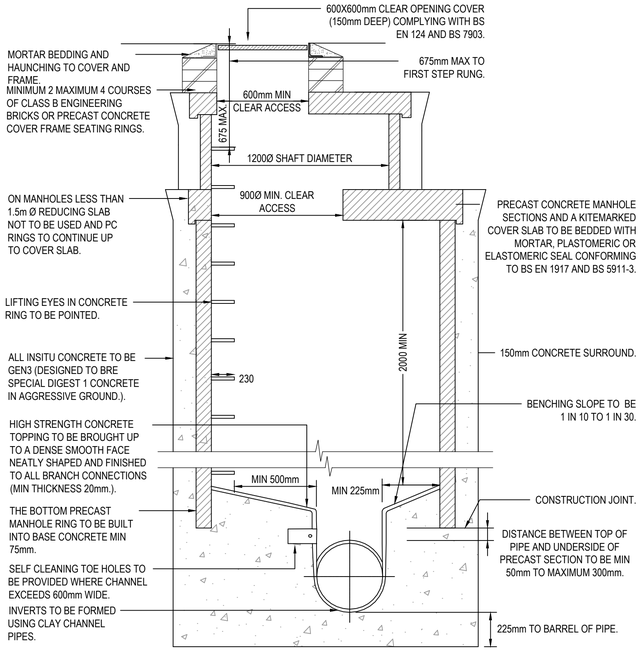
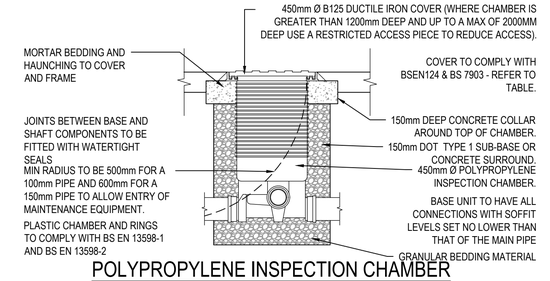
YW REF: H-3-246-041



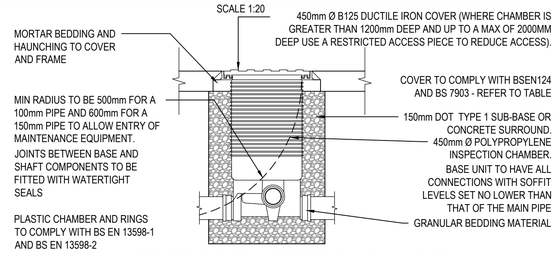
POLYPROPYLENE INSPECTION CHAMBER (WHERE SITED IN DRIVEWAYS/PAVED AREAS) - MAX 2000 DEPTH

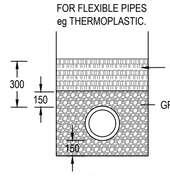
SCALE 1:20



POLYPROPYLENE INSPECTION CHAMBER (WHERE SITED IN GARDENS) - MAX 2000 DEPTH

SCALE 1:20



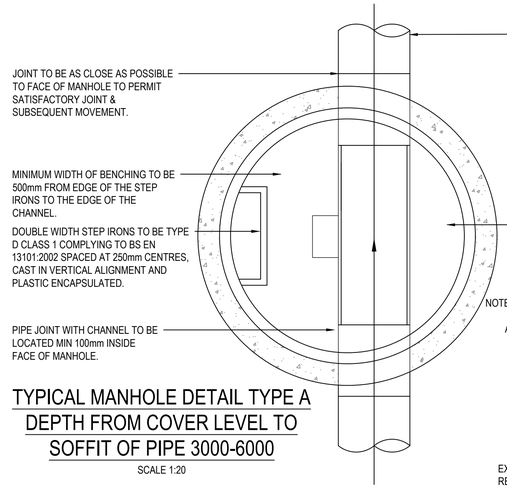


CLASS S BEDDING DETAIL

SCALE 1:20

YORKSHIRE WATER NOTES:

1. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH "SEWERS FOR ADOPTION' 6TH EDITION, THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATERS STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.
2. MANHOLE COVERS SHALL/MUST HAVE A CLEAR OPENING OF 600MM AND SHALL BE CLASS D400 TO BS EN 124 WITH 150MM DEEP FRAMES IN HIGHWAYS.
3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
4. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUN-OFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR IN-DIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY, LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUN-OFF.
5. COVER SLABS MUST CARRY THE BSI KITEMARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOADING BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600MM X 600MM FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA), 'TECHNICAL BULLETIN' ISSUED AUTUMN 2004 FOR KITEMARKED COVER SLAB OPENING SIZES.
6. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
7. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE MARGINS.
8. "SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES (PLEASE ALSO REFER TO FIGURE 2.3 ON PAGE 33 IN "SEWERS FOR ADOPTION' 6TH EDITION FOR RESTRICTIONS ON TREE PLANTING ADJACENT TO SEWERS)".
9. SEWERS TO BE LAID IN CLASS "S" BEDDING (150MM GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2M IN HIGHWAYS AND VERGES (OR LESS THAN 900MM IN NONE VEHICULAR ACCESS THEN A CONCRETE SLAB SHOULD BE PROVIDE ABOVE GRANULAR BED AND SURROUND.
10. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE A2).
11. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
12. YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE "C" BRICK MANHOLES AND 1050MM DIA MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE "B" MANHOLE WITH 1200MM DIA OR 1500MM DIA RINGS, WITH THE OPENING SITED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1 - 1.5M.
13. WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS MUST NOT BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE.
14. DEMARCATION CHAMBERS LOCATED WITHIN DRIVEWAYS TO INCLUDE A 150mm GEN3 SURROUND.
15. PRIVATE DRIVEWAY DRAINAGE ADJACENT TO THE HIGHWAY TO BE SET BACK APPROX. 200mm FROM THE BACK EDGING TO ALLOW EASE IN CONSTRUCTION/RADII AND FULL CONCRETE BACKING TO EDGINGS.



NOMINAL DIAMETER (mm)	EFFECTIVE LENGTH (m)
150-600	0.6
601-750	1.0
OVER 750	1.25

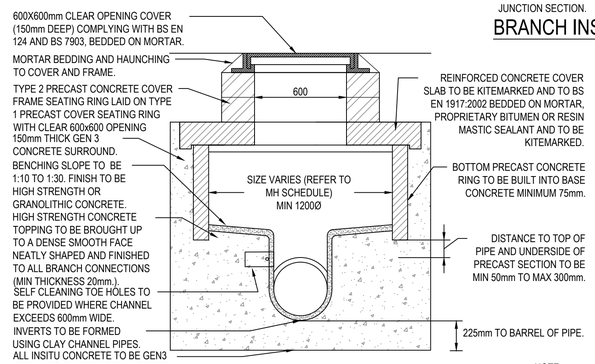
ALL PIPES ENTERING THE BOTTOM OF THE MANHOLE TO HAVE SOFFITS LEVEL.

MINIMUM WIDTH OF BENCHING TO BE 225mm.

NOTE: OPENING TO LOCATED CENTRALLY OVER 900mm SHAFT AND OFFSET APPROXIMATELY 200mm FOR 1200mm DIAMETER SHAFT.

TYPICAL MANHOLE DETAIL TYPE A DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3000-6000

SCALE 1:20



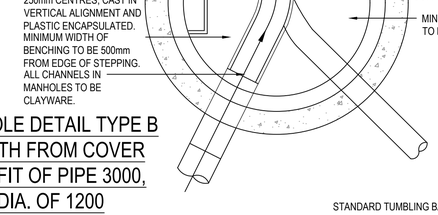
NOTE
MANHOLES LESS THAN 1.5m TO SOFFIT WITH 1500Ø CHAMBER SIZE OR LARGER SHOULD HAVE A 1200x675mm OPENING (CENTRAL OR ECCENTRIC) SITED OVER CHANNEL WITH DOUBLE TWIN 600x600mm COVERS

TYPICAL MANHOLE DETAIL TYPE B1/E MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE <1500

SCALE 1:20

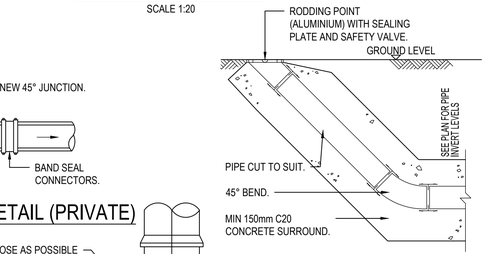
TYPICAL MANHOLE DETAIL TYPE B MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 3000, MINIMUM DIA. OF 1200

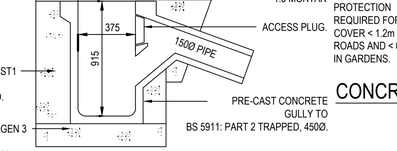
SCALE 1:20

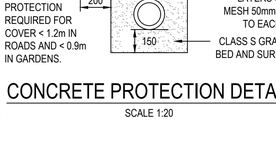


NOMINAL DIAMETER (mm)	EFFECTIVE LENGTH (m)
150-600	0.6
601-750	1.0
OVER 750	1.25

ALL PIPES ENTERING THE BOTTOM OF THE MANHOLE TO HAVE SOFFITS LEVEL





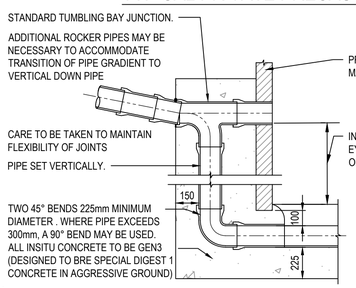


CONCRETE PROTECTION DETAIL

SCALE 1:20

TYPICAL PRIVATE PRECAST CONCRETE ROAD GULLY DETAIL

SCALE 1:20



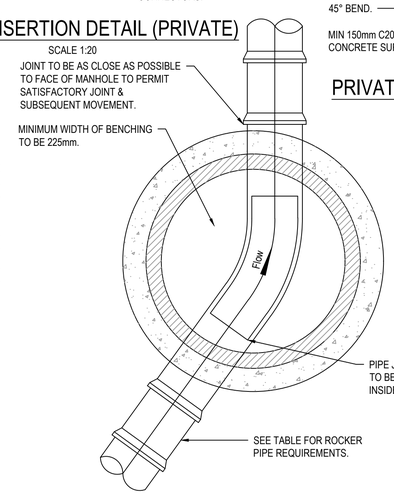
SUITABLE FILL:- THE SUITABLE FILL SHALL BE SUITABLE FOR THE LOCATION AND SHALL BE CAREFULLY COMPACTED TO PROVIDE STABILITY WITHOUT DAMAGING THE PIPE.
FILL UNDER CAR PARKING AREAS AND PRIVATE ROADS TO BE WELL COMPACTED GRADED MATERIAL. FILL UNDER ADOPTED ROADS TO BE TYPE 1 GRANULAR SUB-BASE.

WHERE THE PIPES ARE TO BE ADOPTED CLASS S BEDDING TO BE USED FOR EITHER RIGID OR FLEXIBLE PIPES

SIZE OF BEDDING MATERIAL - ALL GRANULAR MATERIAL TO BE SINGLE SIZED OR GRADED IN ACCORDANCE WITH BS 882.BS1047,BS3797		
PIPE DIAMETER	NOMINAL SINGLE SIZED	GRADED
UP TO 100mm	10mm	
OVER 100mm TO 150mm	10mm or 14mm	5mm to 14mm
OVER 150mm TO 300mm	10mm,14mm or 20mm	5mm to 14mm or 5mm to 20mm
OVER 300mm TO 550mm	14mm or 20mm	5mm to 14mm or 5mm to 20mm
OVER 550mm	14mm, 20mm or 40mm	5mm to 14mm or 5mm to 20mm or 5mm to 40mm

BRANCH INSERTION DETAIL (PRIVATE)

SCALE 1:20



PRIVATE RODDING EYE DETAIL

SCALE 1:20

DIAMETER (mm)	MANUFACTURER	MATERIAL
100&150 (I.D)	Hepworth	Vitrified Clay
100&225 (I.D)	Hepworth	Vitrified Clay
100,150&225 (I.D)	Naylor	Vitrified Clay
100,150&225 (I.D)	Naylor	Vitrified Clay
110&160 (O.D)	Uponor	uPVC
110&160 (O.D)	Hepworth	uPVC
110&160 (O.D)	Wavin	uPVC
150&225 (I.D)	Wavin	uPVC
110&160 (O.D)	Marley	uPVC
150&225 (I.D)	Marley	uPVC
110&160 (O.D)	Polypipe	uPVC
150&225 (I.D)	Polypipe	uPVC

TYPICAL EXTERNAL VERTICAL BACKDROP DETAIL

SCALE 1:20

CONCRETE PROTECTION	
CLASS 1 SULPHATE CONDITIONS	
ADOPTABLE STANDARDS AND AREAS SUBJECT TO HEAVY LOADING	GEN3 OR GEN 3
AREAS SUBJECT TO LIGHT LOADING eg. PRIVATE DRIVES, SMALL CAR PARKS	GEN1 OR ST2
FOR BURIED CONCRETE EXPOSED TO SULPHATE CONDITIONS	
CLASS 2	FND 2
CLASS 3	FND 3
CLASS 4A	FND 4A
CLASS 4B	FND 4B

MANUFACTURER	PRODUCT NAME	MATERIAL	MAX DEPTH
Naylor	Plastic Inspection Chamber	Polypropylene	Up to 1200mm
Hepworth	PPIC	Polypropylene	Up to 1200mm
Uponor	Inspection Chamber (450mmØ)	Polypropylene	Up to 1200mm
Marshalls	Inspection Chamber To BS5911 pt2	Precast concrete	Up to 1000mm
Wavin	Osma Ultrarib Inspection Chamber	Polypropylene	Up to 1200mm
Wavin	OsmaDrain Universal Inspection Chamber	Polypropylene	Up to 1200mm
Wavin	Non Entry Inspection Chamber	Polypropylene	Up to 2000mm
Marley	Inspection Chamber (450mmØ)	Polypropylene	Up to 1200mm
Polypipe	110mm Inspection Chamber (460mmØ)	Polypropylene	Up to 1200mm

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 B BEDDING)			
100-150mm	0.6m - 8.0m	1.2m - 8.0m	1.2m - 8.0m
225mm	0.6m - 5.0m	1.2m - 5.0m	1.2m - 4.5m
400mm	0.6m - 4.5m	1.2m - 4.5m	1.2m - 4.0m
600mm	0.6m - 4.5m	1.2m - 4.5m	1.2m - 4.0m
CLASS M CONCRETE PIPES (CLASS B BEDDING)			
300mm	0.6m - 3.0m	1.2m - 3.0m	1.2m - 2.5m
450mm	0.6m - 3.5m	1.2m - 3.5m	1.2m - 2.5m
600mm	0.6m - 3.5m	1.2m - 3.5m	1.2m - 3.0m
THERMOPLASTIC PIPES (CLASS S BEDDING)			
100 - 300mm	0.6m - 7.0m	0.9m - 7.0m	0.9m - 7.0m

WHERE COVER IS LESS THAN THE ALLOWABLE DEPTH PIPES TO HAVE A CLASS Z CONCRETE SURROUND OR CONCRETE COVER SLAB PROTECTION

No.	Revision	Drawn	Job Manager	Project Director	Date
P07	PRIVATE DRAINAGE NOTE ADDED	JS	EM	VB	01.07.20
P06	YW COMMENTS	JS	NT	VB	18.04.19

Drawing Revisions

Note: * indicates signatures on original issue of drawing or last revision of drawing

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Client **KEEPMOAT HOMES**

Project **CARLTON ROAD, BARNSLEY**

Title **DRAINGAGE CONSTRUCTION DETAILS**

Scale	AS SHOWN		**DO NOT SCALE**
Drawn	DC	Designer	DC
Drafting Check	NT	Design Check	NT
Approved (Project Director)			
Date			

This Drawing must not be used for Construction unless signed as Approved

Drawing No. **44-12501429-C055**

Original Size **A1**

Rev. **P07**

Plot Date: 1 July 2020 - 3:39 PM Plotted by: Joe Smith Cad File No: G:\401\12501429\CADD\Drawings\DWG\44-12501429-C055_Drainage Construction Details.dwg