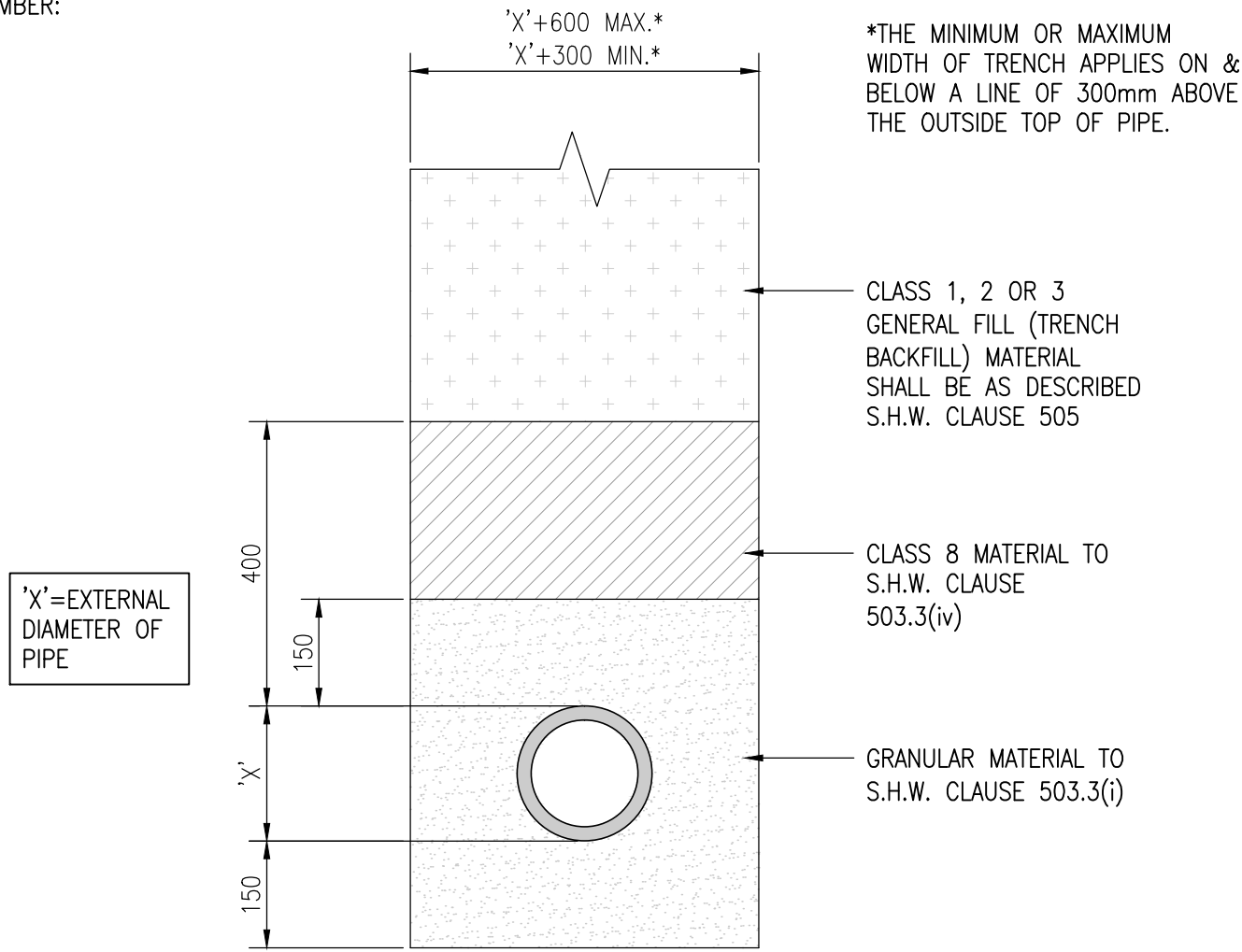
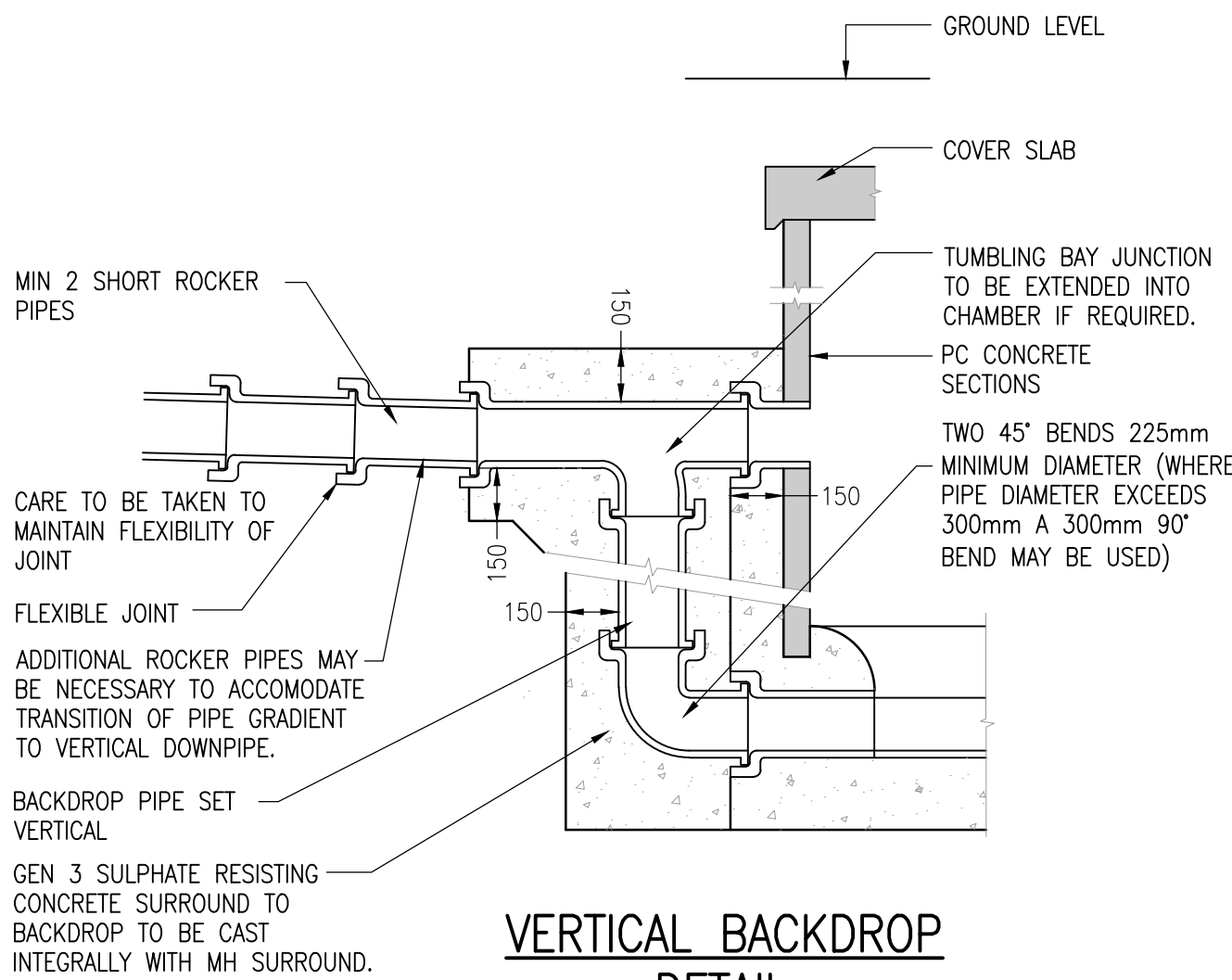


YORKSHIRE WATER
REFERENCE NUMBER:
H-3-263-922

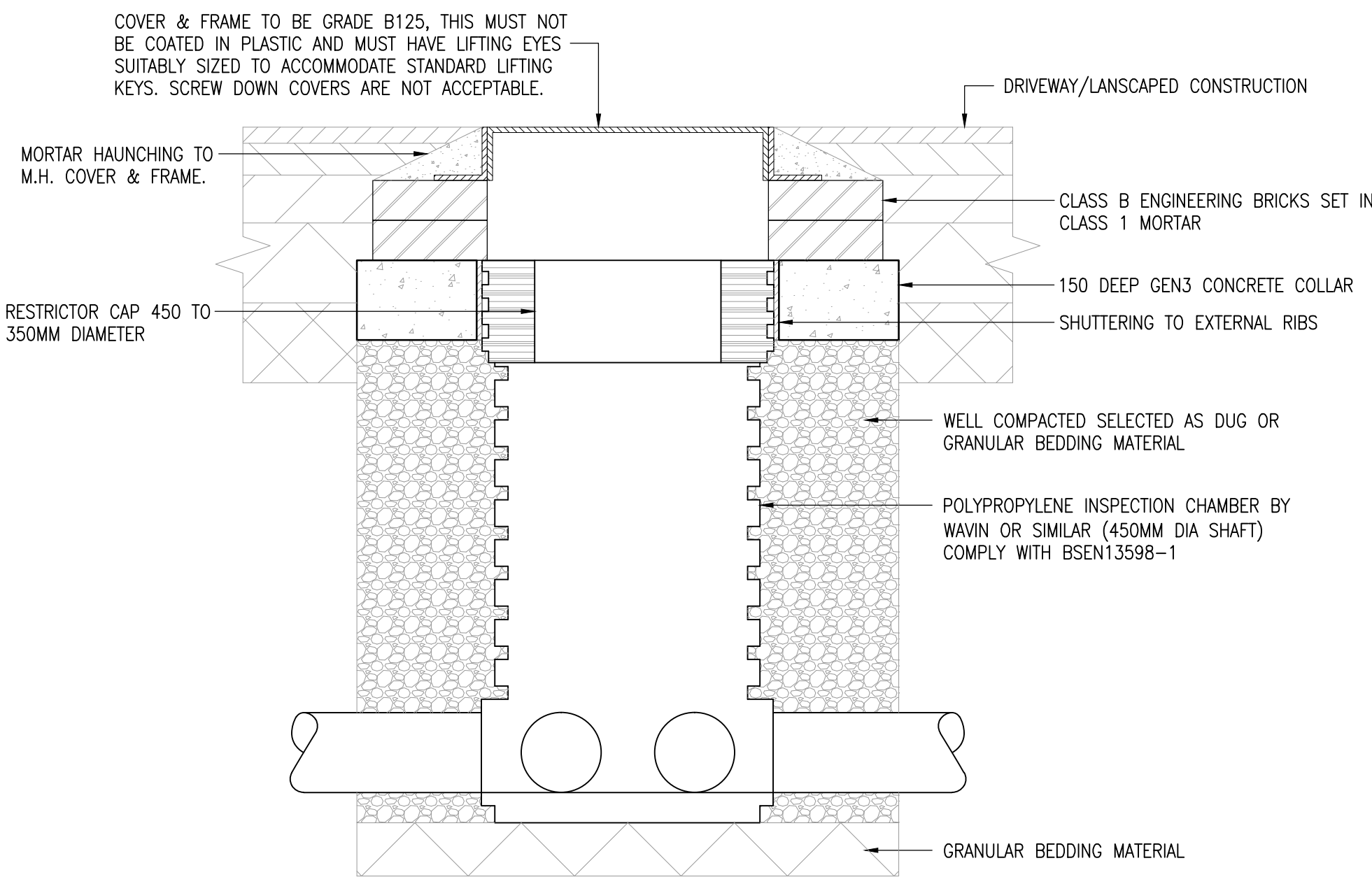


YORKSHIRE WATER CLASS S PIPE BEDDING DETAIL

1:10



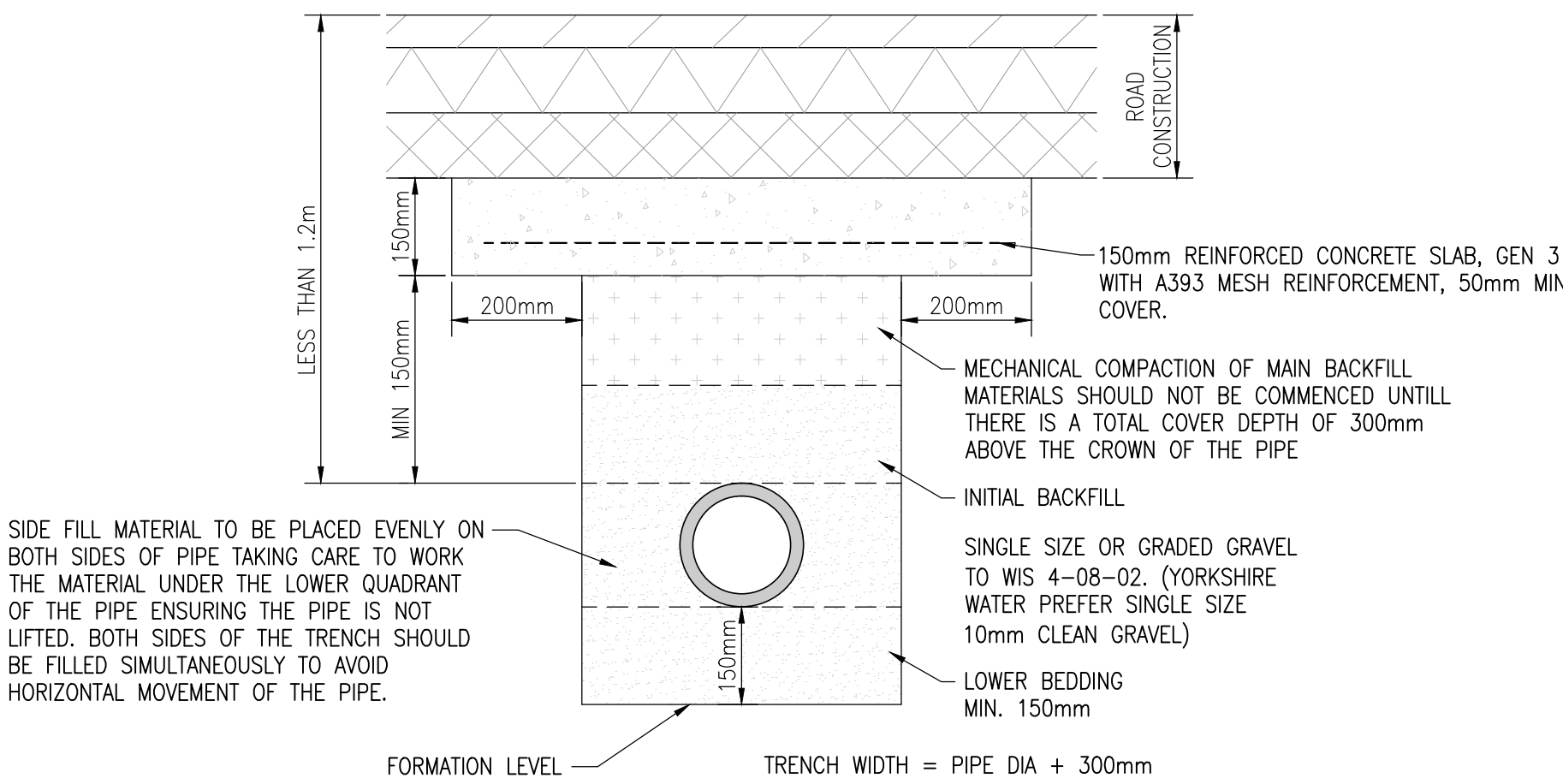
VERTICAL BACKDROP DETAIL



REDUCED ACCESS POLYPROPYLENE INSPECTION CHAMBER DETAILS (RAPPIC)

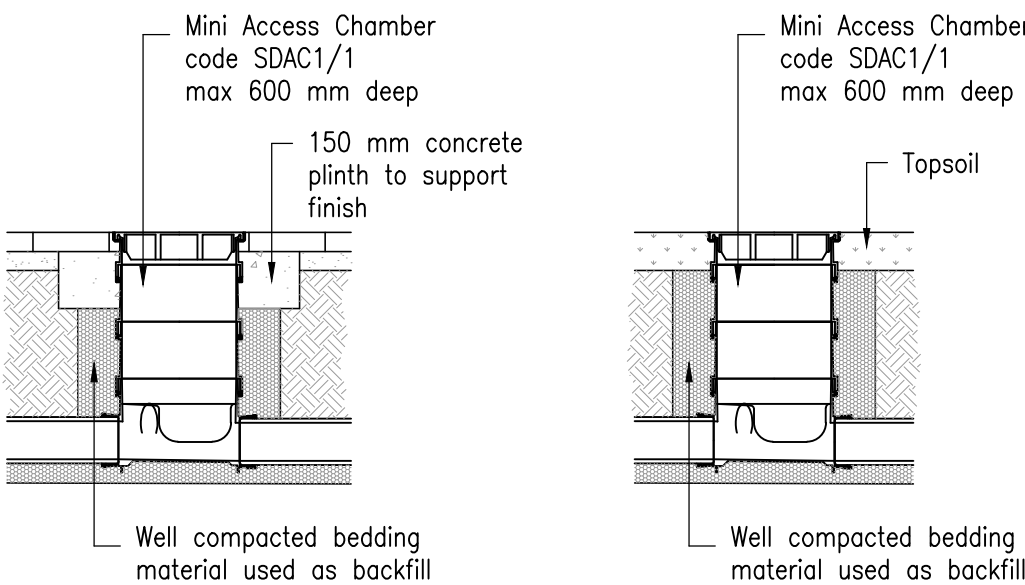
1:10

(DEMARCATON CHAMBER DEPTH TO SOFFIT 1.2M TO 2.0M)

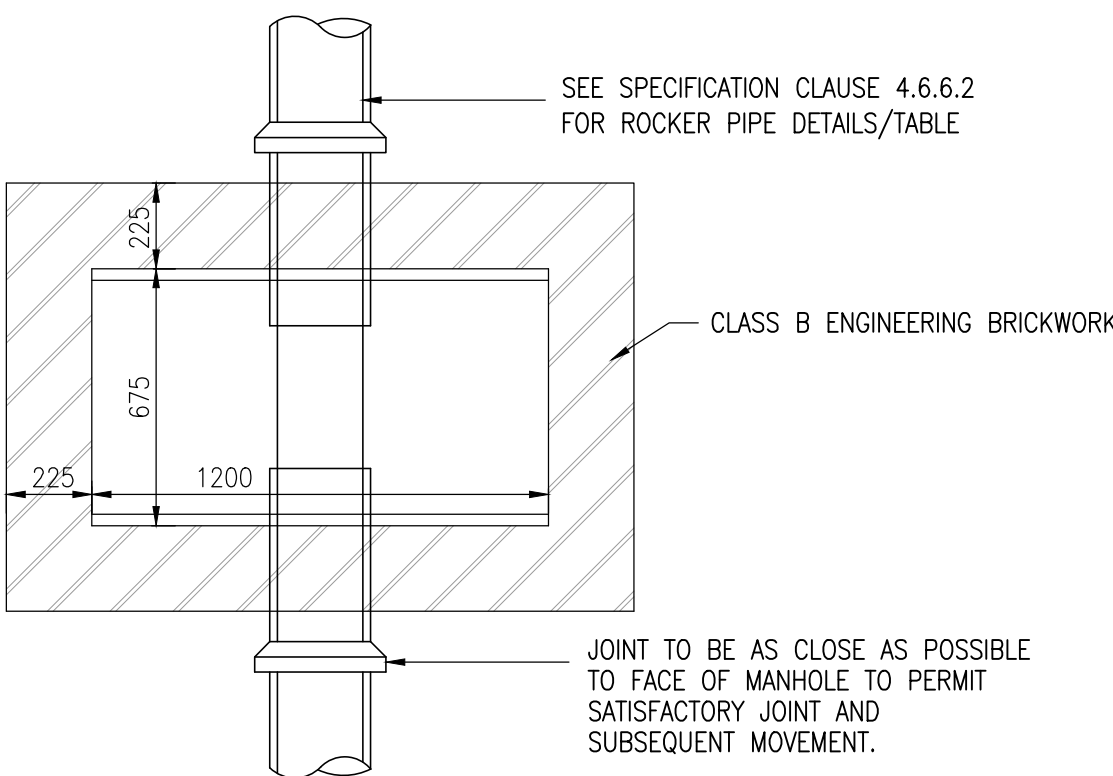
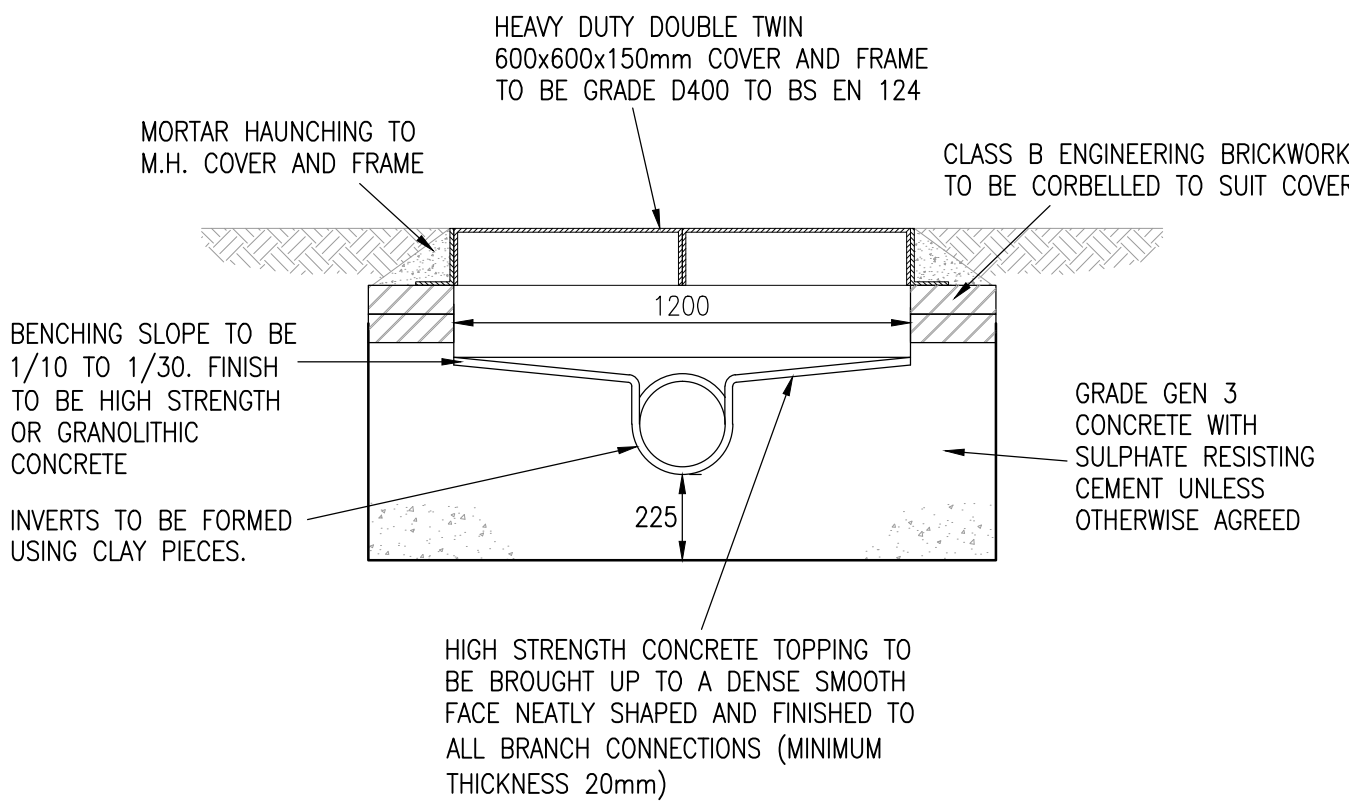


CONCRETE PROTECTION FOR PIPES AT DEPTHS OF COVER LESS THAN 1.2M

1:10



MINI ACCESS CHAMBER DETAILS (MAC)



DIAMETER OF PIPE (mm)	ROCKER PIPE LENGTH (m)
150 to 600	0.6
OVER 600 to 750	1.0
OVER 750	1.25

NOTE:-
THE USE OF PRECAST RECTANGULAR CONCRETE MANHOLE UNITS WITH 150mm GRADE GEN3 CONCRETE SURROUND (DESIGNED TO BRE SPECIAL DIGEST 1 CONCRETE IN AGGRESSIVE GROUND) IS PERMITTED.

TYPICAL MANHOLE DETAIL – TYPE S

(DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE <1.0m)

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 WATER'S STANDARDS/REQUIREMENTS/ADDENDUM 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 HIGHWAY.
- 3) 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.
- 4) FILL GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
- 5) YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUNOFF INTO PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUNOFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LAISE WITH LOCAL AUTHORITY, LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUNOFF.
- 6) 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 TO 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.
- 7) SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING SUCH PRECAUTIONS ARE NOT NECESSARY.
- 8) THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5M FORM KERB FACES AND SERVICE MARGINS.
- 9) "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)".
- 10) SEWERS TO BE LAID IN CLASS "S" BEDDING (150mm GRANULAR BEDDING AND SURROUND). WHERE DEPTH OF COVER TO TOP OF SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NONE VEHICULAR ACCESS AREAS) THEN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND.
- 11) BEDDING AND BACKFILL MATERIAL TO CONFORM TO REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE A2).
- 12) 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.
- 13) 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.

Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION

DEMOLITION

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

NOTE:-

DETAILS SHOWN ARE SUBJECT TO SECTION 104 APPROVAL. ADDITIONAL WORKS & MATERIALS COULD BE REQUIRED.

C	04/07/17	UPDATED TO SUIT YORKSHIRE WATERS COMMENTS DATED 28/02/2018 VIA EMAIL	MJS	DS	CM
B	04/07/17	MANHOLE COVER NOTES UPDATED AND YORKSHIRE WATER NOTE UPDATED	MJS	DS	JRT
A	04/07/17	NOTE ADDED.	DAS		
Rev.	Date	Description	Drawn	Chkd	Appd.

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Keepmoat

Project Title:
**KEEPMOAT HOMES
ASHBROW ROAD
HUDDERSFIELD**

Drawing Title:
**SECTION 104
DRAINAGE DETAILS
SHEET 2**

Scale at A1: 1:20	Status: Preliminary	Approved:
Drawn: DS	Checked:	Date:
Date: 04/07/17	Date:	Date:
Drawing No.:	Revision:	

114509/2009 C