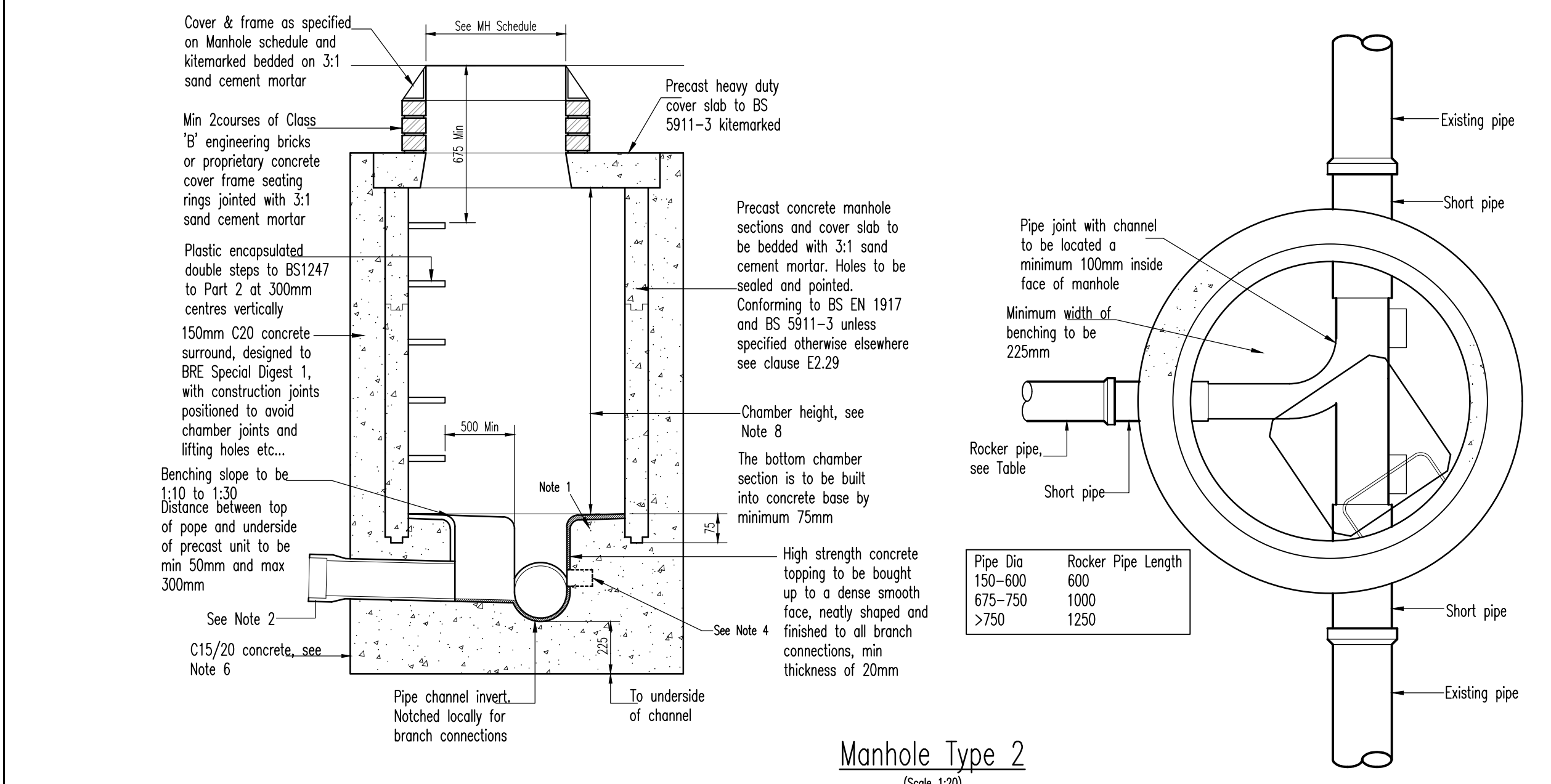
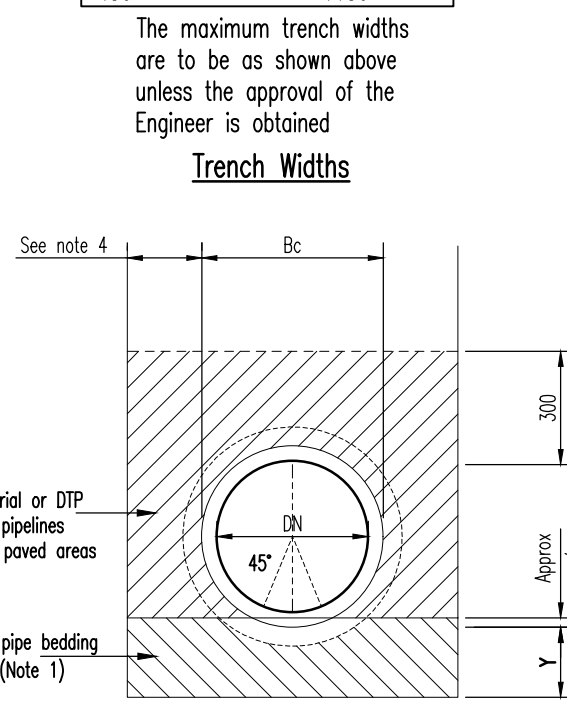




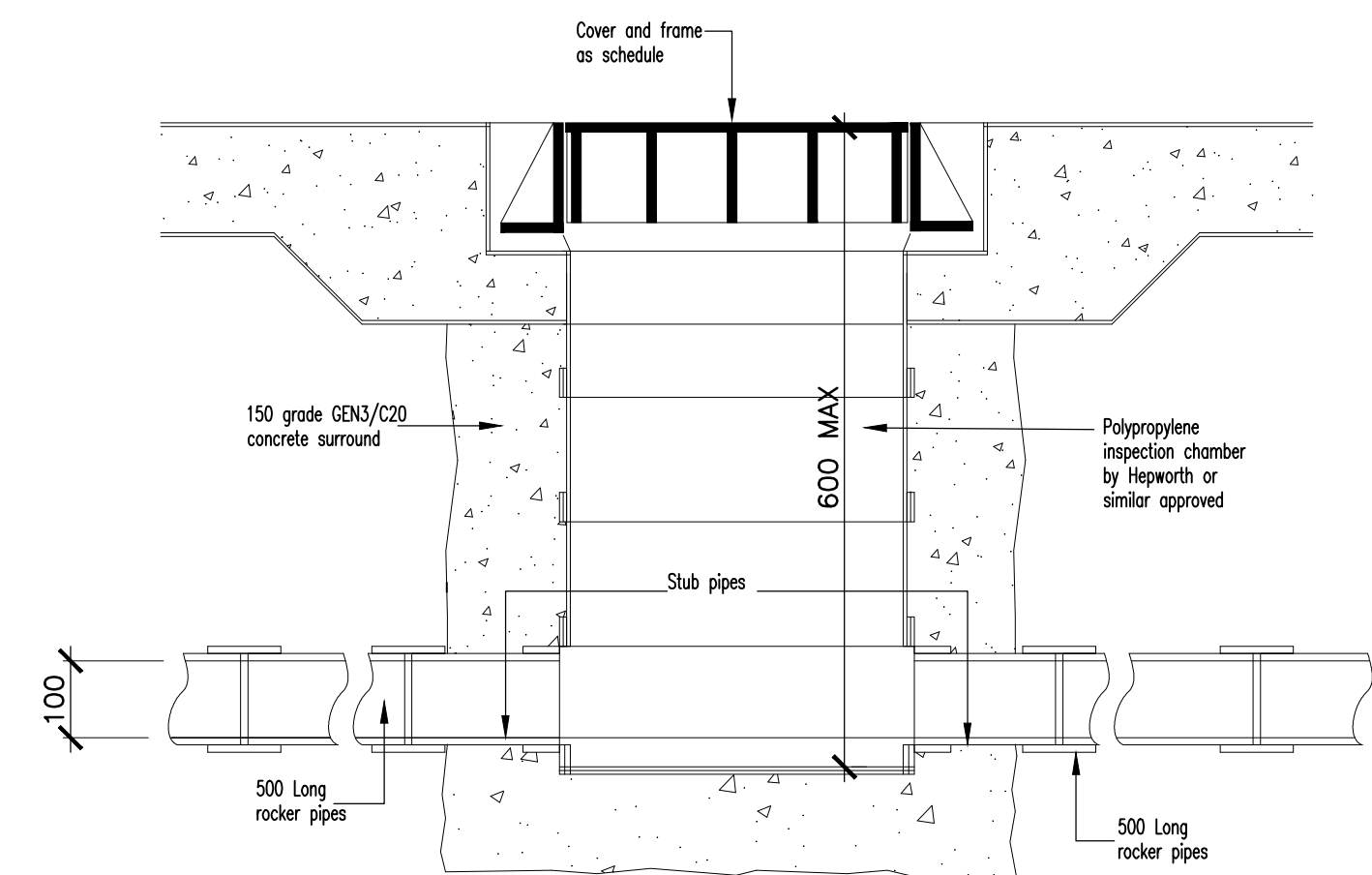
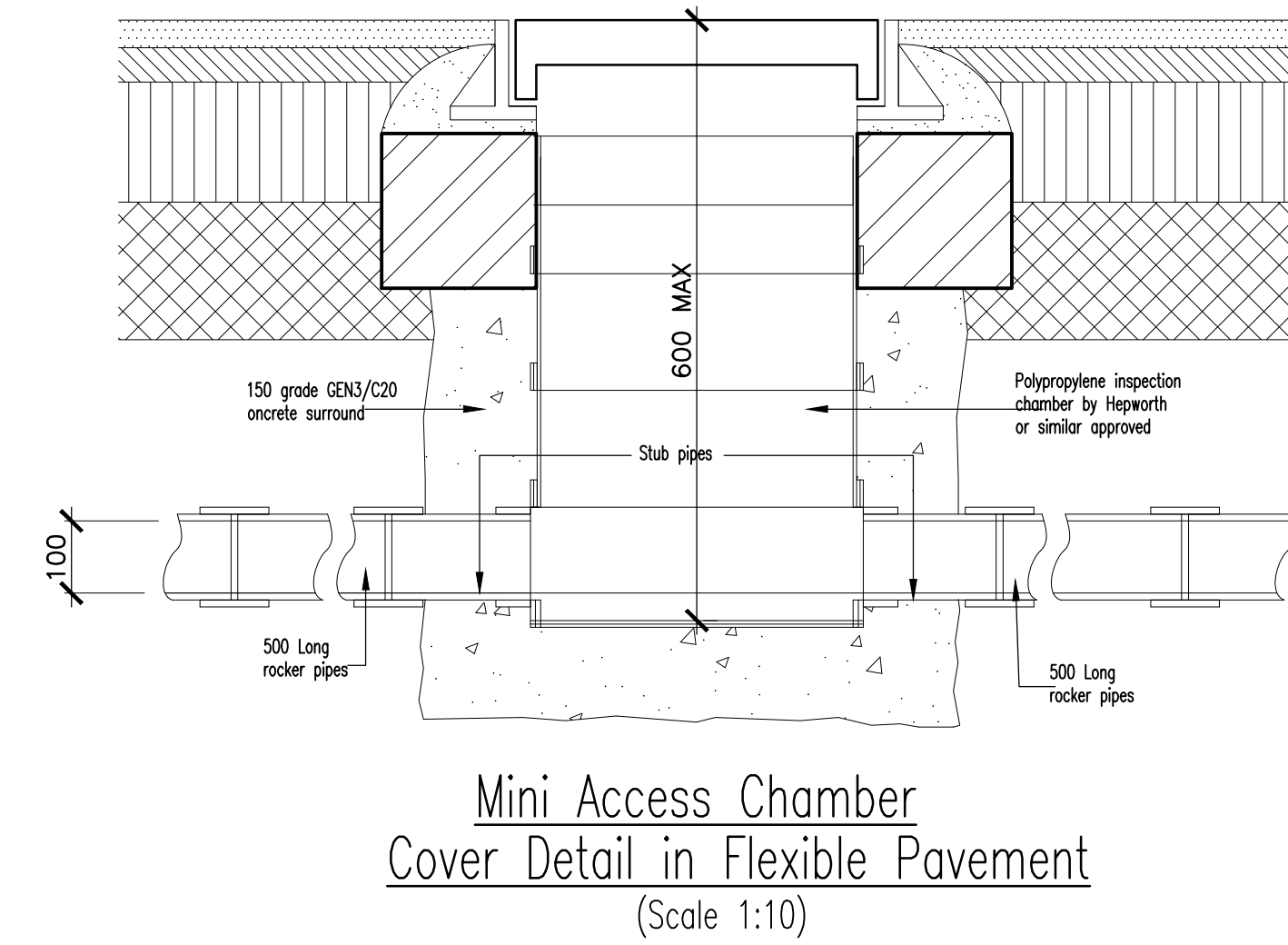
- Notes:
- The dimensions and specifications shown here may be amended by the site specific requirements.
 - Pipe connections smaller than the outgoing pipe are to be laid "soffit to soffit" Where the incoming pipe is of the same diameter as the outgoing pipe, the invert gradients shall intersect in the centre of the manhole at the level specified.
 - High strength concrete tapping to be travelled to a dense, smooth surface neatly shaped and finished to all pipe connections.
 - Toe holes (150 wide x 100 high x150 deep) for access to inverts where pipe diameters exceed 600. Location of toe holes to be agreed with the engineer on site.
 - All concrete and precast concrete products used in drainage works, with a specified strength of 20N/sq.mm or more, to be designed to BRE special digest 1.
 - Manholes with an incoming sewer of dia. 900mm and over to be as approved by the engineer.
 - Chamber height to be not less than 900mm. (adaptable)
 - For Manholes deeper than 3m see "Sewers For Adoption"

Internal Pipe Dia	Max Trench Width
100	600
150	600
225	700
300	850
375	1050
450	1150

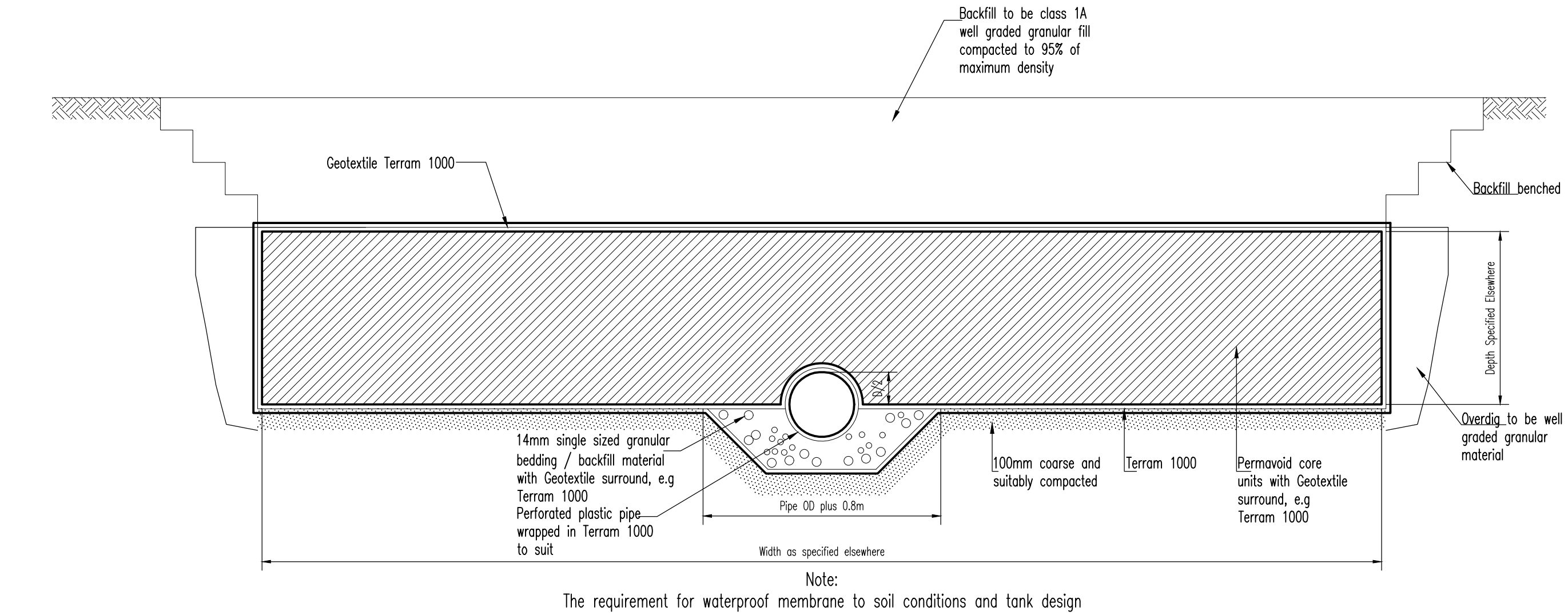
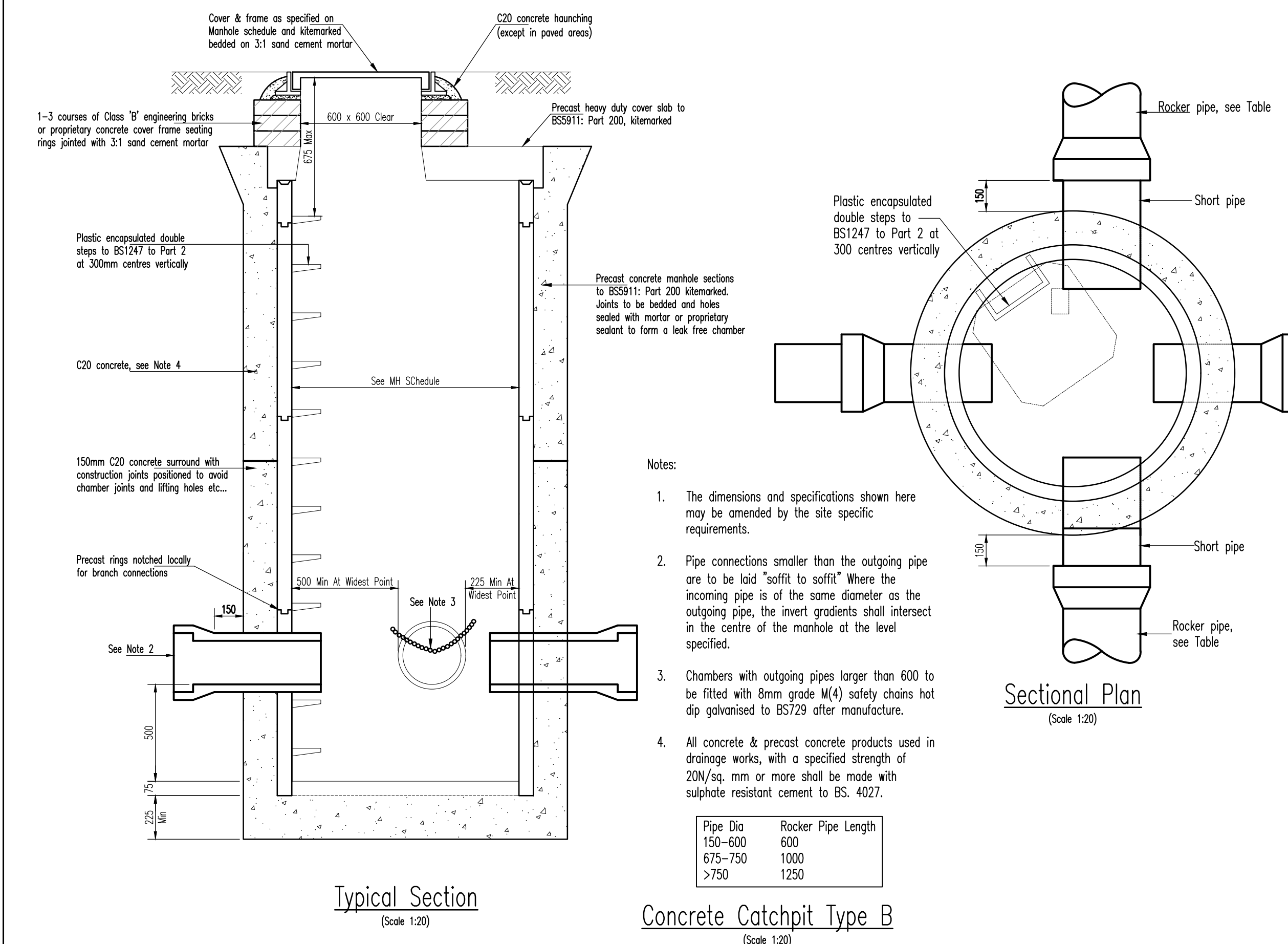


Pipe Bedding Details (Granular) (Scale 1:20)

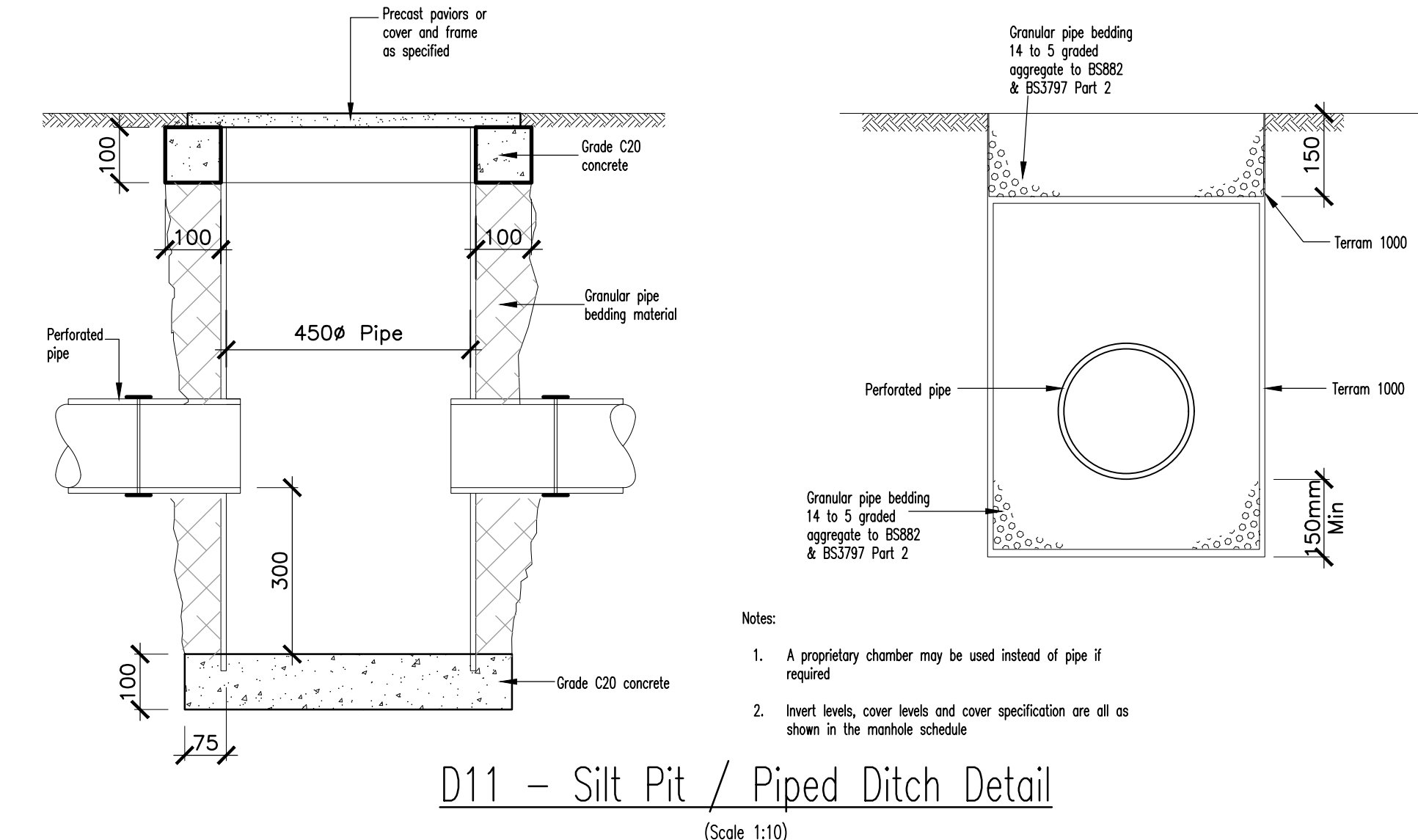
- Notes:
- Granular pipe bedding material for pipes and backfilling for temporary drains (trench sub-drains), shall consist of aggregates from natural sources or sintered pulverized-fuel ash complying with the relevant clauses of BS EN 12424 and BS EN 13055-1 sized in accordance with the following table:
 - Lower trench fill to comply with class 8 material - table 6/1 of shw. selected backfill material, whether selected from locally excavated or imported material, shall consist of uniform, readily compatible material, free from vegetable matter, building rubbish and frozen material, or materials susceptible to spontaneous combustion, and excluding clay of liquid limit greater than 80 and/or plastic limit greater than 35 and materials of excessively high moisture content: clay lumps and stones >40mm not permitted.
 - The contractor is to protect buried pipes (particularly shallow pipes) from damage caused by loads imposed by construction plant.
 - Below roads and other paved areas trenches shall be backfilled type 1 sub-base material to dip spec. class 803 up to formation (or sub-formation if capping layer present), all other trenches to be backfilled with well compacted excavated material up to finished ground level or underside of topsoil layer.
 - DN Y = 1/6 B; OR 100mm under pipe barrels and 50 min under sockets, whichever is the greatest (400 max) in rock etc. 1/4 B; under barrels or 50 under sockets (400max)
 - DN = Normal pipe bore.
 - B = External diameter of pipe barrel.
 - Subdrain to be installed in waterlogged soil conditions (at contractors discretion).
 - The dimensions and specifications shown here may be amended by the site specific requirements.
 - Concrete is to be made from sulphate resisting cement.
 - Transverse reinforcement to be 0.4% of the area of in-situ concrete at section X-X
 - Bedding beneath, and at the side, of, pipes to be well compacted.
 - Bedding/backfill directly above pipes to be placed and lightly compacted by hand.
 - Dimensions :
 - DN = Normal pipe bore.
 - B = External dia of pipe barrel.
 - DN = 18mm FOR DN < 450
 - 36mm FOR 450 < DN < 1200
 - 54mm FOR DN > 1200
 - Y = B/6 OR 100 under barrels or 50 under sockets (whichever is the greatest subject to of 400mm).
 - Subdrain to be installed in waterlogged soil conditions (at contractors discretion).



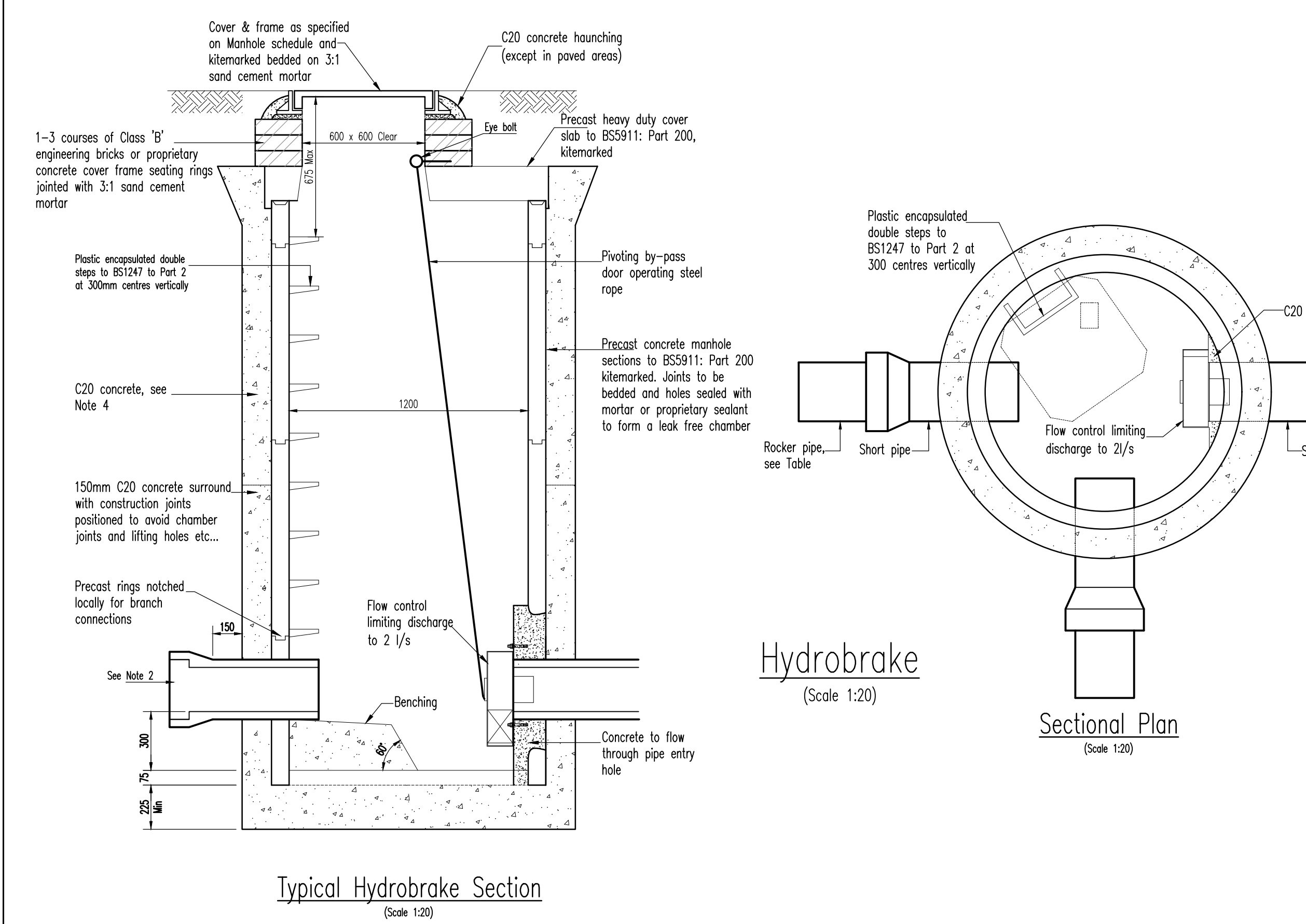
Mini Access Chamber Cover Detail in Concrete Pavement (Scale 1:10)



Permavoid Attenuation Tank (Scale 1:20)

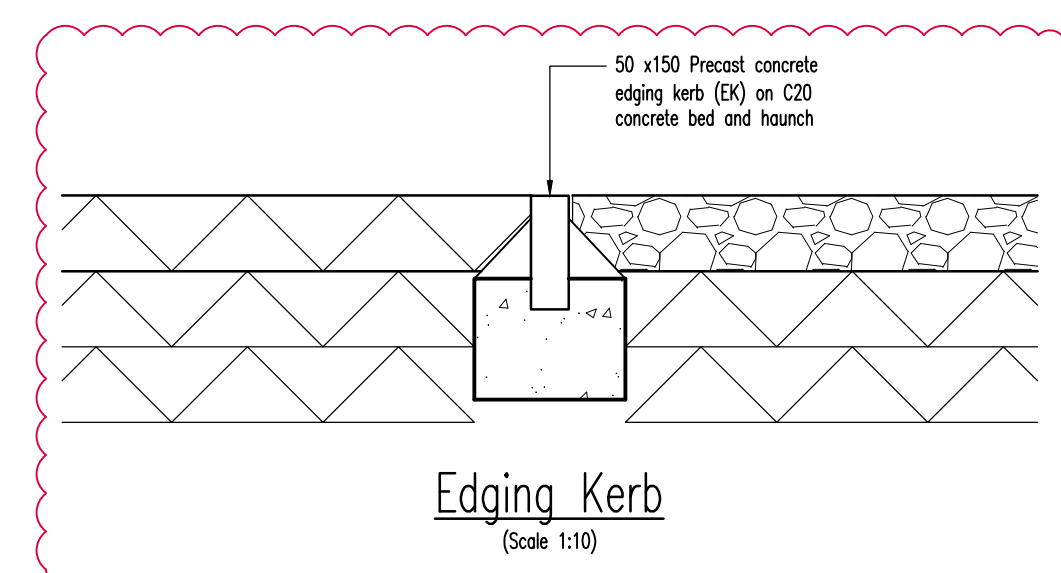
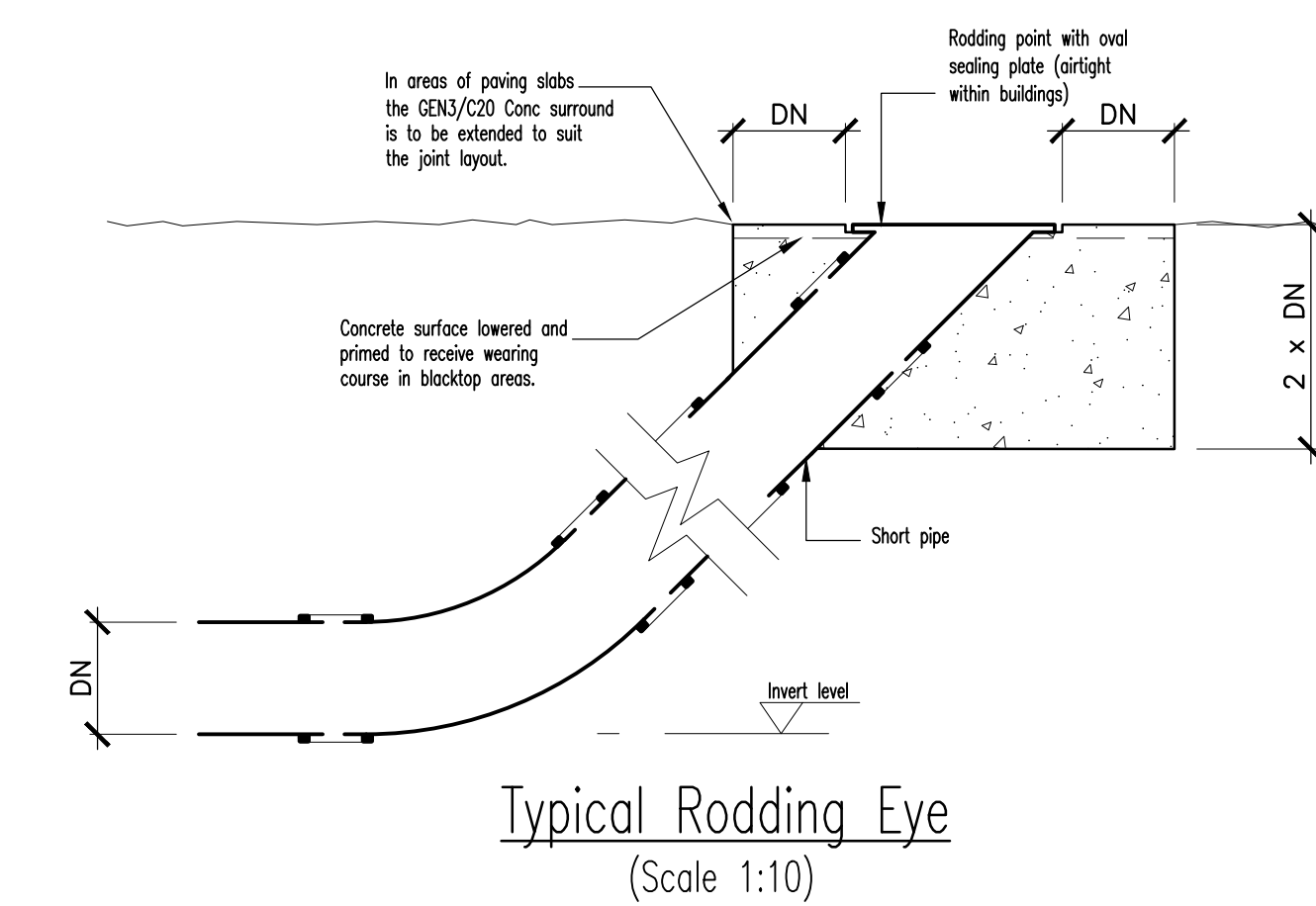


D11 - Silt Pit / Piped Ditch Detail (Scale 1:10)



Hydrobrake (Scale 1:20)

Manhole Schedule						
Manhole No.	Cover Level	Invert Level	Size - Dia	Type	Largest Pipe	Cover Type
EX MH	76.270	73.870	-	-	375mm	-
CWH1	76.250	73.840	1200 dia	CR	375mm	D400
CWH2	76.650	74.165	1200 dia	CR	375mm	D400
SWH1	76.400	74.210	1200 dia	CR	225mm	D400
SWH2	75.900	74.390	600 dia	TEGRA	225mm	D400
SWH3	75.950	74.435	600 dia	TEGRA	225mm	D400
SWH4	75.900	74.510	600 dia	TEGRA	225mm	C250
SWH5	75.900	74.585	600 dia	TEGRA	225mm	C250
SWH6	75.900	74.630	600 dia	TEGRA	225mm	C250
FWH1	76.630	74.255	1200 dia	CR	150mm	D400
FWH2	75.950	74.510	600 dia	TEGRA	150mm	D400
FWH3	75.900	74.840	450 dia	PPIC	150mm	C250
MANHOLE INVERT LEVELS ARE BASED UPON PIPE SLOPES OF 1:200 STORM AND 1:100 FOUL FROM SITE EXIT LEVEL 73.870						



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PURPOSES ONLY
NOT TO BE USED FOR CONSTRUCTION

Green Frog Connect
Ashton Old Road Manchester

Drainage Details



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Drawn by ChB	Date March 23	Plot Date March 23	Scale 1: 20,10@A0
Checked by ARW	Project No 2022-278	Dwg No 17	T2