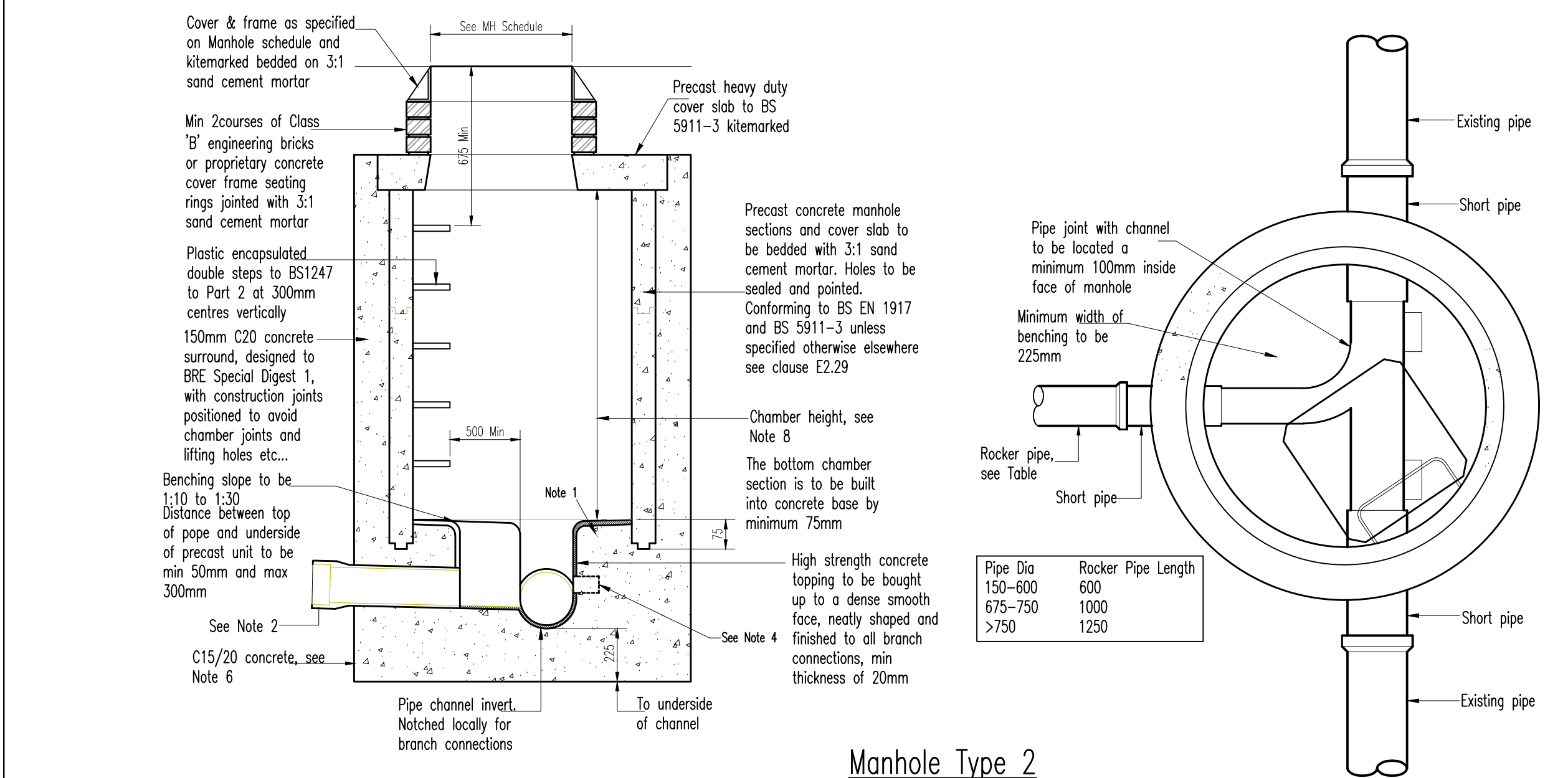
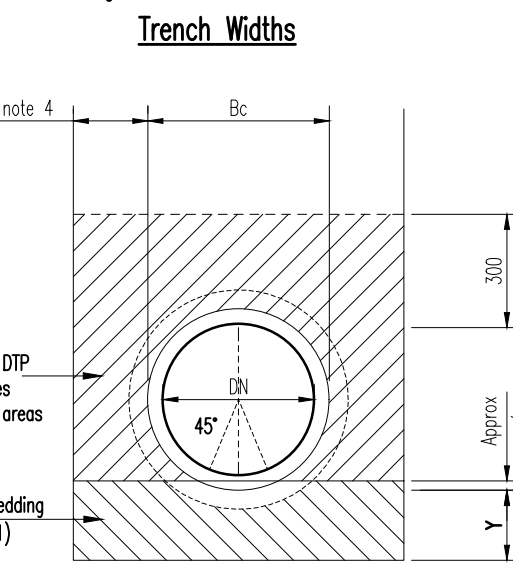




- Notes:
- The dimensions and specifications shown here may be amended by the site specific requirements.
 - Pipe connections smaller than the outgoing pipe are to be laid 'soffit to soffit' where the incoming pipe is of the same diameter as the outgoing pipe, the invert gradients shall intersect in the centre of the manhole at the level specified.
 - High strength concrete topping to be trowelled 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 invert 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

The maximum trench widths are to be as shown above unless the approval of the Engineer is obtained

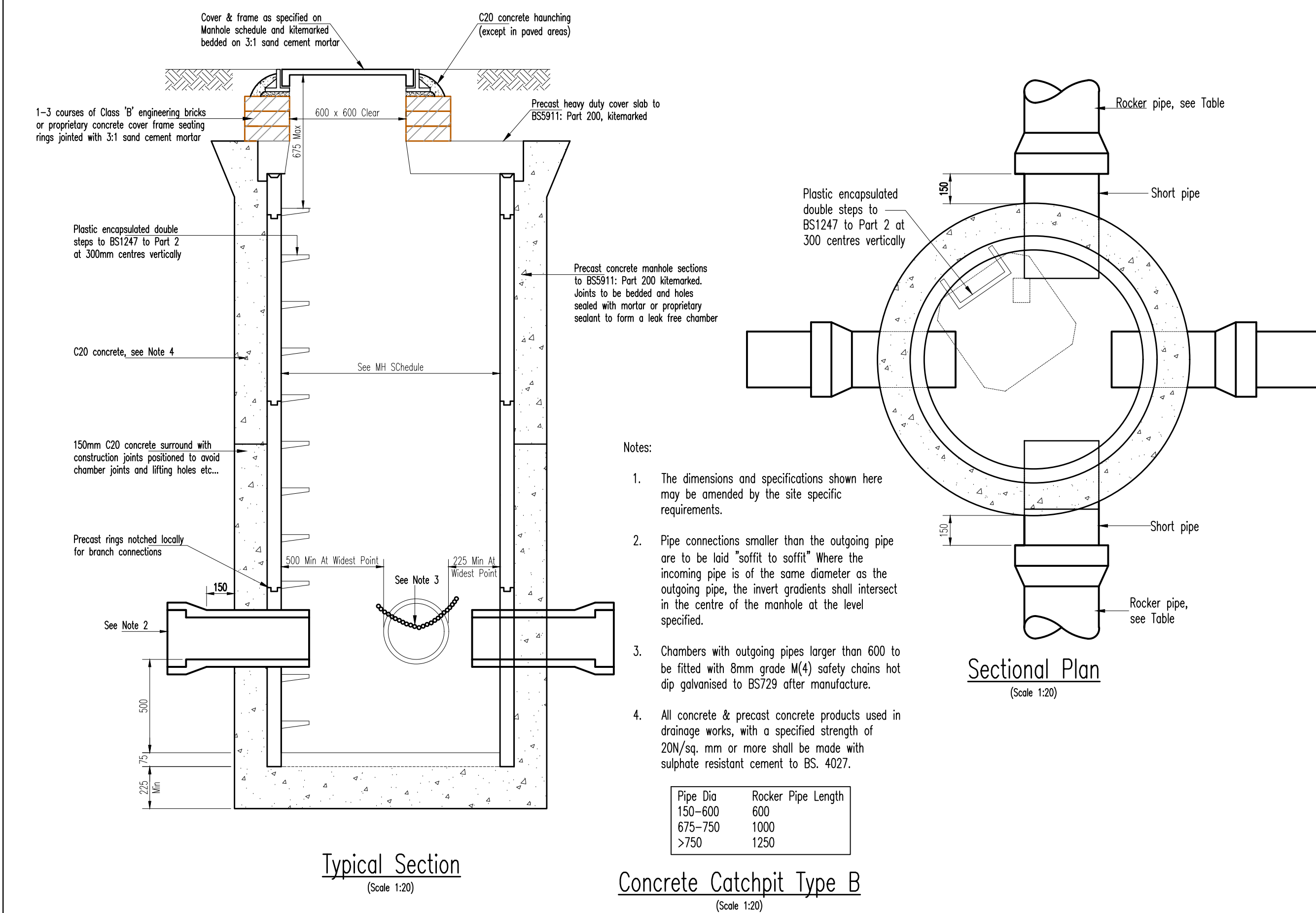
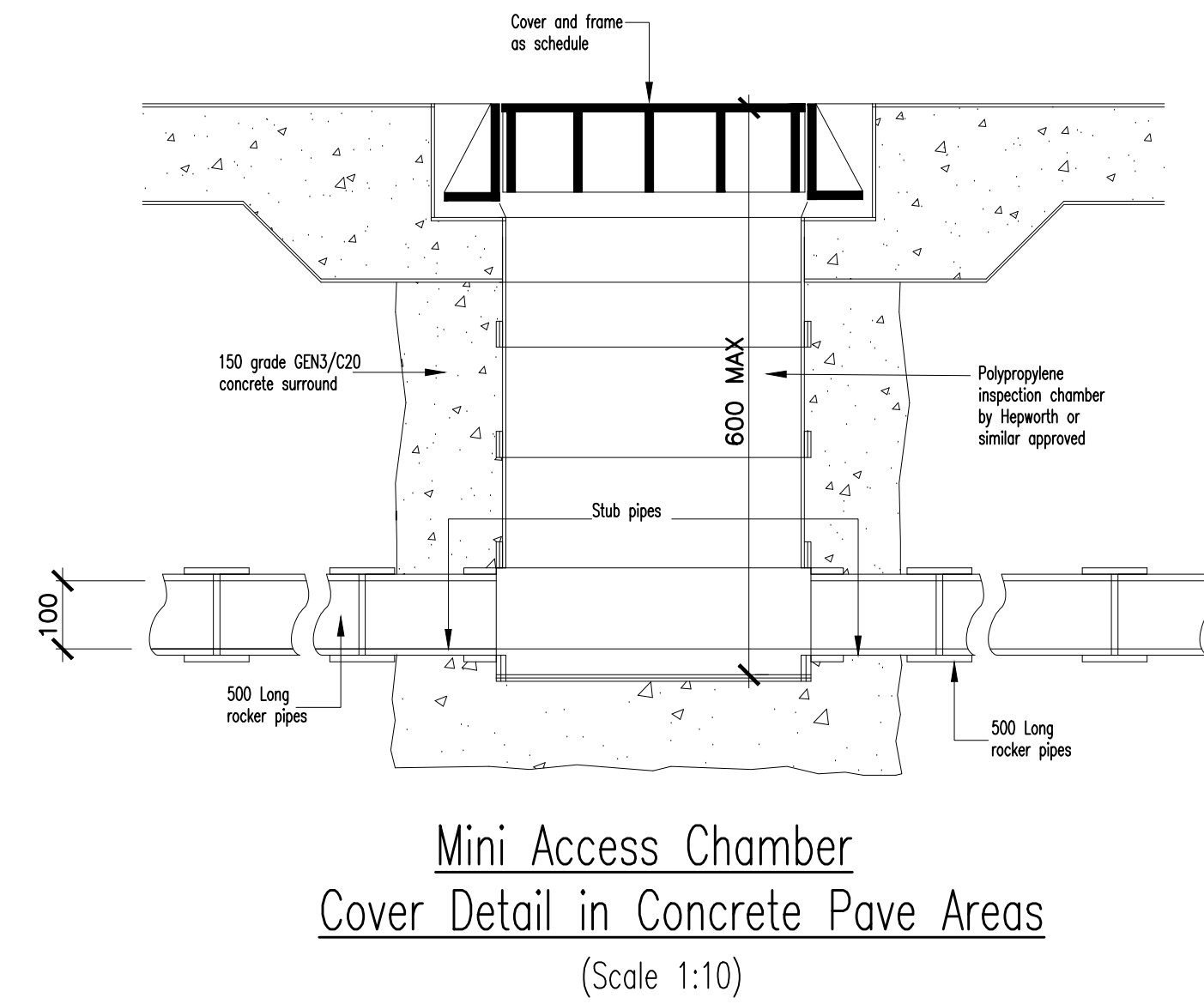
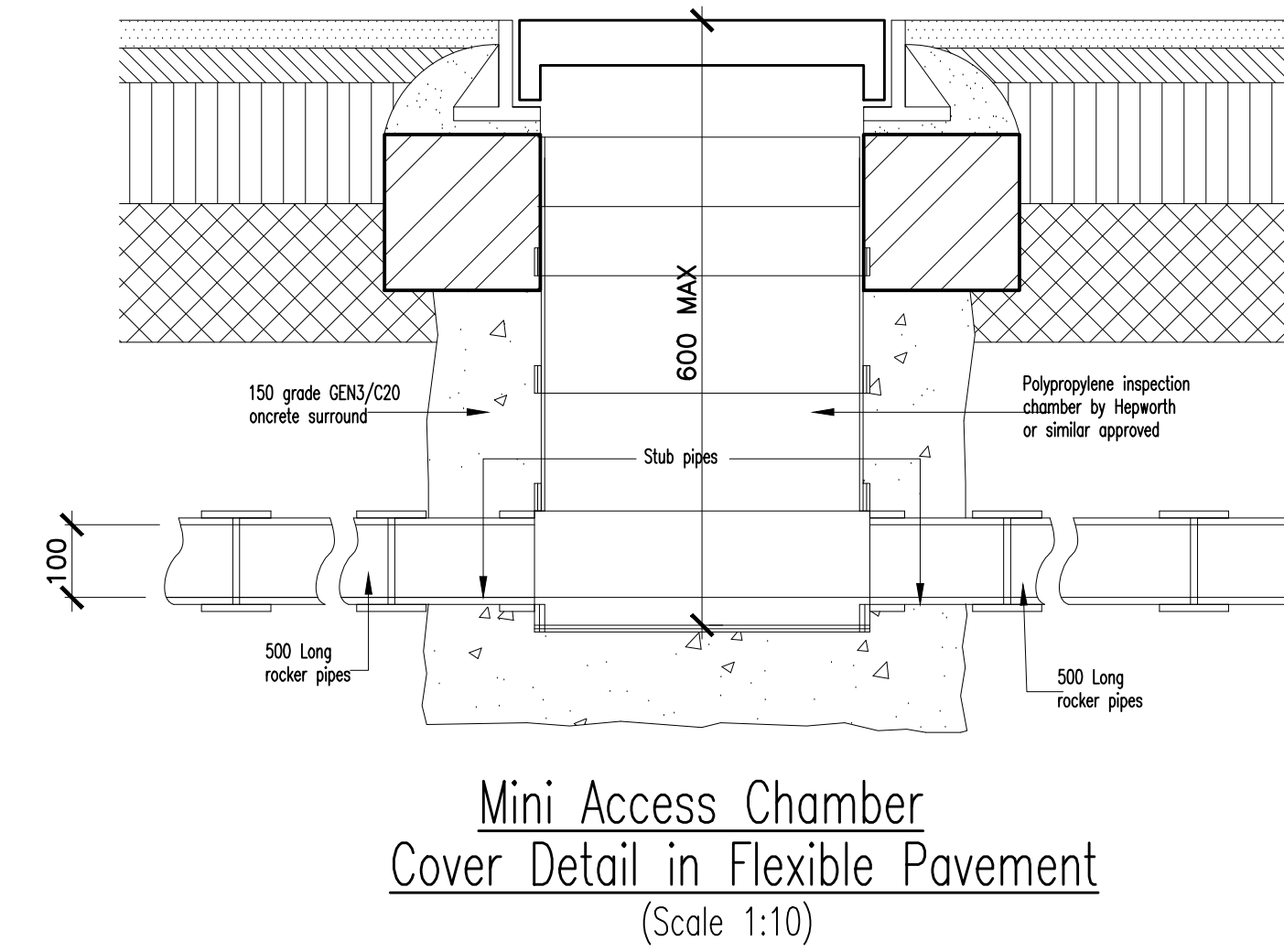


Pipe Bedding Details (Granular)
(Scale 1:20)

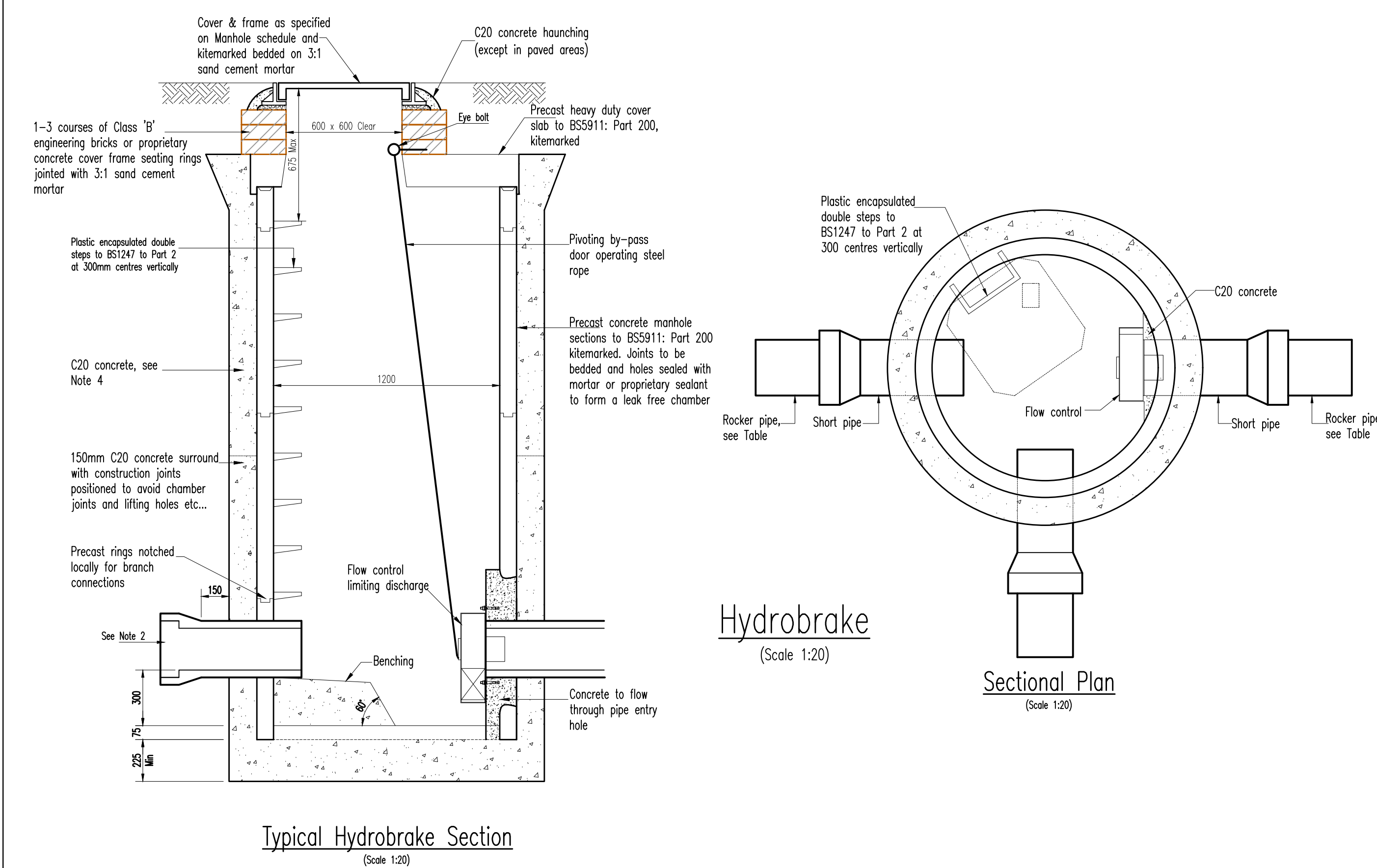
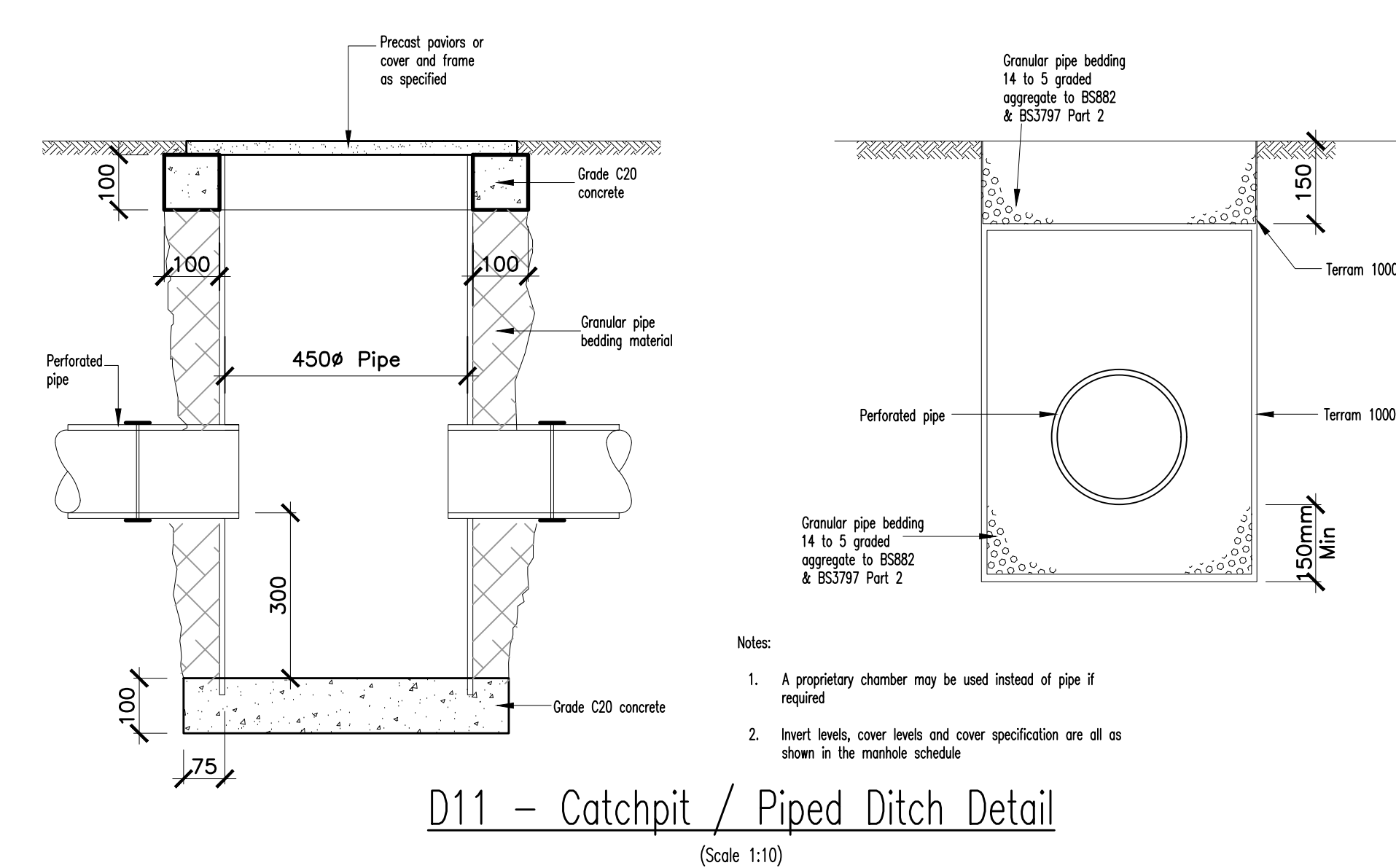
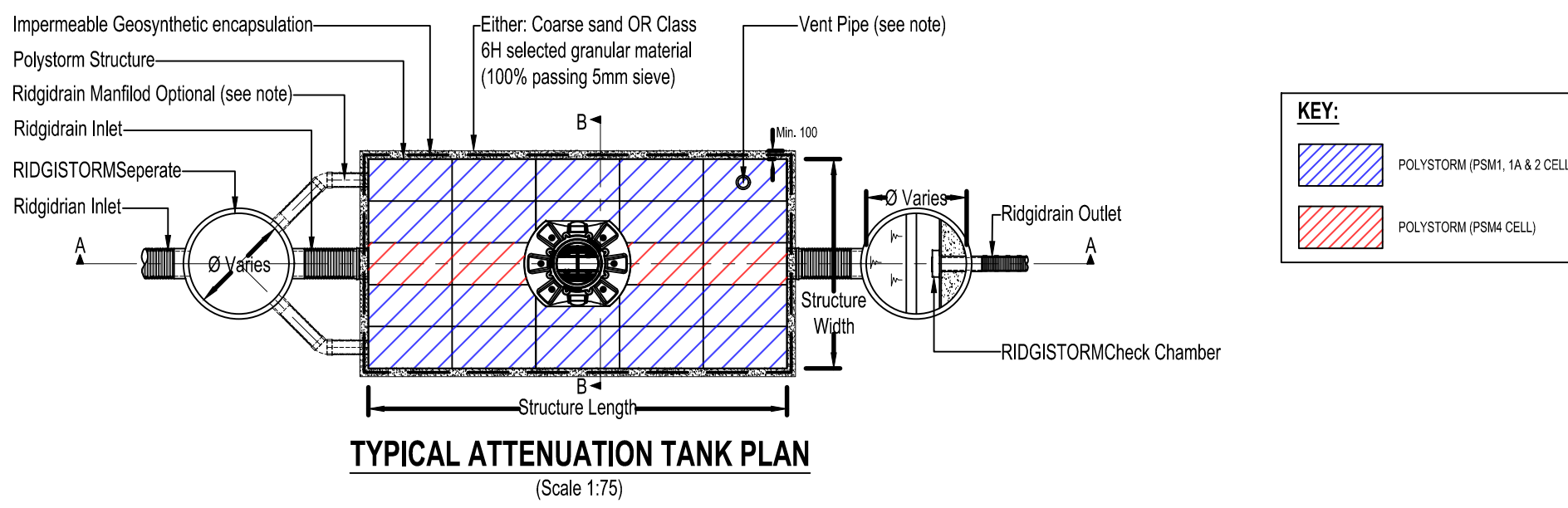
Notes:

- 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 12655-1 sized in accordance with the following table:

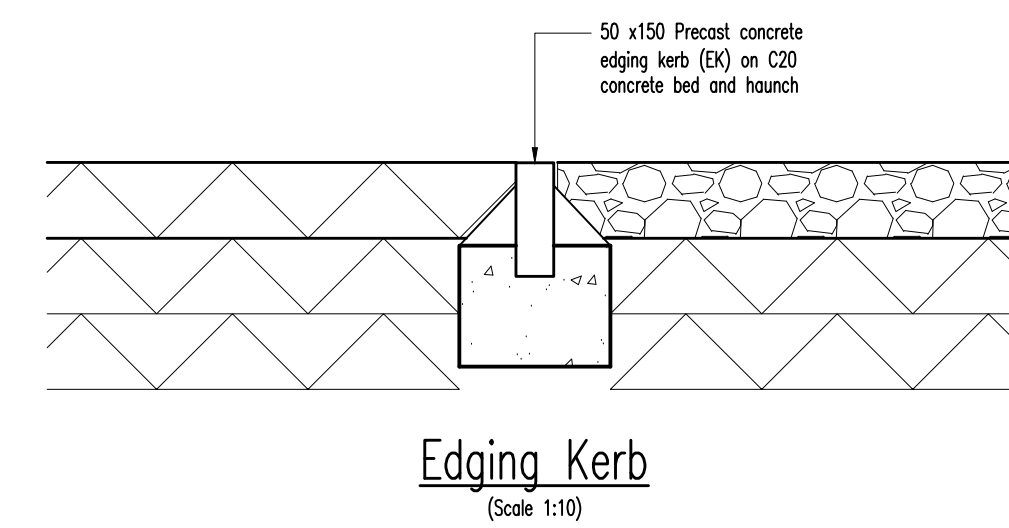
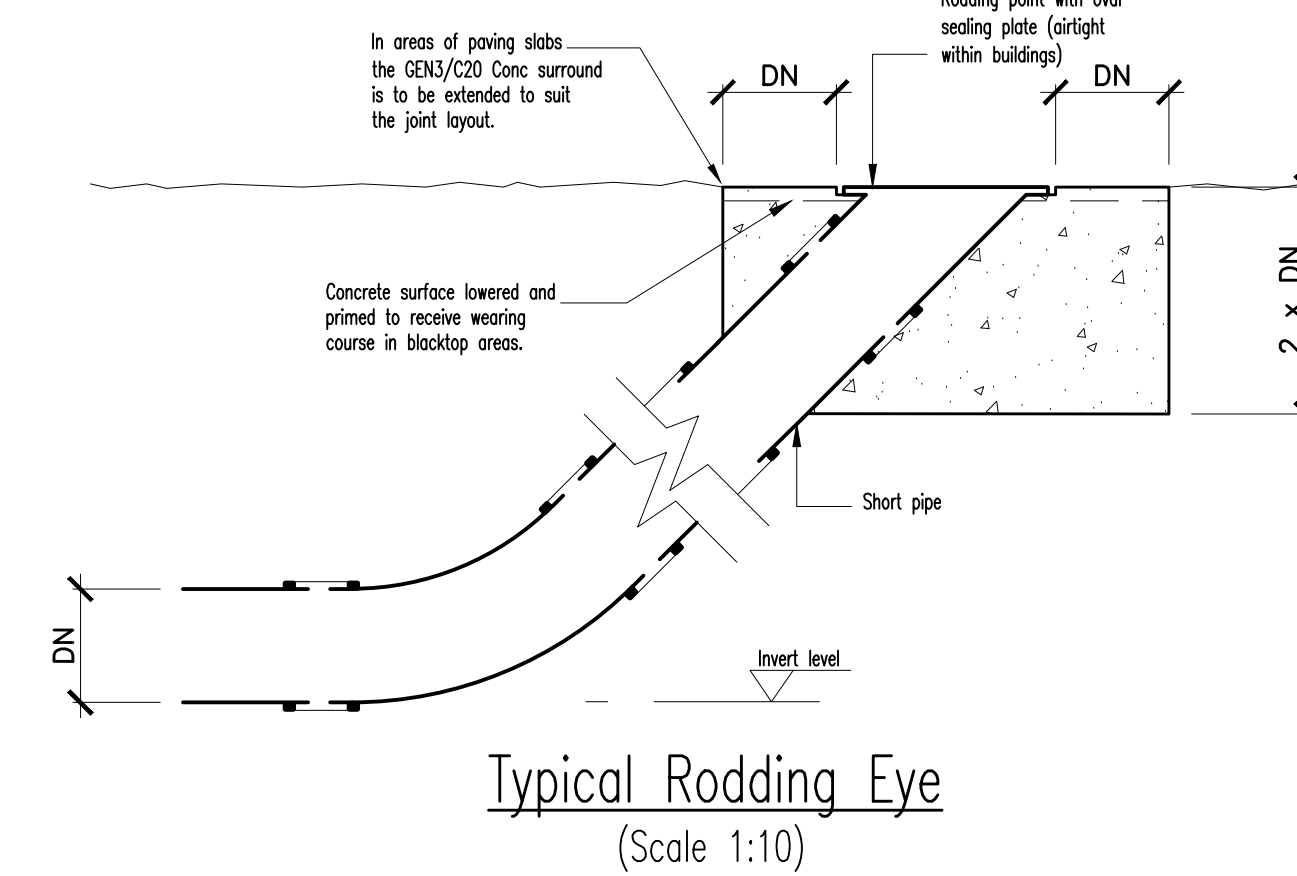
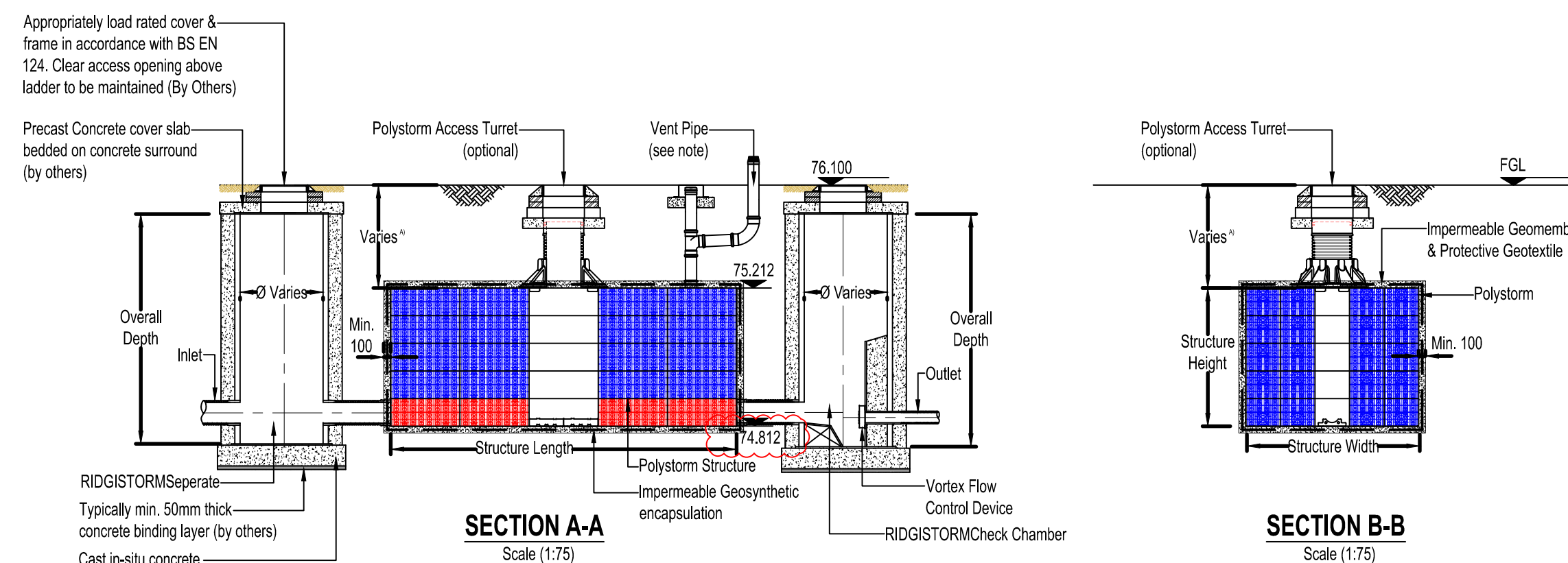
Normal Bore Of Pipe 'DN'	Alternative Aggregate Sizes	
	Single Sized	Graded
100	4/10	4/10 to 4/20
140-400	4/10 6/10 or 10/20	2/14 to 4/20
>400	4/10 6/14 10/20 or 20/40	2/14 4/20 or 4/40
- Lower trench fill to comply with class 8 material - table 6/1 of shw. selected backfill material, whether selected from locally excavated or imported material, shall consist of uniform, readily compressible 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 = 1/8 Bc OR 100mm under pipe barrels and 50 min under sockets, whichever is the greatest (400 max) in rock etc:
1/4 Bc under barrels or 150min under sockets (400max)
- DN = Normal pipe bore.
Bc = 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.
Bc = External dia. of pipe barrel.
Bt = 18mm FOR DN < 450
36mm FOR 450 < DN < 1200
54mm FOR DN > 1200
Y = Bc/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).



Concrete Catchpit Type B
(Scale 1:20)



Hydrobrake
(Scale 1:20)



NOLAN ASSOCIATES
CONSTRUCTION
DRAWING

REV	DESCRIPTION	BY	CHKD	DATE
C	Invert level changed.	JSD	KP	24.04.24
B	Detail amended & Attenuation Detail added.	JSD	KP	02.04.24
A	Construction	K/inst	ARW	26.07.23
T2	Edging kerb detail added	K/inst	ARW	26.06.23
T1	Tender	CHB	ARW	30.03.23

Green Frog Connect
Ashton Old Road Manchester

Drainage Details



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E-MAIL: enquiries@nolanassociates.co.uk

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	C