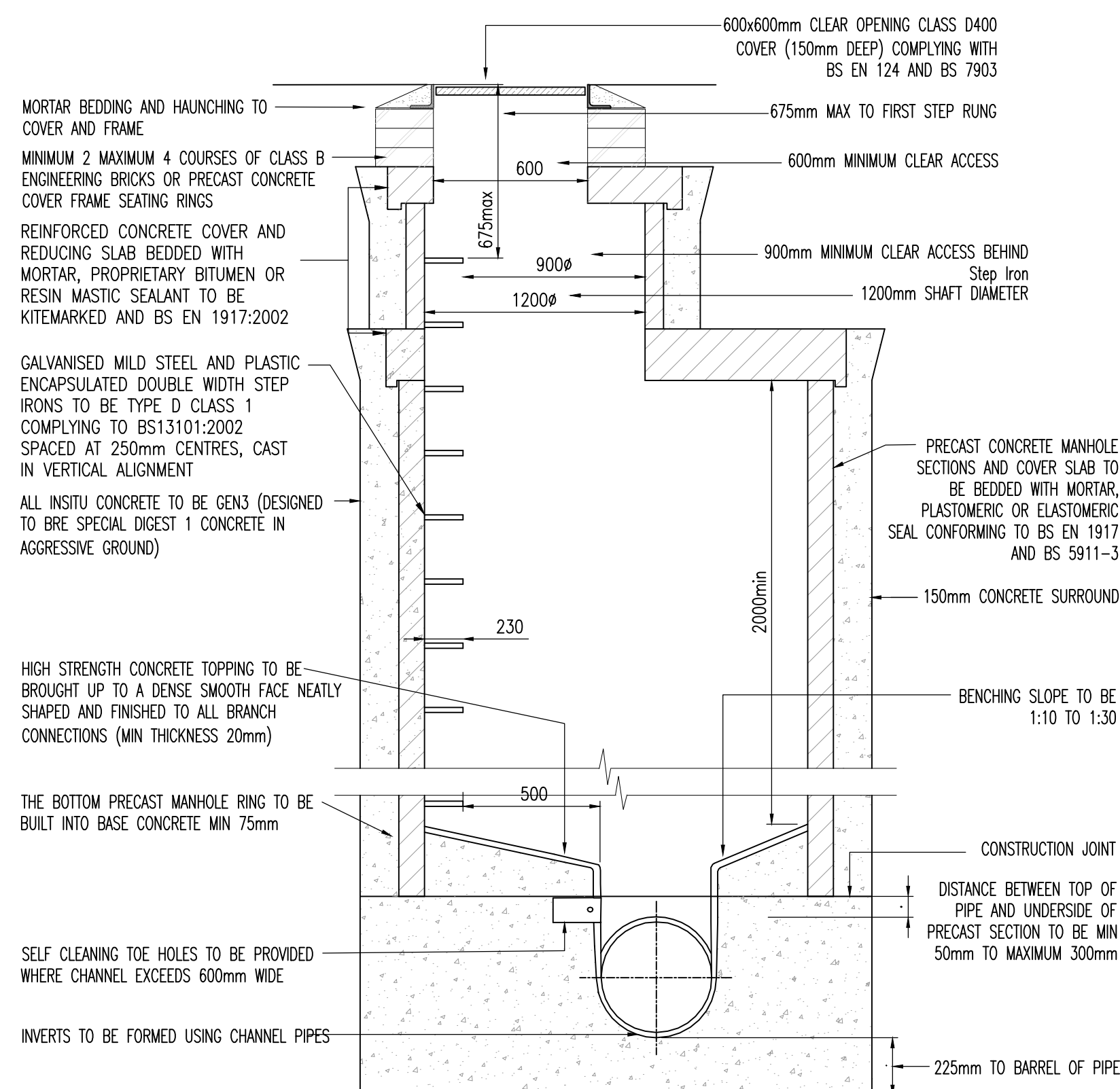
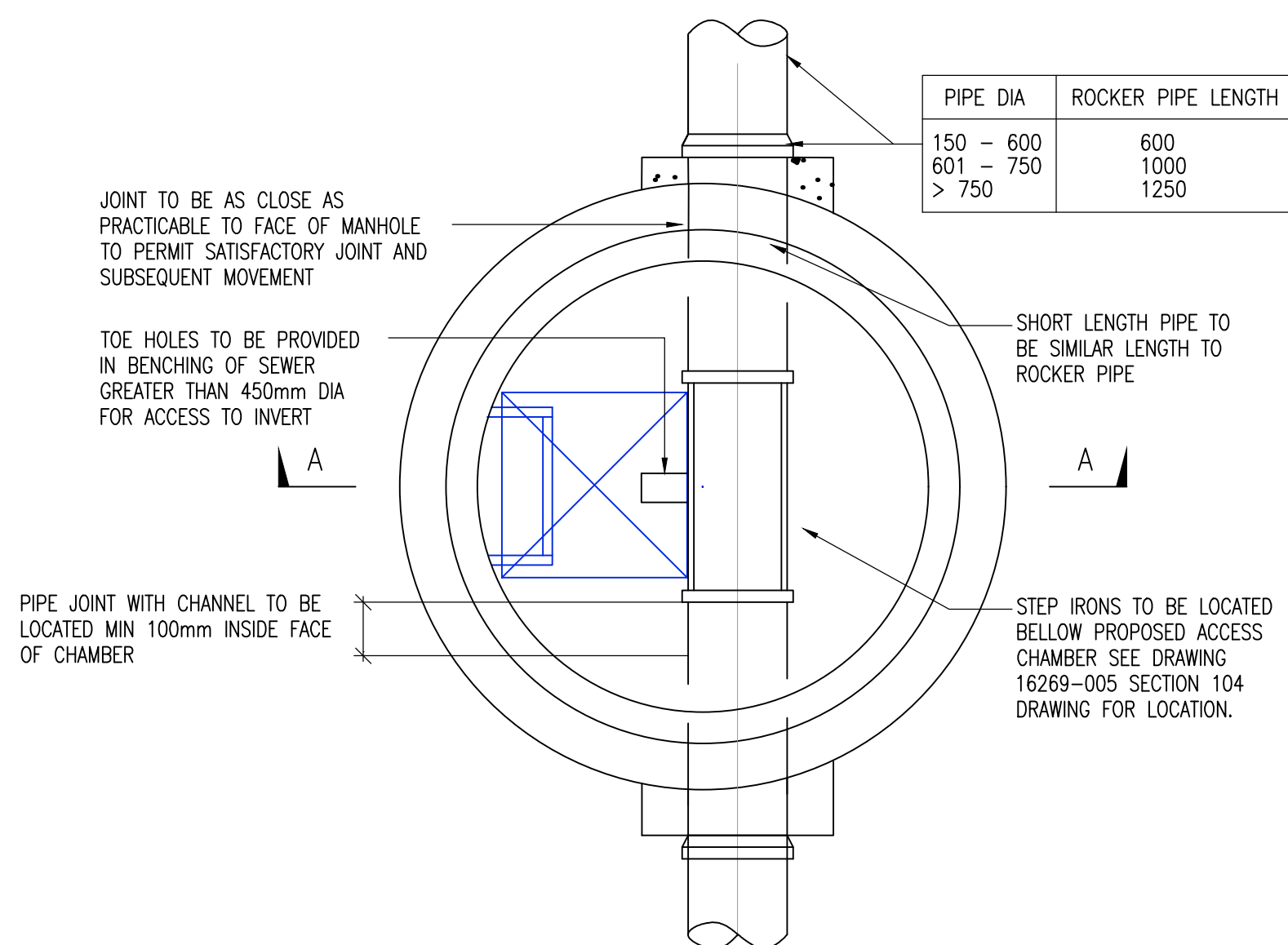




MANHOLE DETAIL TYPE A
SECTION 'A-A'

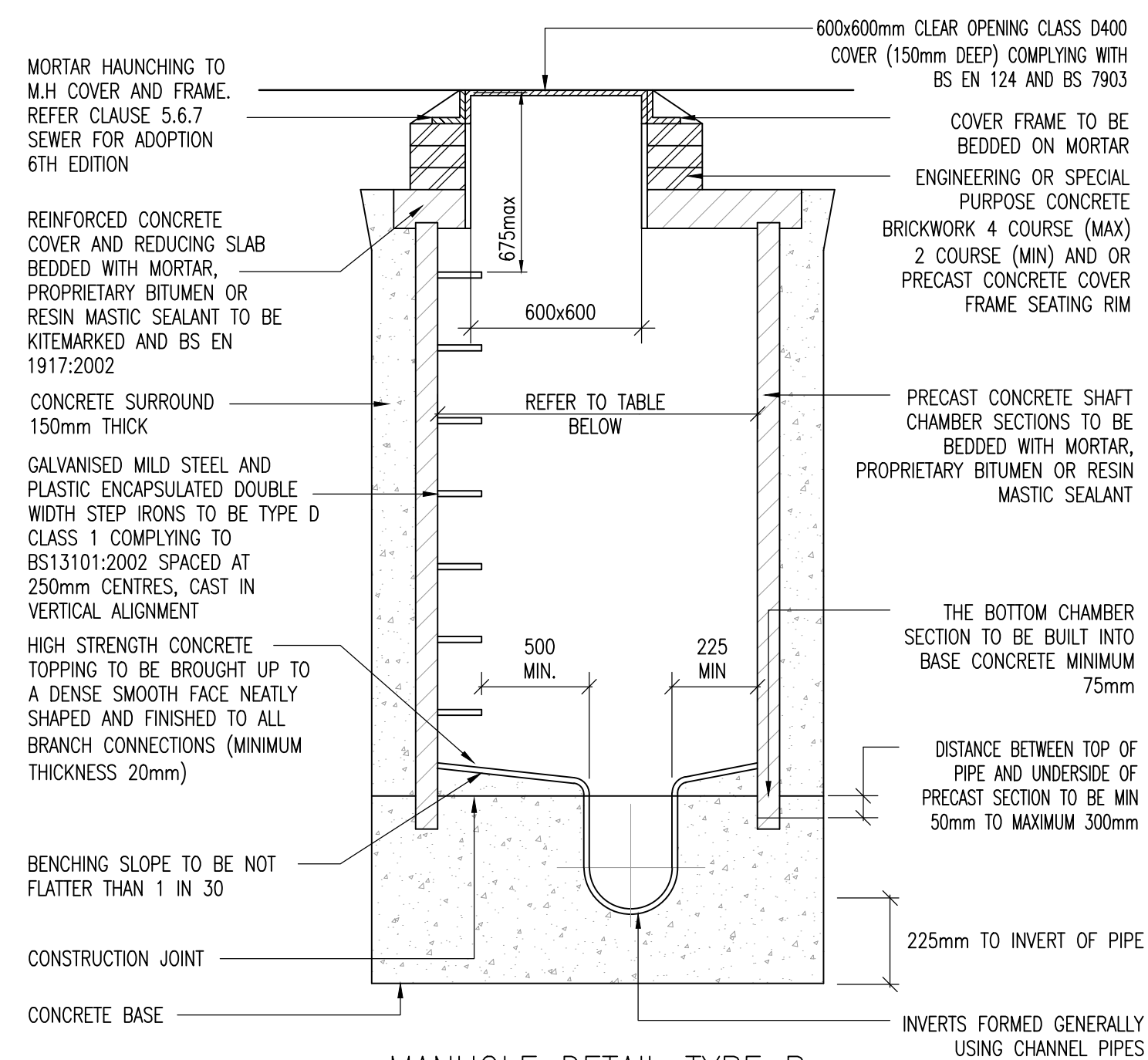
Ø OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375-700	1500
750-900	1800
>900	LIAISE WITH WATER AUTHORITY

NOTE: ON MANHOLES LESS THAN 1.5M DIAMETER REDUCING SLAB IS NOT TO BE USED AND PRECAST RINGS TO CONTINUE UP TO WATER SLABS.



MANHOLE DETAIL TYPE A

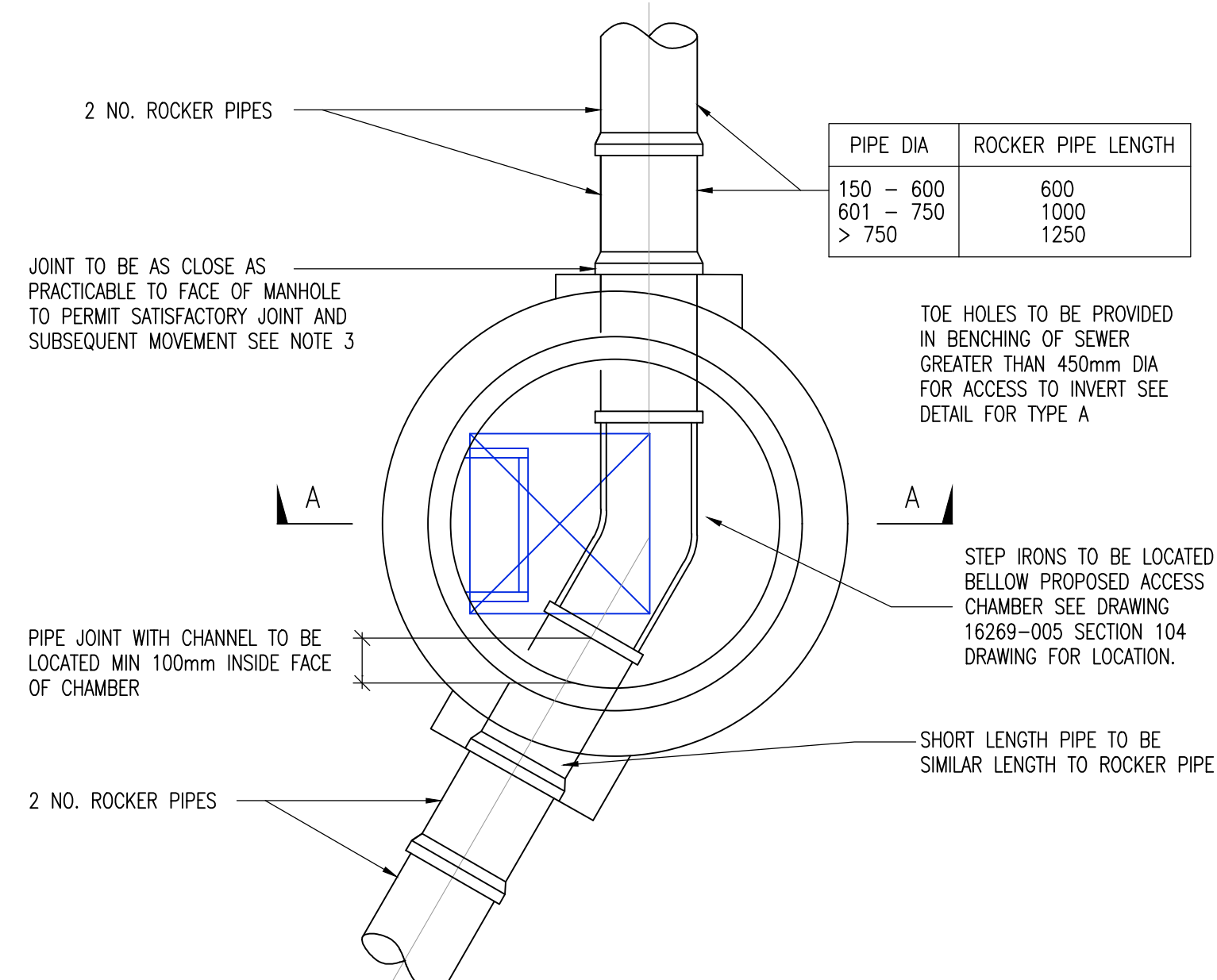
SCALE 1:20
MAX DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 3.0M TO 6.0M



MANHOLE DETAIL TYPE B

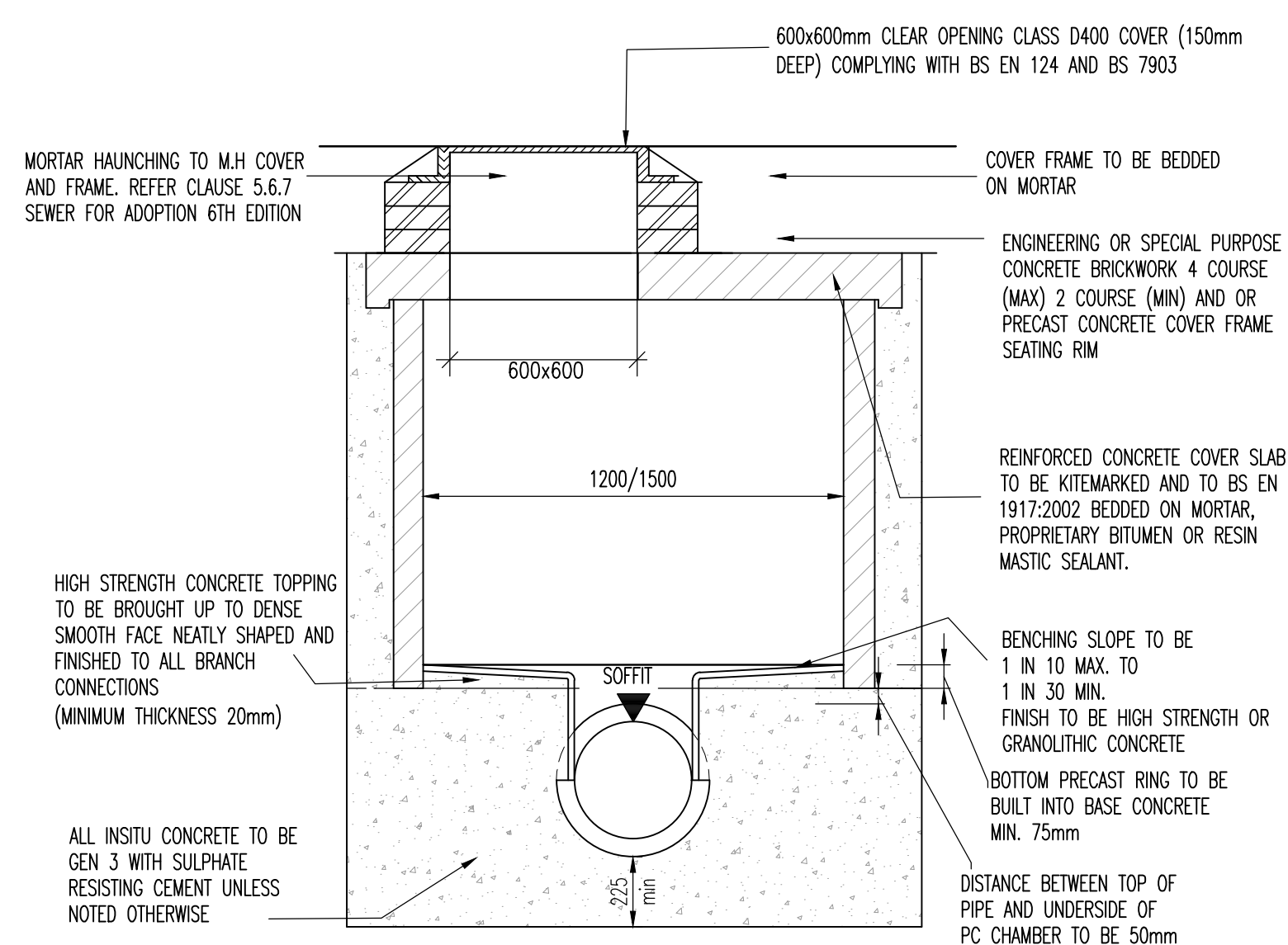
SECTION 'A-A'

Ø OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375-700	1500
750-900	1800
>900	LIAISE WITH WATER AUTHORITY



MANHOLE DETAIL TYPE B

SCALE 1:20
MAX DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE 1.5M TO 3.0M

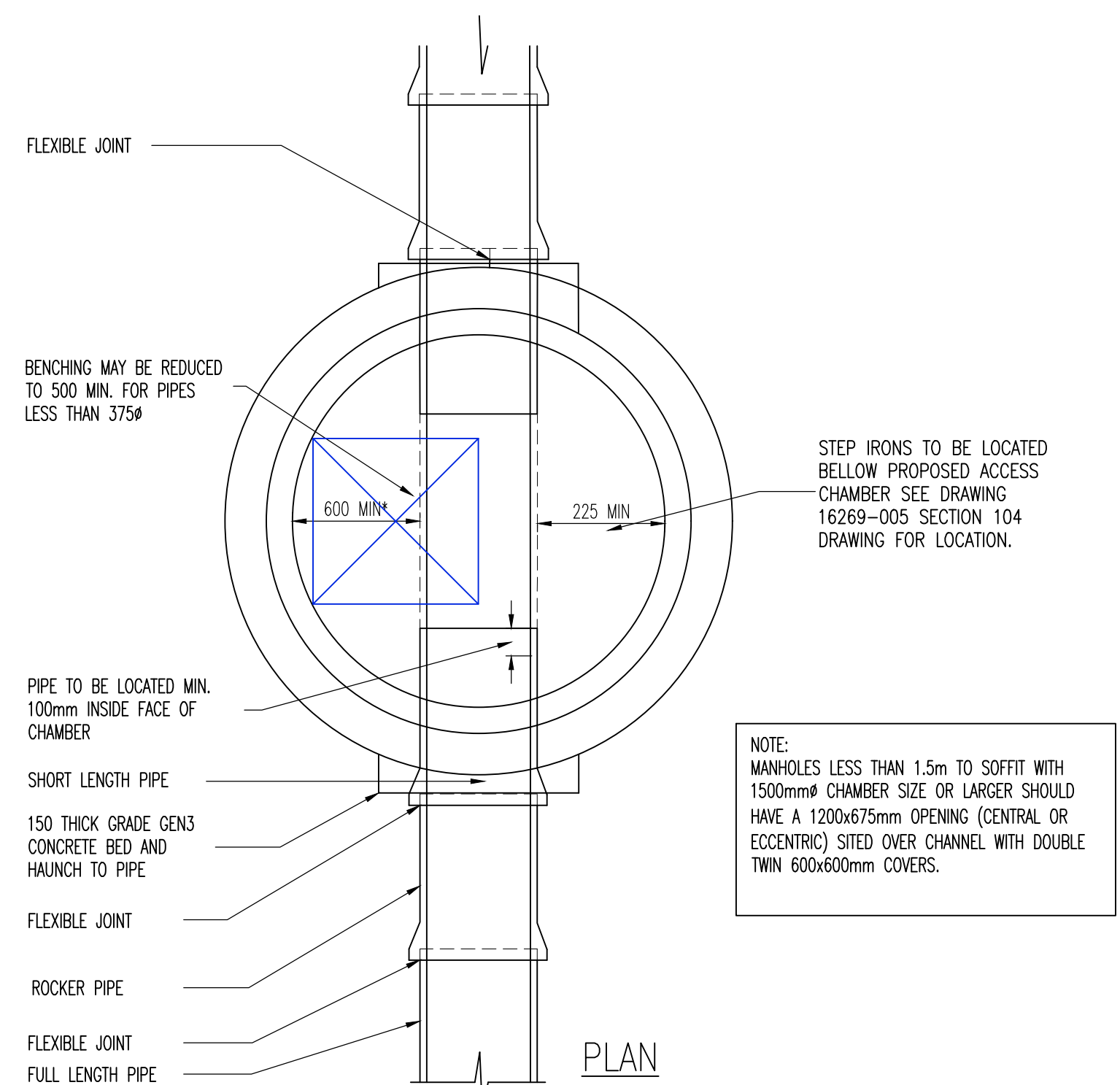


TYPICAL MANHOLE DETAIL – TYPE B1/E

SECTION 'A-A'

NOMINAL SIZE	EFFECTIVE LENGTH (mm)
150 TO 600	600
601 TO 750	1000
750 AND ABOVE	1250

SHORT AND ROCKER PIPE
LENGTHS TABLE APPLICABLE TO
ALL MANHOLE TYPES



TYPICAL MANHOLE DETAIL - TYPE B1/E

SCALE 1:20
DEPTH TO SOFFIT OF PIPE LESS THAN 1.5m

IT IS ASSUMED THAT ALL WORKS WILL BE UNDERTAKEN BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. IN ADDITION TO THE HAZARDS TYPICALLY ASSOCIATED WITH THE TYPES OF CONSTRUCTION DETAILED ON THIS DRAWING, ANY KNOWN ABNORMAL HAZARDS SPECIFIC TO THIS DRAWING HAVE BEEN IDENTIFIED.



ABNORMAL
HAZARD
REFERENCE

YORKSHIRE WATER GENERAL NOTES

1. ALL ADAPTABLE SEWERS SHALL BE MATERIAL TO BE IN ACCORDANCE WITH SENIORS FOR ADIPTION 6TH EDITION THE RELEVANT BRITISH /EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND ITEMWATERD.
 2. MANHOLE COVERS SHALL MAINTAIN HAVE A CLEAR OPENING 600mm AND BE CLASS D400 TO BS EN 124 WITH 150mm DEEP FIRMES IN HIGHWAY.
 3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION YORKSHIRE WATER BEFORE ANY SENIOR WORKS ARE CARRIED OUT.
 4. ALL VIO TO BE CLASS OF EN 1916 / BS 5911-1:2002.
 5. COVER SLABS MUST CARRY THE BS ITEMARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE MANHOLE 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 TYPE. PLEASE REFER TO 10.6 SYSTEMS ADIPTION 6TH EDITION TECHNICAL BULLETIN SECTI AUTUMN 2004 FOR ITEMARKED COVER SLAB OPENING SIZES.
 6. THE ADAPTABLE SEWERS SHOULD BE A MINIMUM 1m FROM KERBS AND MANHOLES 0.5m FROM KERB FACES AND SURFACE MARGINS.
 7. SENIORS MUST HAVE 5 METERS CLEARANCE FROM TREES AND HEDGES, (PLEASE ALSO REFER TO FIGURE 2.3 ON PAGE 33 IN SENIORS FOR ADIPTION 6TH EDITION FOR RESTRICTIONS ON TREES PLANTING ADJACENT TO SENIORS).
 8. SENIORS TO BE LAID IN CLASS "S" BEDDING (150mm GRANULAR BED AND SURROUND), WHERE DEPTH COVER TO TOP OF THE SENIOR IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 800mm IN PEDESTRIAN ONLY AREAS) THEN A CONCRETE SLAB MUST BE PROVIDED ABOVE THE GRANULAR BED AND SURROUND.
 9. ALL ADAPTABLE SEWERS TO BE BS ITEMARK (CERTIFIED TO WAS 4-5-01).
 10. ADAPTABLE SENIOR PIPES TO BE LAID IN MAXIMUM 3 METER LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LONGER.
 11. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE 2).
 12. PLASTIC CHANNEL SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD PREFER CALVARE CHANNEL IN MANHOLES. YORKSHIRE WATER HAVE A SPECIFIC REQUIREMENT FOR THE CHANNELS TO BE CAST IN CONCRETE BECAUSE THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON THE BENCHING.
 13. THE CHAMBER SIZE MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
 14. YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE "3" BRICK MANHOLES AND 1050mm D400 MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE TYPE "S" MANHOLES WITH 1200mm D400 OR 1500mm D400 RINGS, WITH THE OPENING SIZED OVER THE CHANNEL WHERE DEPTH COVER TO TOP OF SPOFFIT IS 1-1.5m.
 15. IF PLASTIC PIPES ARE TO BE USED THEN THE FOLLOWING SHOULD BE APPLIED:-
 - A) "ALL ADAPTABLE SEWERS TO BE BS1 ITEMARK (CERTIFIED TO BS EN 1347-1 AND BS EN 439-01 AND BS EN 1347-2 AND BS EN 1347-3).
 - B) PIPES LESS THAN OR EQUAL TO 500MM SHALL HAVE NOMINAL SHORT-TERM RING STIFFNESS NOT LESS THAN 80N/M².
 - C) BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS WATER INDUSTRY SPECIFICATION 4-08-02 (TABLE 2)
 16. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE SYSTEMS OR PUBLIC DRAINAGE SYSTEMS OR ADAPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF LAND DRAINAGE RUN-OFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIVE WITH THE LOCAL LOCALITY, LAND DRAINAGE RUNOFF WITH REGARDS TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUNOFF.
 17. SULPHATE RESISTANT CEMENT (C20-022) AND PRECAST CONCRETE PRODUCTS MUST BE USED UNLESS A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
 18. LIFTING EYES ARE TO BE POINTED FOR ALL MANHOLE TYPES.
- ## GENERAL NOTES
1. ALL CONNECTIONS TO PROPOSED PUBLIC DRAINAGE TO BE A MINIMUM 1500mm.
 2. ALL MANHOLES WITHIN DRAVES TO HAVE B125 COVERS WITH CONCRETE COLLARS. MANHOLES LOCATED WITHIN THE HIGHWAY TO HAVE D400 COVERS.
 3. ALL PRIVATE DRAINAGE WITHIN 1m TREES TO HAVE 150mm CONCRETE BED AND SURROUND.

GENERAL NOTES

SUBJECT TO APPROVAL OF
YORKSHIRE WATER

24.08.17	STEP RUNG & NOTE (YW24.08)	KB	VB	P3
15.08.17	DIMENSIONS AND STEP RUNG. (YW10.08)	KB	VB	P2
02.08.17	PRELIMINARY ISSUE	KB	VB	P1
Date	Revision	By	Chkd	Ref

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Project	A1 v.1.0
ST MARYS AVENUE, NEVERTHONG, HOLMFIRTH	
Title	
DRAINAGE CONSTRUCTION DETAILS SHEET 1	

Scale 1:20 @ A1	Drawn KB	Checked VB
Date JULY'17	Status PRELIMINARY	
Drg. No. 16293/025		Rev. P3