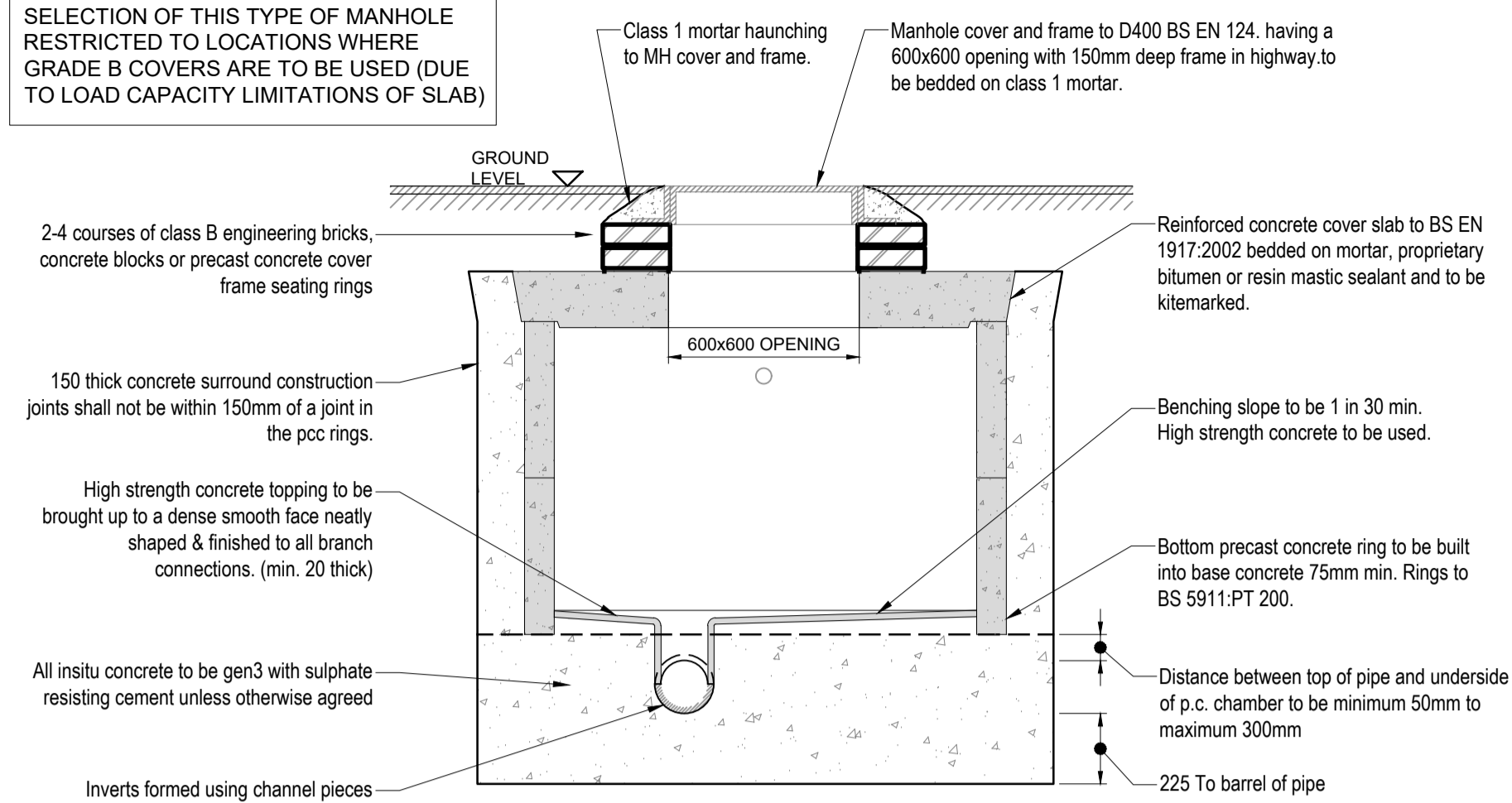


SELECTION OF THIS TYPE OF MANHOLE RESTRICTED TO LOCATIONS WHERE GRADE B COVERS ARE TO BE USED (DUE TO LOAD CAPACITY LIMITATIONS OF SLAB)



TYPICAL TYPE 'B1/E' MANHOLE SECTION
DEPTH FROM GROUND LEVEL TO SOFFIT OF PIPE LESS THAN 1.5m

SCALE 1:20

ALL PRECAST CONCRETE TO BS 5911:2 & BS 8301 KITEMARKED.

SCHEDULE OF CHAMBER DIAMETERS	
DIA. OF LARGEST PIPE IN MANHOLE	INTERNAL DIA. OF MANHOLE
LESS THAN 375Ø	1200
375-700 (incl)	1500
750-900 (incl)	1800
>900	2100+

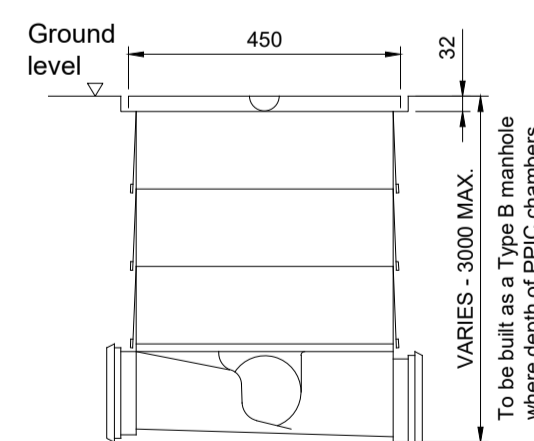
NOTE: CHAMBER SIZES OF MANHOLES WITH MORE THAN ONE CONNECTION MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE.

NOMINAL SIZE	EFFECTIVE LENGTH (m)
150 TO 600	0.60
601 TO 750	1.00
OVER 750	1.25

TYPE B MANHOLE DETAILS MAY BE APPLIED TO TYPE A MANHOLES FOR CHAMBER DIAMETERS LESS THAN 1500Ø UP TO 6.0m DEPTH TO SOFFIT.

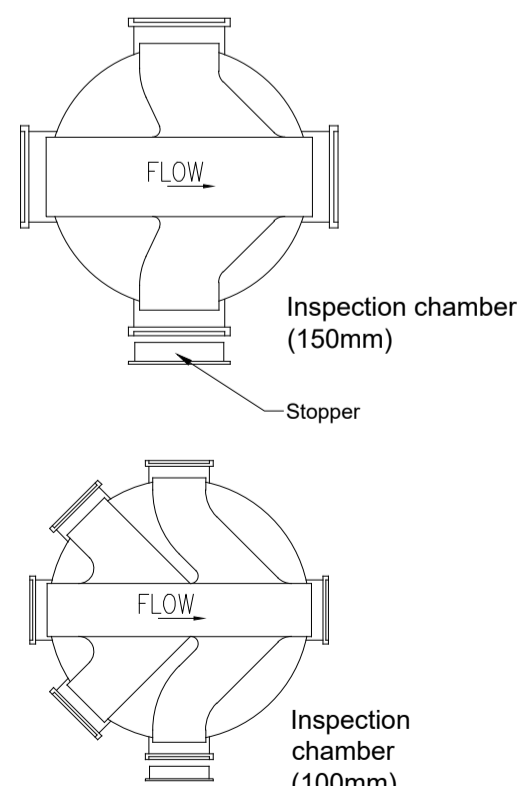
Manhole Depth (To Soffit)	Diameter of largest pipe in manhole (mm)	Internal diameter of manhole (mm)	Minimum Clear opening size
Less than 1500	150	1050	750x750
	300	1200	675x675 ECCENTRIC
	450	1350	675x675 ECCENTRIC
	700	1500	675x675
	900	1800	675x675
	1000	2100	675x675
Greater than 1500	Greater than 1000	Refer to schedules	750x675
	100 - 450	1200	600x600
	Greater than 450	Larger of 1800 or (DN+775)	600x600
Manhole Shaft Greater than 3000 to soffit of pipe	Greater than 1000	Refer to schedules	600x600
	STEPS	1050	600x600
	LADDERS	1200	600x600

TABLE APPLICABLE TO MANHOLE TYPES A AND B
CHAMBER SIZES ARE MINIMUM REQUIRED. SEE LAYOUT FOR VARIATIONS, IF ANY.

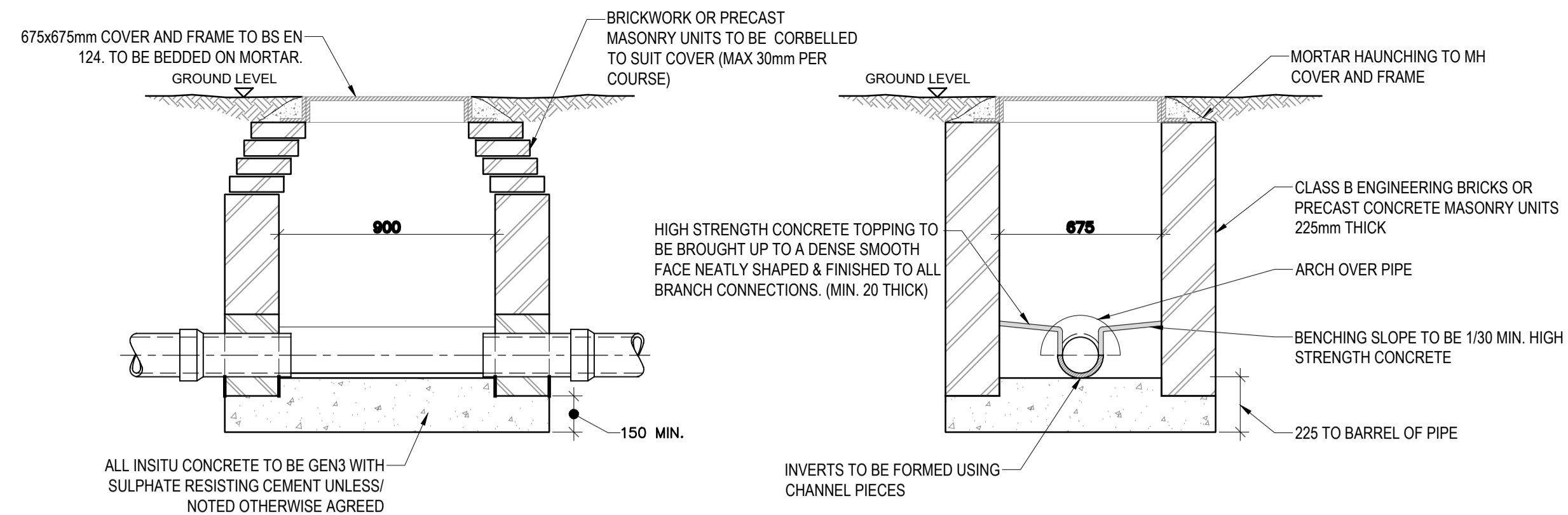


NOTES 1.

1. Cast iron cover and plastic frame are suitable for use where wheel loads do not exceed 1.5 tonnes.
2. For vehicle loading installations, chamber to be surrounded with 250mm thick concrete and cover replaced with appropriate loading classification cover.
3. Where side branches are not to be used stopper to be inserted to blank off connection
4. Access to chamber restricted to 350mm for chamber depths greater than 1.2m



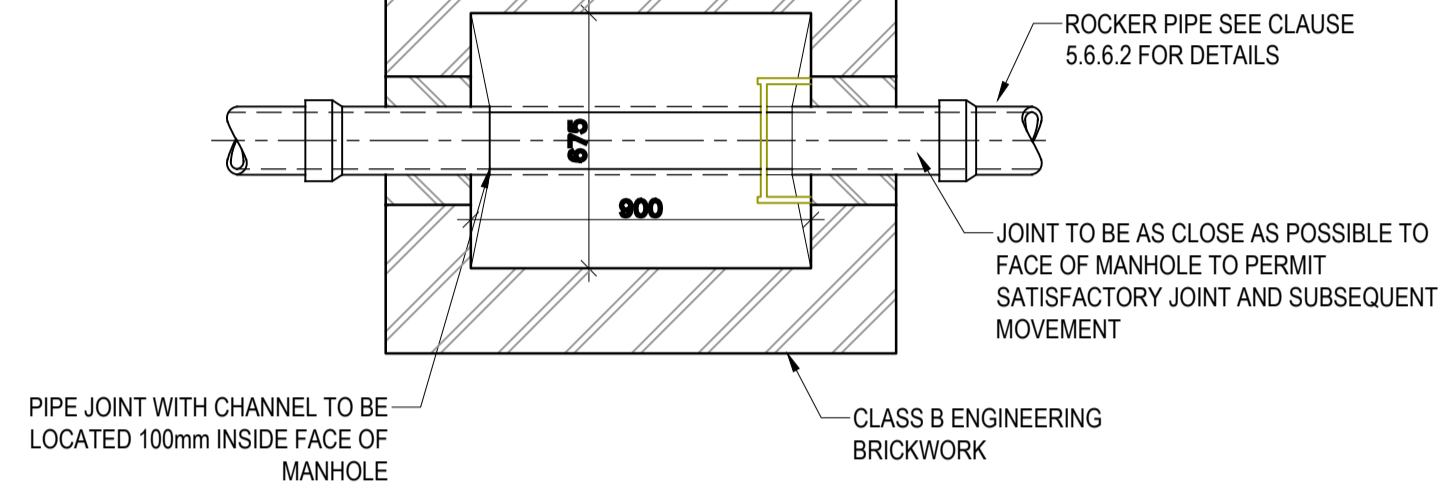
PRIVATE POLYPROPYLENE INSPECTION CHAMBER (PIC)
TYPE NON ENTRY INSPECTION BY WAVIN OSA TO BS 7158:2001 KITEMARKED



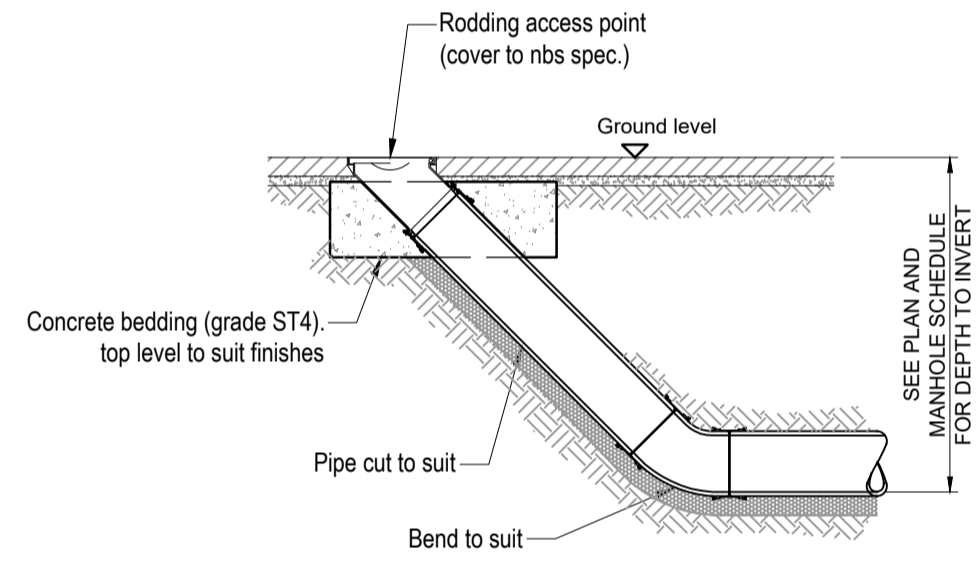
TYPICAL DETAIL MANHOLE TYPE D
DEPTH TO SOFFIT LESS THAN 1M

SCALE 1:20

PIPE JOINT WITH CHANNEL TO BE LOCATED 100mm INSIDE FACE OF MANHOLE



PRIVATE TYPICAL RODDING EYE DETAIL

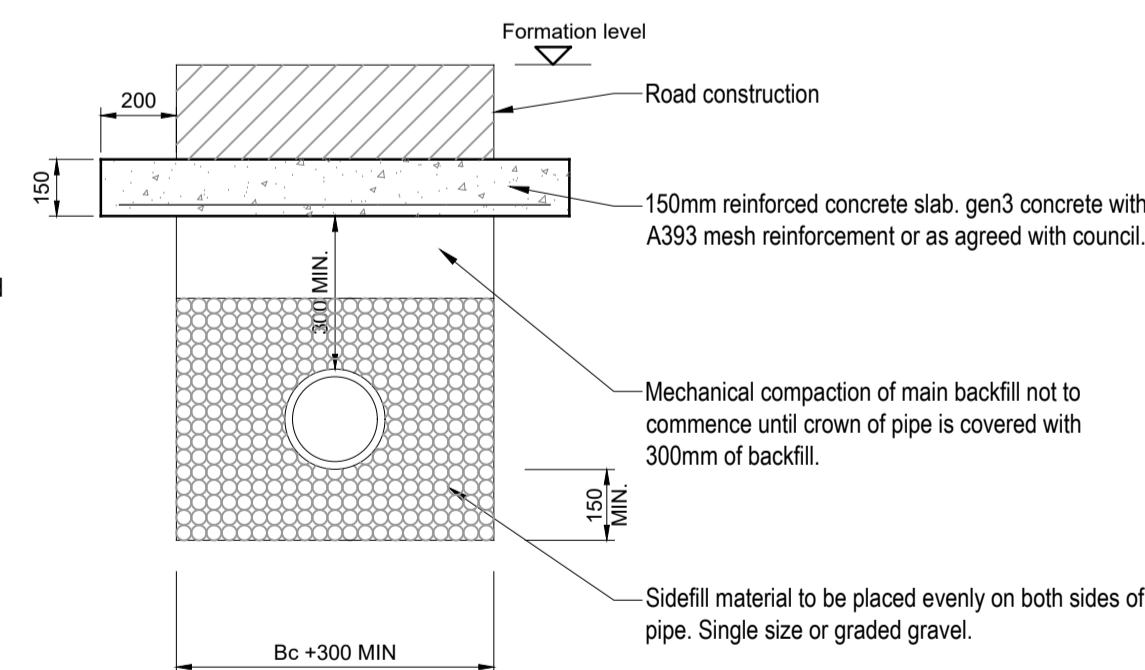


CLASS S DETAIL

NOMINAL PIPE DIA (mm)	SINGLE SIZED (mm)	GRADED (mm)
150	10 or 14	14 to 5
200 to 300	10, 14 or 20	14 to 5 or 20 to 5
375 to 525	14 or 20	14 to 5 or 20 to 5
Greater than 525	14, 20 or 40	14 to 5, 20 to 5 or 40 to 5

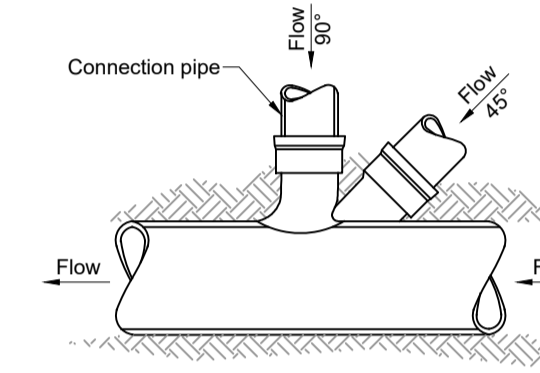
GRANULAR BEDDING MATERIAL
(ALL AGGREGATES TO TABLE 4 OF BS 882:1983)

CLASS S DETAIL
COVER < 1200mm FOR HIGHWAYS COVER < 900mm FOR NONE VEHICULAR ACCESS



NOTES
A) Bc = OUTSIDE DIAMETER OF PIPE BARREL.
B) Y = FOR UNIFORM SOILS:
SLEEVE JOINTED PIPES, MIN. 50mm OR 1/4 Bc, WHICHEVER IS THE GREATER.
SOCKETED PIPE, MIN. 100mm OR 1/2 Bc, WHICHEVER IS THE GREATER UNDER BARRELS AND NOT LESS THAN 50mm UNDER SOCKETS.
FOR ROCK OR MIXED SOILS CONTAINING ROCK BANDS, Boulders, STONES OR OTHER IRREGULAR HARD SPOTS:
SLEEVE JOINTED PIPES, MIN. 150mm OR 1/2 Bc, WHICHEVER IS THE GREATER.
SOCKETED PIPE, MIN. 200mm OR 1/2 Bc, WHICHEVER IS THE GREATER UNDER BARRELS AND NOT LESS THAN 150mm UNDER SOCKETS.

TYPICAL JUNCTION CONNECTION DETAIL



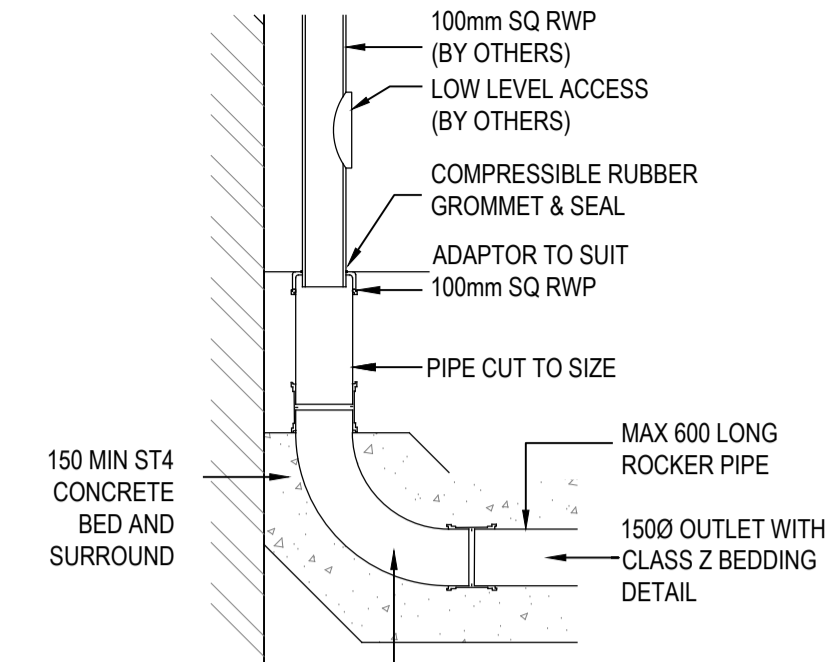
OBLIQUE OR SQUARE CURVED JUNCTION CONNECTION TO BE USED WHEN PUBLIC SEWER IS NOT 3 PIPE SIZES LARGER THAN THE LATERAL (CONNECTION) TO BE CONNECTED

LATERAL (dia in mm)	PUBLIC SEWER DIAMETER (mm)									
	100	150	225	300	375	450	525	600	675	750
100	JN	JN	JN	SA	SA	SA	SA	SA	SA	SA
150		JN	JN	SA	SA	SA	SA	SA	SA	SA
225			JN	JN	SA	SA	SA	SA	SA	SA
300				JN	JN	SA	SA	SA	SA	SA
375					JN	JN	SA	SA	SA	SA
450						JN	JN	JN	SA	SA

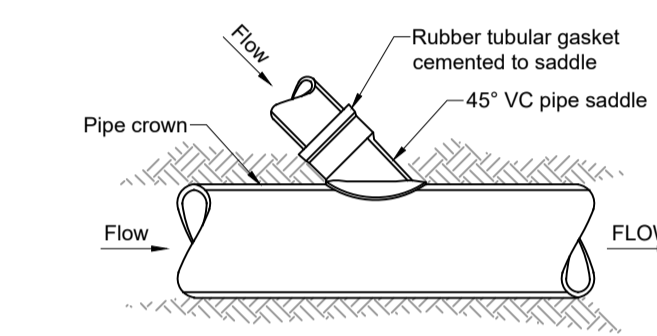
JN = JUNCTION
SA = SADDLE

TYPICAL EXTERNAL RWP CONNECTION DETAIL

SCALE 1:10
(REFER TO PARAPET & RAINWATER SCUPPER LAYOUT/DETAILS FOR LOCATIONS)

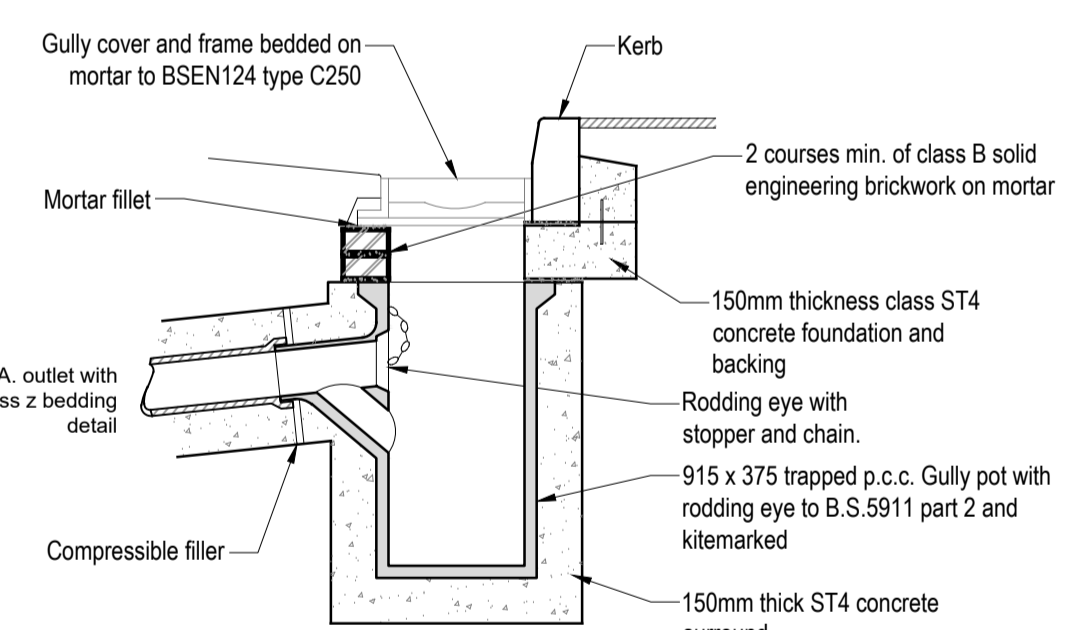


TYPICAL SADDLE CONNECTION DETAIL

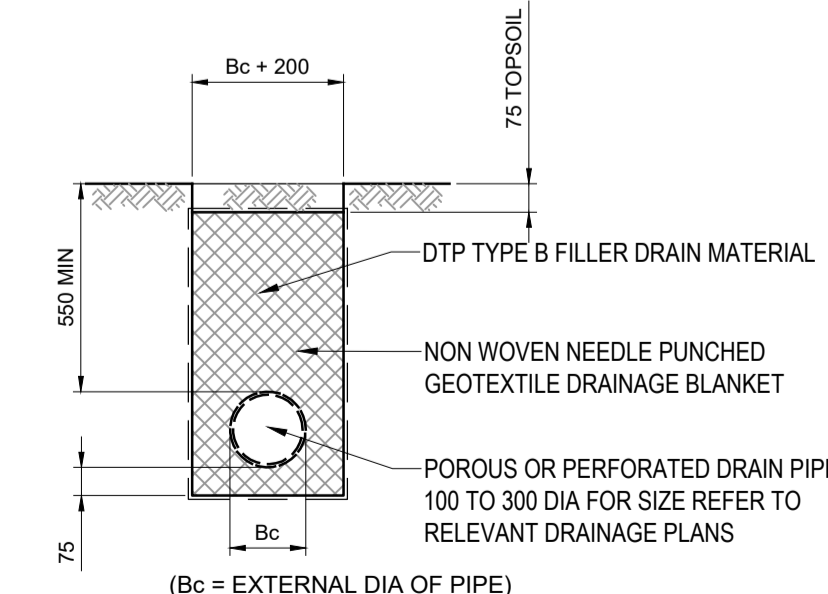


SADDLE CONNECTION INTO PUBLIC SEWER IS ACCEPTABLE WHEN SEWER DIAMETER IS THREE INCREMENTS LARGER THAN CONNECTION DIAMETER. SADDLE CONNECTIONS MUST BE POSITIONED AT 10 O'CLOCK OR 2 O'CLOCK AND AT AN ANGLE OF 45°. SADDLES SHALL BE THE SAME MATERIAL AS EXISTING SEWER.

THE TABLE BELOW SHOWS IF A JUNCTION OR SADDLE MAY BE USED FOR VARIOUS PUBLIC SEWER AND LATERAL COMBINATIONS



PRIVATE TYPICAL ESTATE ROAD GULLY



FRENCH DRAIN

Notes-
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All dimensions are in millimetres unless noted otherwise
DO NOT SCALE THIS DRAWING - IF IN DOUBT ASK
1. All dimensions & levels to be checked by the contractor prior to commencement of work, any discrepancy shall be reported immediately to Ave Consulting Ltd
2. All work shall be carried out in accordance with Local Authority, statutory authority, health & safety requirements and regulations.
3. The drawings shall be read in accordance with all other contract documents relevant at that time of issue and during the period of the contract.
4. The contractor must ensure the overall stability of the works is adequate at all stages of the construction.
5. No allowance has been made for cutouts, holes, notches, etc. for services. All of these are to be agreed prior to the start of the works.

Rev	Initial Issue	Details	By	Chk	Date
C01	Construction Issue				01/04/2021
0	Initial Issue				28/03/2021

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Killingbeck Office Village,
Killingbeck Drive,
Leeds LS14 6FD.
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Client: Elliott Off-Site Solutions

Project: Carnaby Manufacturing Site Improvements

Title: Proposed Drainage Details

Drawn: P.A.S.	Checked: S.A.B.	Date: Mar 2021	Scale: 1:20	Original dwg size: A1
Drawing Number: FACT-AVE-ZZ-XX-DR-D-00002				Rev: C01