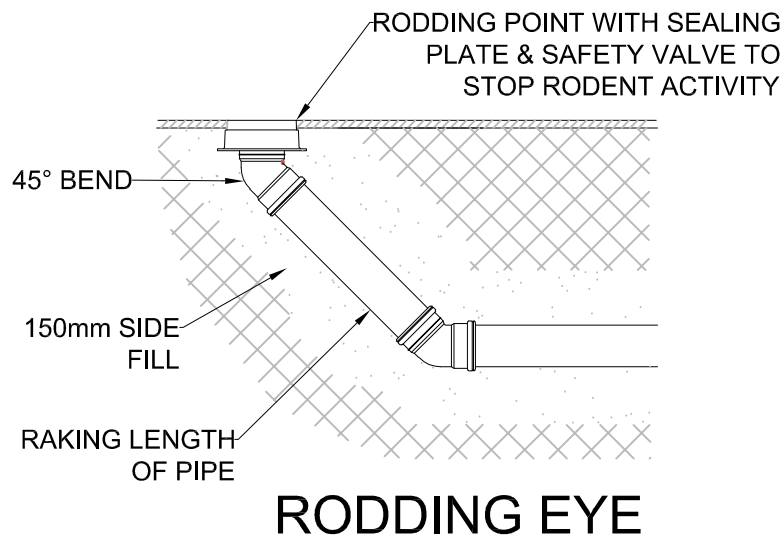
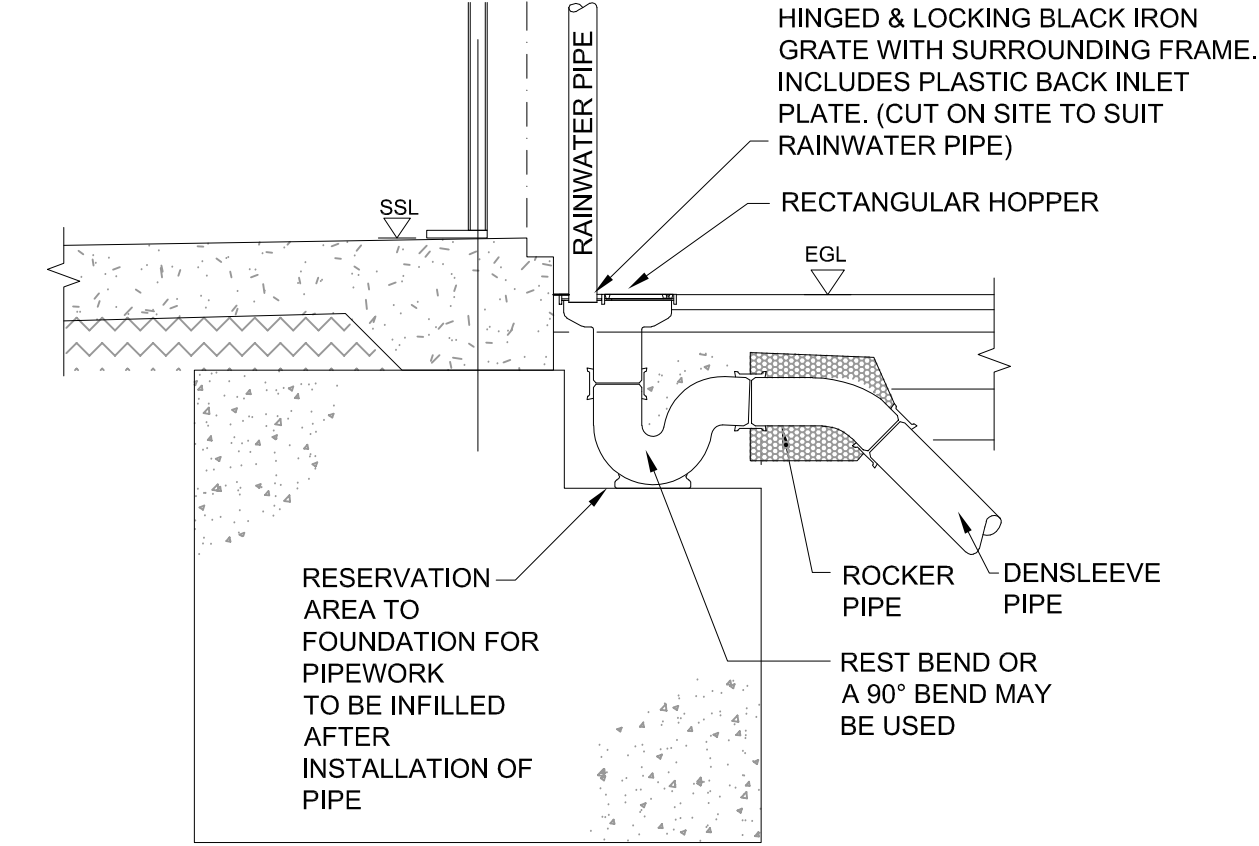




TYPICAL EXTERNAL RWP WITH ACCESS GULLY

Dia (mm)	Bd (m)	GRANULAR MATERIAL TO NOMINAL SINGLE SIZED AS FOLLOWS.	
100	0.5	100 DIA.	10mm
150	0.6	150 DIA.	10mm/ 14mm.
225	0.7	200 DIA.	
300	0.85	& ABOVE	10mm/ 14mm/ 20mm.
375	1.05		
450	1.15		
525	1.20		
600	1.35		
1050	1.80		

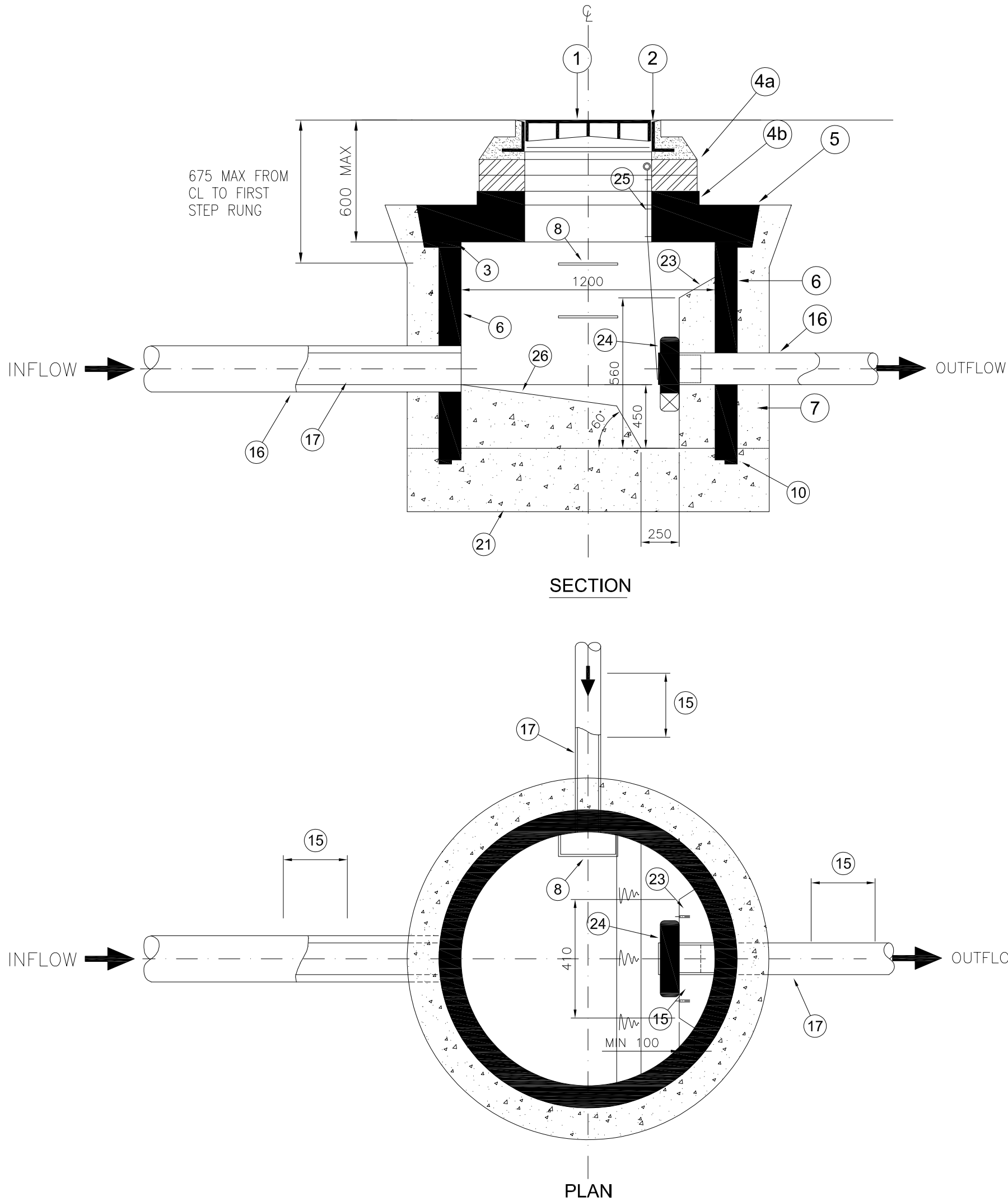
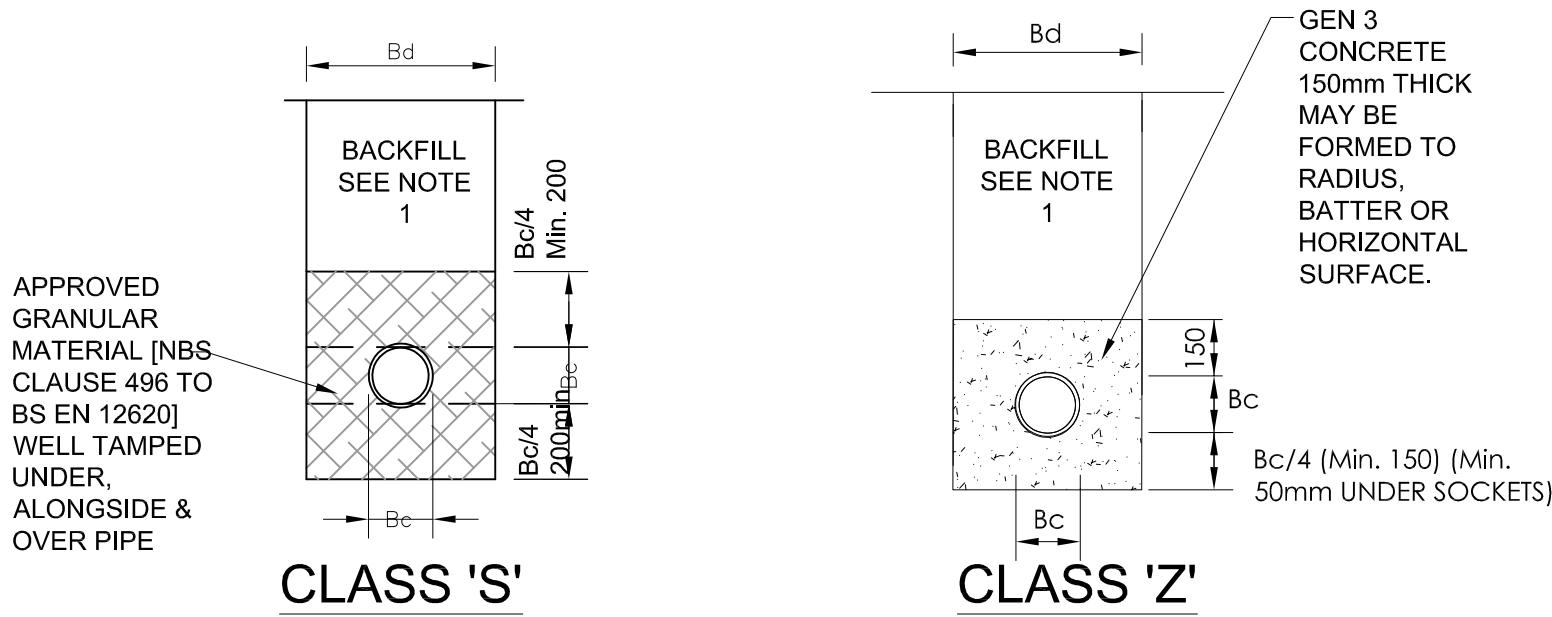
NOTE 1
Bd = TRENCH WIDTH AT CROWN OF PIPE - (NARROW TRENCH WIDTH CONDITIONS)
Bc = OUTSIDE DIAMETER OF PIPE

CLASS 'A' & CLASS 'S' FOR PIPE DIAMETERS 100 TO 525. GENERAL CASE CLASS 'S'.
CLASS 'A' FOR USE WHERE CROWN OF PIPE IS WITHIN 1.2m OF U/S OF PAVING.
CLASS 'F' FOR 100 & 150 DIAMETER CONCRETE OR VITRIFIED CLAY ONLY.
CLASS 'F' IS NOT TO BE USED FOR PLASTIC PIPES.

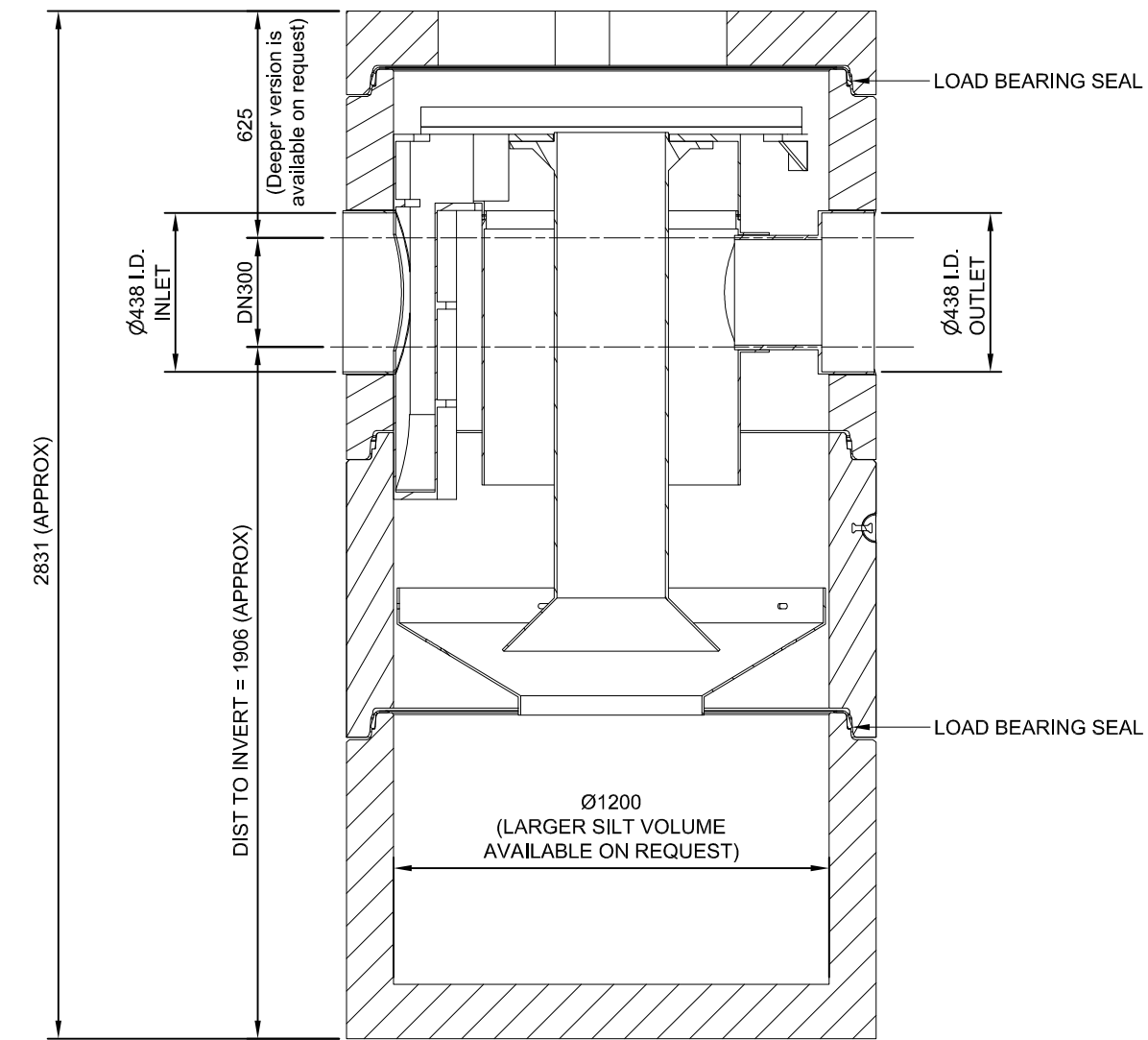
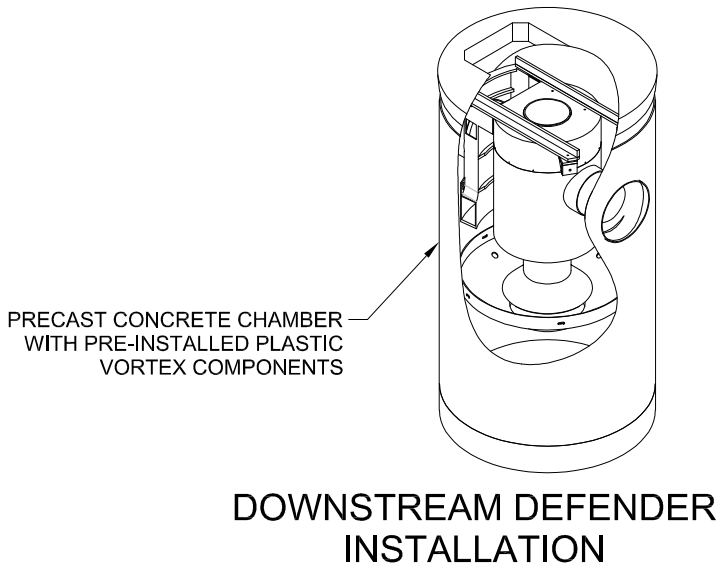
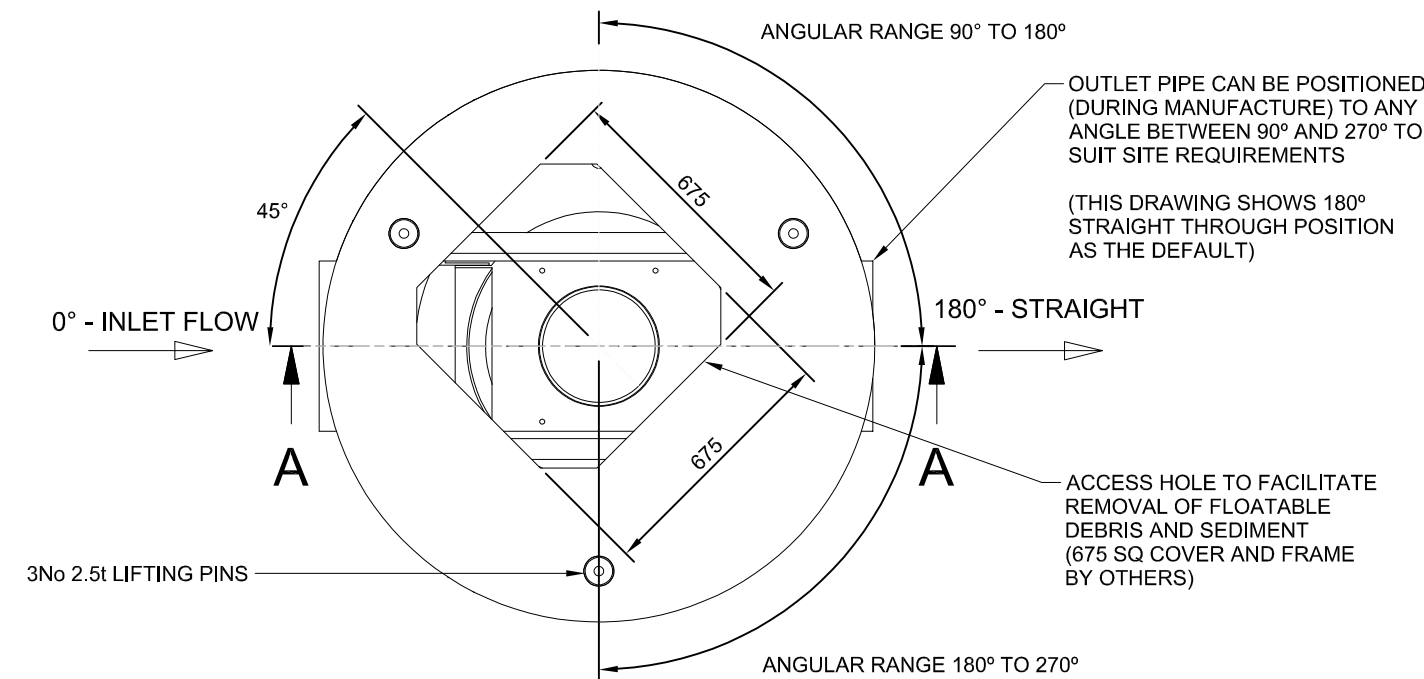
1. BACK FILL TO TRENCHES TO BE SELECTED GRANULAR MATERIAL. MAX. PARTICLE SIZE NOT EXCEEDING 75mm, AND NOT MORE THAN 10% PASSING 75mm SIEVE. MATERIAL SHALL NOT CONTAIN ANY CLAY LUMPS OR ANY OTHER FOREIGN MATTER.

2. PIPES TO BE VITRIFIED CLAY TO BSEN 295 OR PVC-U TO BSEN 1404-1:1998 TO CONTRACTOR CHOICE

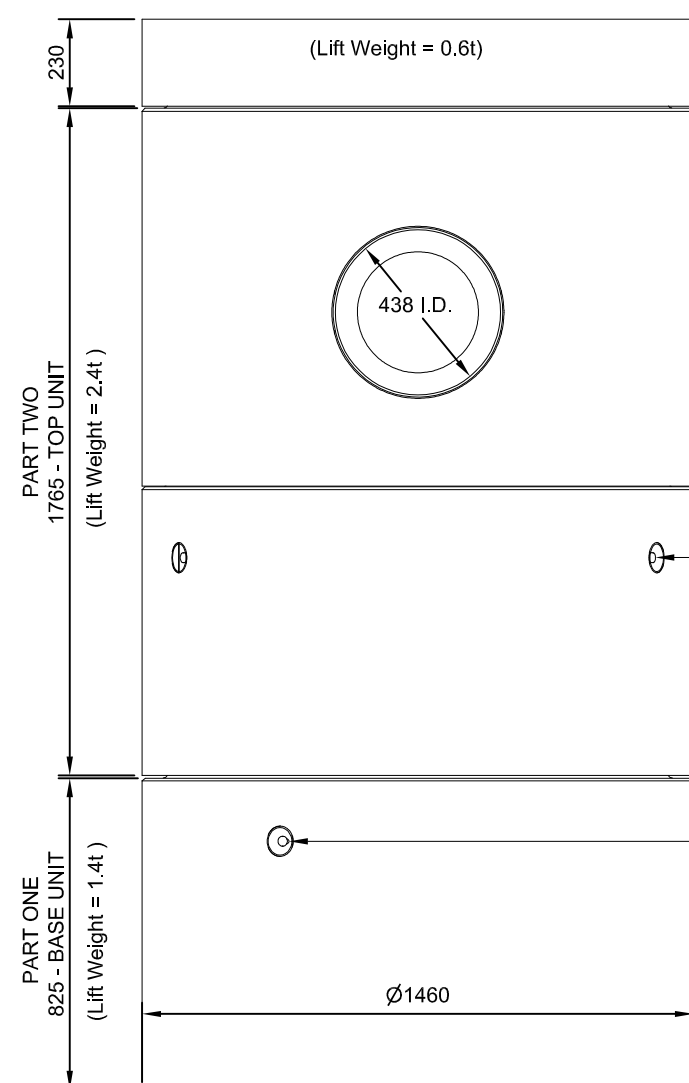
EXTERNAL PIPE BEDDING DETAILS



- KEY
- FOR ACCESS COVER TYPE REFER TO MANHOLE SCHEDULE ON DRAWING 2/5943-900.
 - COVER FRAME BEDDED ON AND HAUNCHED IN CLASS M1, M2 OR EPOXY MORTAR NO GREATER THAN 20mm THICK. APPROVED PACKING MATERIAL MAY BE USED IF REQUIRED.
 - 10mm UNCOMPRESSED THICKNESS OF 'TOKSTRIP' OR SIMILAR APPROVED COMPRESSIBLE SEALANT TO ALL HORIZONTAL JOINTS.
 - TYPE 2 COVER FRAME SEATING RINGS WITH 600x600 CENTRAL ACCESS OPENING OR MIN TWO COURSES OF ENGINEERING BRICK.
 - TYPE 1 COVER FRAME SEATING RING WITH 600x600 ECCENTRIC ACCESS OPENING (BS EN 752-3 & BS EN 1917) BEDDED ON MORTAR.
 - REINFORCED PRECAST CONCRETE (SULPHATE RESISTING) HEAVY DUTY COVER SLAB TO BS 5911:PART 200 WITH 750x600 ACCESS OPENING, BEDDED ON MORTAR.
 - PRECAST CONCRETE (SULPHATE RESISTING) CHAMBER RINGS TO BS 5911:PART 200.
 - MIX ST4 SULPHATE RESISTING CONCRETE SURROUND MIN 150 THICK.
 - POLYPROPYLENE ENCAPSULATED DOUBLE STEP RUNGS TO BS 1247 PARTS 1 & 2. MIN WIDTH 280mm AT 250mm CTRS.
 - GRANO CONCRETE BENCHING (MIN 20mm THICK) TO BE BROUGHT UP TO A DENSE SMOOTH FACE NEATLY SHAPED AND FINISHED TO ALL BRANCH CONNECTIONS. BENCHING SLOPE TO BE BETWEEN 1 IN 10 AND 1 IN 30.
 - BOTTOM CHAMBER SECTION TO BE BUILT INTO BASE CONCRETE MIN 75mm.
 - CONSTRUCTION JOINT.
 - INVERT WITHIN CHAMBER TO BE FORMED USING A CHANNEL PIPE.
 - MIX ST4 CONCRETE.
 - DISTANCE BETWEEN TOP OF PIPE AND UNDERSIDE OF PRECAST CHAMBER TO BE 100.
 - | PIPE DIA | ROCKER PIPE LENGTH |
|----------|--------------------|
| 150-600 | 600 |
| 675-750 | 1000 |
| 825+ | 1250 |
 - ALL PIPES ENTERING OR LEAVING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE.
 - SHORT LENGTH PIPE TO BE SIMILAR LENGTH TO ROCKER PIPE.
 - PIPE JOINT WITH CHANNEL TO BE LOCATED MIN 100mm FROM INSIDE FACE OF CHAMBER.
 - TOE HOLES TO BE PROVIDED IN BENCHING OF SEWER GREATER THAN 450mm Ø FOR ACCESS TO INVERT.
 - 150 MIN STANDARD CONCRETE MIX 'ST2' SURROUND TO SUMP AND TO 150 MIN ABOVE OUTGOING PIPE INVERT. ALTERNATIVELY, 150 MIN STANDARD CONCRETE MIX 'ST2' CAST INSITU SUMP IN LIEU OF PRECAST CONCRETE CHAMBER RINGS.
 - 225 MIN INSITU CONCRETE BASE SLAB (STANDARD MIX 'ST4').
 - INLETS AND OUTLETS THOROUGHLY PACKED AND SEALED WITH MORTAR AROUND PIPES.
 - 'HYDRO-BRAKE' FIXED TO CONCRETE MOUNTING BLOCK WITH MASONRY STUD ANCHOR FIXING BOLTS.
 - 'HYDRO-BRAKE OR SIMILAR' FLOW CONTROL FITTED WITH PIVOTING BY-PASS DOOR.
 - PIVOTING BY-PASS DOOR OPERATING STEEL ROPE WITH PULL HANDLE FIXED JUST UNDER ACCESS COVER FOR MANUAL OPERATING AT GROUND LEVEL.
 - CONCRETE BENCHING.



Section A - A



Elevation on Inlet

NB: Allowable dimensional variation
Height ± 25mm
Diameter ± 9mm
Wall Thickness ± 10mm

DOWNSTREAM DEFENDER DN
1200 CONCRETE CHAMBER
HDPE INTERNAL COMPONENTS
(SCALE 1:50)

TYPE 2 MANHOLE - VORTEX FLOW CONTROL (HYDRO-BRAKE) CHAMBER. NTS

P1	18,10,19	PRELIMINARY	CN	CH	GS
Rev	Date	Description	By	Check	App.

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Project	LANGSTONE TECHNOLOGY PARK LANGSTONE ROAD HAVANT, PO9 1SA
Office	NORWICH 01603 305190
Discipline	CIVIL ENGINEERING
Title	INDICATIVE DRAINAGE DETAILS SHEET 1 OF 2
Scale @ A1	1:20 UNO
Status	PRELIMINARY



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Originator	Job Number	Discipline	Building/Zone
CCL	8/1982	C	LAN
Type	Level	Drawing No.	Revision
DET	DRN	400410	P1

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