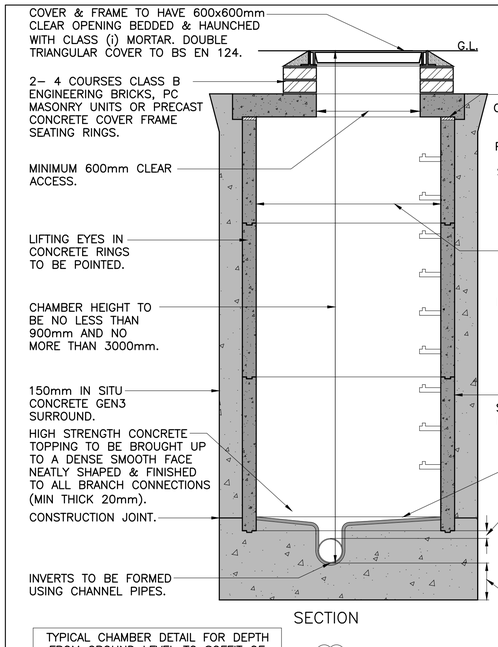
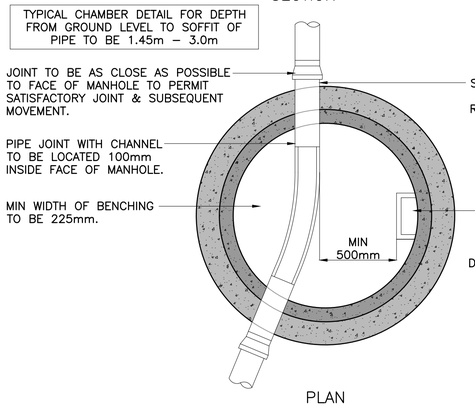
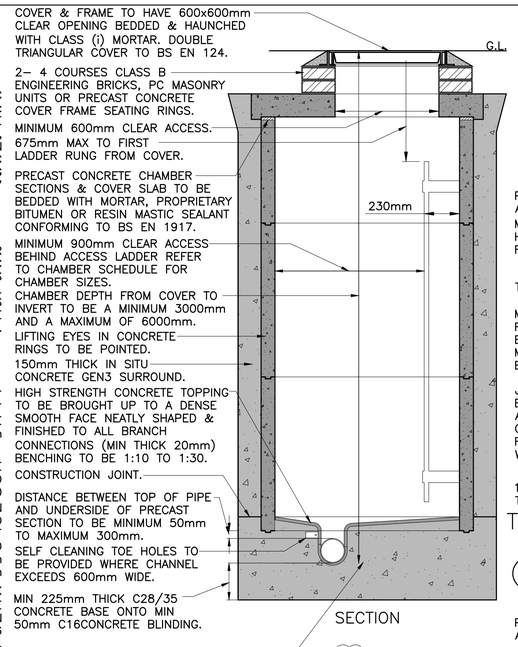
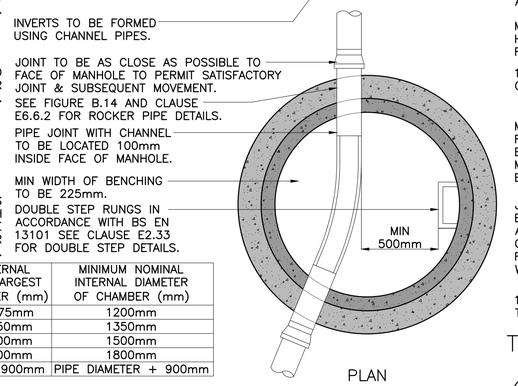


TYPICAL CHAMBER DETAIL FOR DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE TO BE 1.45m – 3.0m



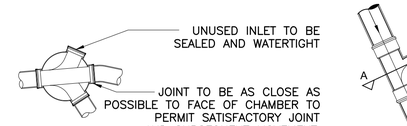
TYPICAL INSTALLATION DETAIL FOR TYPE 2 INSPECTION CHAMBER
SCALE – 1:20

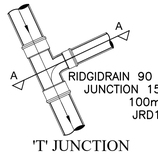


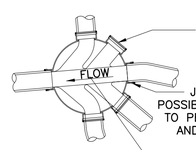


NOMINAL INTERNAL DIAMETER OF LARGEST PIPE IN CHAMBER (mm)	MINIMUM NOMINAL INTERNAL DIAMETER OF CHAMBER (mm)
LESS THAN 375mm	1200mm
375mm – 450mm	1350mm
500mm – 700mm	1500mm
750mm – 900mm	1800mm
GREATER THAN 900mm	PIPE DIAMETER + 900mm

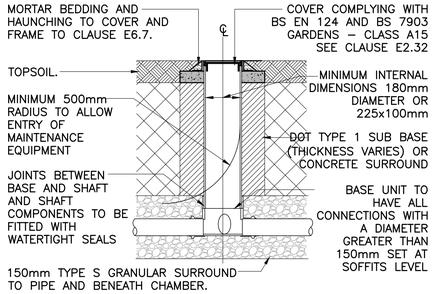
TYPICAL INSTALLATION DETAIL FOR TYPE 1B INSPECTION CHAMBER
SCALE – 1:20





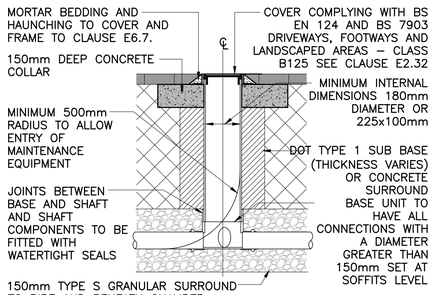


PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598–1 AND BS EN 12598–2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL.



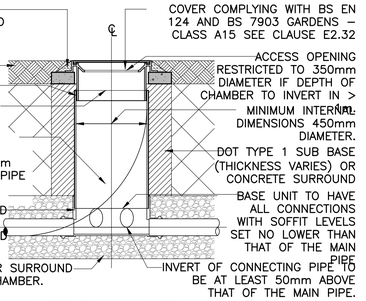
TYPICAL DETAIL FOR ø 320mm TYPE 4 INSPECTION CHAMBER (SITED IN DRIVEWAYS/PAVED AREAS)
SCALE: 1/20

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598–1 AND BS EN 12598–2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL.



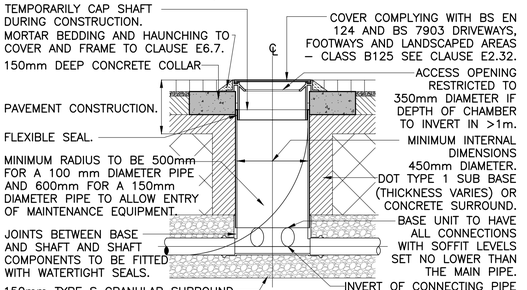
TYPICAL DETAIL FOR ø 320mm TYPE 3 INSPECTION CHAMBER (SITED IN DRIVEWAYS/PAVED AREAS)
SCALE – 1:20

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598–1 AND BS EN 12598–2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL.



TYPICAL DETAIL FOR ø 460mm TYPE 3 INSPECTION CHAMBER (SITED IN DOMESTIC GARDENS)
SCALE – 1:20

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598–1 AND BS EN 12598–2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL.



TYPICAL DETAIL FOR ø 460mm TYPE 3 INSPECTION CHAMBER (SITED IN DRIVEWAYS/PAVED AREAS)
SCALE – 1:20

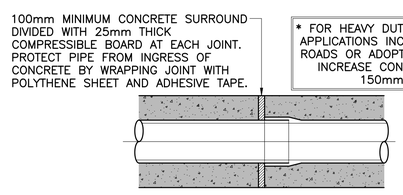
SUITABLE FILL – THE SUITABLE FILL SHALL BE SUITABLE FOR THE LOCATION AND SHALL BE CAREFULLY COMPACTED TO PROVIDE A STABLE FILL WITHOUT DAMAGING THE PIPE. FILL UNDER CAR PARKING AREAS, SHARED DRIVES & PRIVATE ROADS SHALL BE WELL COMPACTED GRADED GRANULAR MATERIAL. FILL UNDER ADOPTABLE ROADS MAY NEED TO BE TYPE 1 GRANULAR SUB–BASE MATERIAL – CHECK WITH HIGHWAY AUTHORITY IF APPROPRIATE.

GRANULAR MATERIAL – FOR RIGID PIPES THE GRANULAR MATERIAL SHOULD CONFORM TO BS EN:1610 Annex B Table B.15 AND SHOULD BE SINGLE SIZE MATERIAL OR GRADED MATERIAL FROM 5mm UP TO A MAXIMUM SIZE OF 10mm FOR 100mm DIA, PIPES, 14mm FOR 150mm DIA. PIPES, 20mm FOR PIPES FROM 150mm TO 600mm DIA. AND 40mm FOR PIPES MORE THAN 600mm DIA.

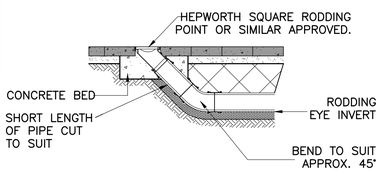
LIMITS OF COVER IN ANY WIDTH OF TRENCH			
Nominal Size	Laid in Fields	Laid in Light Roads	Laid in Main Roads
CLASS 120 CLAYWARE PIPES (CLASS S BEDDING)			
100mm	0.9m – 8.0m+	1.2m – 8.0m+	1.2m – 8.0m
150mm	0.9m – 8.0m+	1.2m – 8.0m+	1.2m – 8.0m
225mm	0.9m – 5.0m	1.2m – 5.0m	1.2m – 4.5m
400mm	0.9m – 4.5m	1.2m – 4.5m	1.2m – 4.0m
600mm	0.9m – 4.5m	1.2m – 4.5m	1.2m – 4.0m
CLASS 120 CONCRETE PIPES (CLASS S BEDDING)			
300mm	0.9m – 3.0m	1.2m – 3.0m	1.2m – 2.5m
450mm	0.9m – 3.5m	1.2m – 3.5m	1.2m – 2.5m
600mm	0.9m – 3.5m	1.2m – 3.5m	1.2m – 3.0m
THERMOPLASTIC PIPES (CLASS S BEDDING)			
100 – 300mm	0.9m – 7.0m	0.9m – 7.0m	0.9m – 7.0m
300 – 600mm	0.9m – 4.5m	0.9m – 4.5m	0.9m – 4.5m

SEWERS THROUGH WALLS OR BENEATH FOUNDATIONS (SPREAD ONLY) TO HAVE R.C BRIDGE LINTELS OVER & PIPE SURROUNDED IN FLEXIBLE MATERIAL (50mm). CONCRETE SURROUND TO SEWER TO BE FLEXIBLY JOINTED AT EVERY JOINT NOT WITHSTANDING THE ABOVE, MAXIMUM SPACING OF FLEXIBLE JOINT TO BE 3.0m . TO MAINTAIN THE FLEXIBILITY OF CONCRETE SURROUNDED SEWERS,CONCRETE PROTECTION SHALL BE INTERRUPTED OVER ITS FULL CROSS–SECTION AT EACH PIPE JOINT BY SHAPED COMPRESSIBLE FILLER.

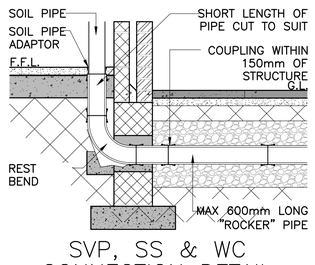
GRANULAR BEDDING TYPE A SHALL CONSIST OF AGGREGATES FROM NATURAL SOURCES SINTERED PULVERIZED FUEL ASH COMPLYING WITH THE RELEVANT PROVISIONS OF BS 882 AND BS 3792 PART 2 RESPECTIVELY AND TO BE SIZED ACCORDING TO PIPE DIAMETER.



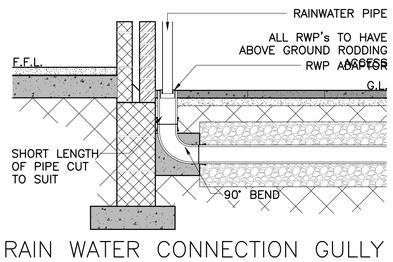
JOINTS FOR CLASS Z BED AND SURROUND PIPES



RODDING EYE DETAIL
SCALE – 1:20

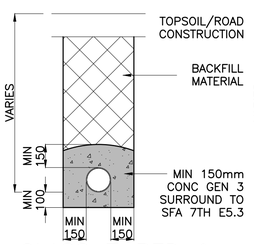


SVP, SS & WC CONNECTION DETAIL
SCALE – 1:20

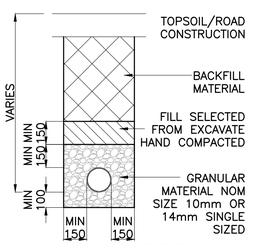


RAIN WATER CONNECTION GULLY
SCALE – 1:20

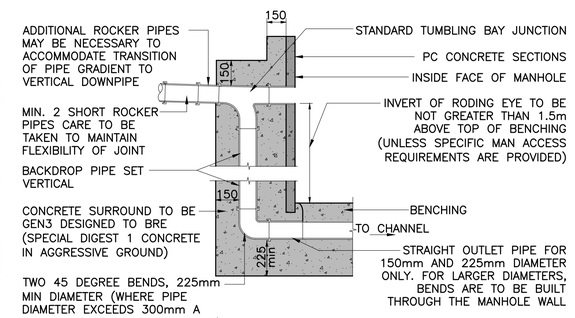
BACKFILLING TO PIPE TRENCHES BENEATH SOFT LANDSCAPE AND FOOTWAYS TO BE SELECTED EXCAVATED MATERIAL FREE FROM STONES LARGER THAN 40mm, LUMPS OF CLAY OVER 100mm, ANY TIMBER, FROZEN MATERIAL OR VEGETABLE MATTER UP TO FORMATION/ GROUND LEVEL FROM THE TOP OF THE SPECIFIED PIPE SURROUND (WELL COMPACTED IN 150mm MAX LAYERS).



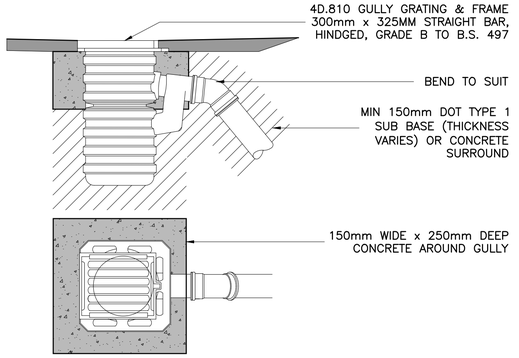
CLASS Z BED & SURROUND
SCALE – 1:20



CLASS S BED & SURROUND
SCALE – 1:20



TYPICAL VERTICAL BACKDROP DETAIL
SCALE – 1:20



YARD GULLY DETAIL
SCALE – 1:20

NOTES

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS AND LEVELS TO BE CHECKED ON SITE PRIOR TO UNDERTAKING ANY WORKS, ORDERING MATERIALS OR FABRICATING ANY COMPONENTS.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS AND RELEVANT SPECIFICATION CLAUSES.
4. ALL DRAINAGE COMPONENTS ARE TO COMPLY WITH CURRENT BRITISH STANDARDS.
5. ALL BURIED CONCRETE TO BE CHEMICAL CLASS DC1 CONCRETE DESIGNATION GEN1, SLUMP CLASS S1 IN STRICT ACCORDANCE WITH BS 8500 PART 2 : 2006 AS UPDATED.
6. ALL WORKS AND MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS (SHW SERIES 500).
7. DRAIN PIPE THROUGH WALLS OR BENEATH FOUNDATIONS (SPREAD ONLY) TO HAVE R.C BRIDGE LINTELS OVER AND PIPE SURROUNDED IN FLEXIBLE MATERIAL (50mm).
8. FINAL LOCATIONS AND DETAILS OF SOIL VENT PIPES, STUB STACKS, RAINWATER DOWN PIPES, GULLIES ETC. TO BE CONFIRMED BY REFERENCE TO ARCHITECT' DRAWINGS.
9. ALL THRESHOLD DRAIN DETAILS TO BE TO ARCHITECT' DETAILS.
10. ALL PIPES INTO CHAMBERS TO SOFFIT TO SOFFIT U.N.O.
11. AT ALL OUTFALL POINTS TO AN EXISTING NETWORK, THE POSITION AND INVERT LEVEL OF EXISTING DRAINS MUST BE CONFIRMED WELL IN ADVANCE OF THE PROGRAMMED DATE FOR INSTALLING ANY OF THE UPSTREAM DRAINAGE, OR ORDERING OF ANY MATERIALS IN ORDER TO ALLOW TIME FOR ANY NECESSARY REVISIONS TO THE HYDRAULIC DESIGN.
12. ALL GRAVITY UPVC PIPEWORK TO BE TO BS 4660 OR BS 5481 WHERE RELEVANT UNLESS NOTED OTHERWISE.
13. ALL NON ADOPTABLE DOMESTIC FOUL AND SURFACE WATER PIPE RUNS SHALL CONSIST OF 100MM DIA. PIPES LAID AT NO FLATTER THAN 1 IN 80 FALLS U.N.O. A SEWER OR LATERAL DRAIN WITH A NOMINAL INTERNAL DIAMETRE OF 100mm, OR A LATERAL DRAIN SERVING TEN OR LESS PROPERTIES IS LAID TO A GRADIENT NOT FLATTER THAN 1:80, WHERE THERE IS AT LEAST ONE WC CONNECTED AND 1:40 IF THERE IS NO WC CONNECTED.
14. ALL CONNECTIONS FROM HIGHWAY GULLIES TO BE 150mm DIA. LAID AT FALLS OF BETWEEN 1 IN 20 AND 1 IN 100 WITH TYPE S BED AND SURROUND TO ALL CONNECTIONS WITH MIN. 1.20m COVER, TYPE Z BED AND SURROUND TO ALL OTHER CONNECTIONS.
15. THE MINIMUM DEPTH OF COVER TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
    A) DOMESTIC GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS, 0.35M
    B) DOMESTIC DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.5M.
    C) DOMESTIC DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.9M
    D)AGRICULTURAL LAND AND PUBLIC OPEN SPACE, 0.9M
    E) OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 1.2M
16. OPTIMUM TRENCH WIDTH
    OPTIMUM TRENCH WIDTH = PIPE + 300mm. CONTRACTOR TO ENSURE TRENCH WALLS ARE SUITABLY PROPPED.
17. BACKFILLING TO PIPE TRENCHES BENEATH ROADS, CAR PARKING AND STRUCTURES TO BE M.O.T. TYPE 1 GRANULAR MATERIAL UP TO FORMATION LEVEL FROM THE TOP OF THE SPECIFIED PIPE SURROUND (WELL COMPACTED IN 150mm LAYERS).
18. BACKFILLING TO PIPE TRENCHES BENEATH LANDSCAPED AREAS TO BE SELECTED EXCAVATE MATERIAL FREE FROM LARGE STONES GREATER THAN 75mm, LUMPS OF CLAY OVER 100mm, ANY TIMBER, FROZEN MATERIAL OR VEGETATION MATTER UP TO FORMATION / GROUND LEVEL FROM THE TOP OF THE SPECIFIED PIPE SURROUND (WELL COMPACTED IN 150mm LAYERS).
19. CONSTRUCTION OF SEWER TO BE IN ACCORDANCE WITH WELSH MINISTERS STANDARDS AND SFA 7TH EDITION.
20. THE DEVELOPER MUST SELF–VET AND CERTIFY THAT THE DESIGN CRITERIA, MATERIAL STANDARDS AND WORKMANSHIP SPECIFICATIONS FOR THE PROPOSED ADOPTABLE LATERAL DRAIN ARE IN ACCORDANCE WITH THOSE SET OUT IN 'SEWERS FOR ADOPTION' 7TH EDITION, THE WELSH MINISTERS STANDARDS AND THE REQUIREMENTS OF DCWW AS THE STATUTORY SEWERAGE UNDERTAKER.

FOR TENDER ISSUE

Revisions.

Revision	Made by	Date	Checked	Description
C02	T.J	12.01.2024	I.R	AMENDED DETAILS TO SUIT CHANGES
C01	M.J	31.10.2023	I.R	FIRST ISSUE

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b·r·p Bingham Rawlings Partnership Limited

Project	BRYMBO HERITAGE PROJECT
Drawing Title	PROPOSED DRAINAGE CONSTRUCTION DETAILS SHEET 1
Architect	TACP ARCHITECTS
Client	BRYMBO HERITAGE TRUST
Scale	1/250 @ A1
Drawn	M.Jones
Date	31.10.2023
Checked	I.Rowlands
Drawing No.	4866 | 0008
Revision	C01 C02