

MANHOLE SCHEDULE

Manhole Number	Cover Level	Depth To Soffit	Connections	Pipe			Manhole Size	Types	
				Code	Inverts	Dams Invert-off		Manhole	Cover
F1	117.468	1.518		1 LATERAL	115.850	100	1200	TYPE B	D400 600x600
				2 LATERAL	115.850	100			
F2	117.757	1.957		1 LATERAL	115.650	150	1200	TYPE B	D400 600x600
				2 LATERAL	115.700	100			
F3	116.801	1.201		1 LATERAL	115.450	150	1200	EXISTING	D400 600x600
				EXISTING	115.450	150			

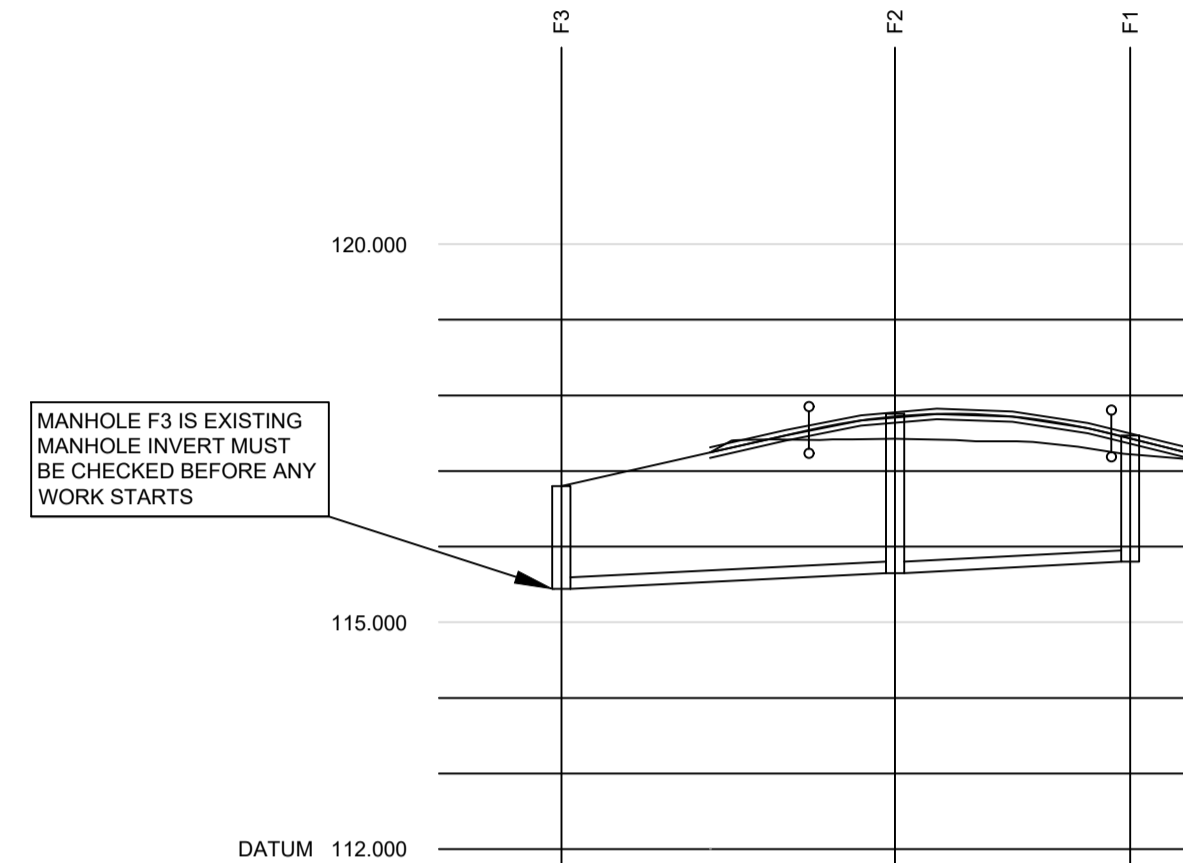
MANHOLE F3 IS EXISTING  
MANHOLE INVERT MUST BE CHECKED BEFORE ANY WORK STARTS

DEMARICATION CHAMBER SCHEDULE

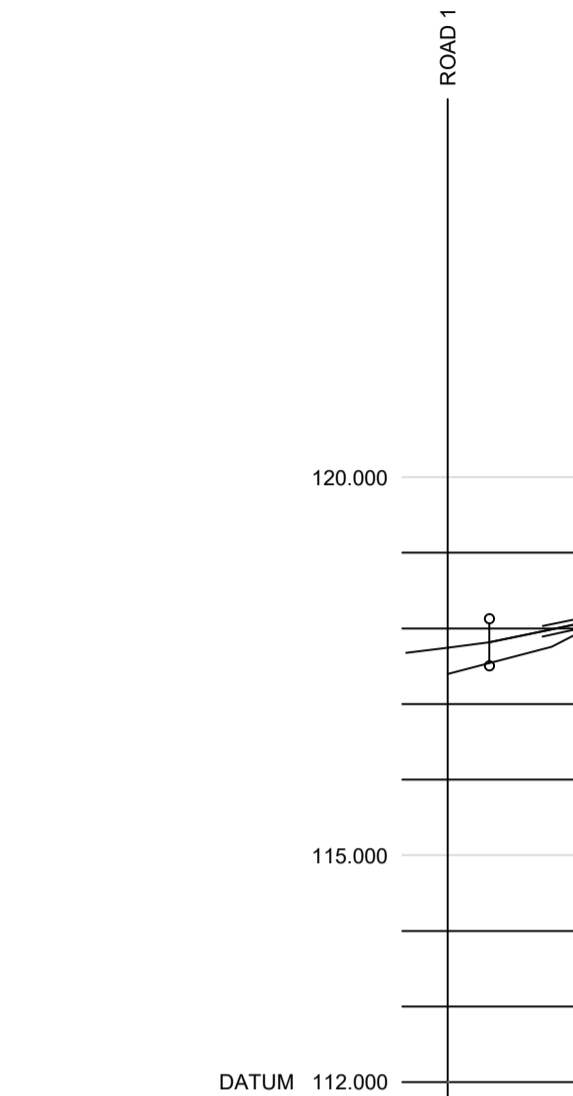
CHAMBER	MAKE	COVER LEVEL	INVERT LEVEL	DEPTH	TYPE	PIPE SIZE	PIPE MATERIAL	LENGTH metres	GRADIENT	LOCATION
DCF1	HEPWORTH P/PC	117.70	116.25	1.45	foul	100	CLAY	4.0	1:10	435970 962E 407787 982N
DCF2	HEPWORTH P/PC	117.93	116.10	1.83	foul	100	CLAY	4.0	1:10	435963 379E 407770 725N

YORKSHIRE WATER SEWER NOTES

- All adoptable sewer works and materials to be in accordance with 'Design and Construction Guidance for foul and surface water sewers offered for adoption under the code for adoption agreements for water and sewerage companies operating wholly or mainly in England'. The relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and kitemarked.
- Manhole covers shall have a clear opening of 600mm and shall be Class D400 to BSEN124 with 150mm deep frames in highways.
- Filled ground must be filled and consolidated under the supervision of and to the satisfaction of Yorkshire Water before any sewer works are carried out.
- Yorkshire Water is **not** obliged to accept filter drain/land drainage system (directly or indirectly). An alternative method of disposal of the land drainage run-off with therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with the regard to the disposal of the filter drain/land drain run-off.
- Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water Inspector. Where the clear opening of the Kitemarked product is different to that of the cover and frame, a load bearing slab should be fitted above the cover slab to bring the size down to 600mm x 600mm for the Yorkshire Water specified cover size. Please refer to the Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for kitemarked cover slab opening sizes. As an alternative 600mm x 600mm access cover slabs are now available (must be kitemarked) and Yorkshire Water would accept without the requirement of the reducing piece.
- Sulphate resisting cement (C20-DC2) and pre-cast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
- The adoptable sewers should be located a minimum of 1m and manholes 0.5m from kerb faces and service margins.
- Sewers must have 5 metres clearance from trees and hedges (please also refer to Figure 2.3 on page 33 in 'Sewers for Adoption' 6th Edition for restrictions on tree planting adjacent to sewers).
- Sewers to be laid with Class 'S' Bedding (150mm granular bed and surround). Where depth of cover to top of sewer is less than 1.2m in highways and verges (or less than 900mm in non vehicular areas), then a concrete slab should be provided above the granular bed and surround.
- Bedding and backfilling material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
- The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
- Yorkshire water policy is not to accept Type 'c' brick manholes and 1050mm diameter rings. Instead it is preferred that you use a 'type B' manhole with 1200mm dia or 1500mm dia rings with the opening sited over the channel where depth of cover to pipe soffit is 1-1.5m.
- Adoptable plastic sewer pipes to be BSI Kitemarked (certified to WIS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3m lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channels in manholes. We have found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the benching.
- The minimum crushing strength for clay pipes should be as follows: 100mm dia, 40KN/m, 150mm dia, 40KN/m, 225mm, 45KN/m and 300mm dia 72KN/m. The minimum crushing strength for concrete pipes should be (Class 120 to EN 1916/BS5911-1 2002). Plastic pipes should conform to WIS 4-35-01 and BS EN13476.



CHAINAGE	EXISTING GROUND LEVEL	ALIGNMENT LEVEL	VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	LEFT HAND CHANNEL	RIGHT HAND CHANNEL	FOULWATER COVER LEVEL	FOULWATER INVERT	FOULWATER DETAILS	FOULWATER LENGTHS
-9.80	116.800	117.243	G= 4.545% 1: 22.0	R= 20.217	117.212	117.174	116.600	115.450	Pipe 1.001 Dia 150 Circular CLAY Strength 40KN/m 1 in 100 CLASS S BED	22.070
0.000	117.275	117.540	L= 20.000 KF= -2.09524		117.539	117.402	115.450			
6.540	117.424	117.669	G= -5.000% 1: -20.0		117.728	117.600	115.650	115.650	Pipe 1.000 Dia 150 Circular CLAY Strength 40KN/m 1 in 100 CLASS S BED	16.232
10.000	117.424	117.754			117.823	117.685	117.757	115.650		
12.240	117.395	117.757			117.789	117.651	117.688	115.650		
15.000	117.395	117.720			117.789	117.497	117.688	115.650		
16.084	117.395	117.666			117.635	117.253	117.688	115.650		
20.000	117.395	117.322			117.991	117.031	117.688	115.650		
25.000	117.395	117.200			117.289	117.031	117.688	115.650		
26.500	117.395						117.688	115.650		
27.738	117.395						117.688	115.650		
30.000	117.395						117.688	115.650		
32.451	117.395						117.688	115.650		



CHAINAGE	EXISTING GROUND LEVEL	ALIGNMENT LEVEL	VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	LEFT HAND CHANNEL	RIGHT HAND CHANNEL	FOULWATER COVER LEVEL	FOULWATER INVERT	FOULWATER DETAILS	FOULWATER LENGTHS
-2.746	117.399	117.815	G= 4.171% 1: 24.0		118.031	117.892	116.800	115.450		
0.004	117.542	117.815			118.021	117.954	115.450			
3.519	117.542	118.128			118.021	118.060	115.450			
3.841	117.542	118.128			118.021	118.060	115.450			
7.531	117.542	118.128			118.021	118.060	115.450			

B	Updated to 8 units	11/02/21
A	First issue for approvals.	13/01/21
REV	DETAILS	DATE

SCALE = 1:500H/100V@ A1



CHARTERED CIVIL ENGINEER

HM Design  
10 The Green  
York  
YO26 5LR

07919 031289

Client  
M BOOTH DESIGN

Drawing Title  
LONGSECTIONS AND SCHEDULES

Site Address  
RESIDENTIAL DEVELOPMENT  
LAND OFF CROSS STREET  
MONK BRETTON  
BARNLSLEY

Drawn HM	Checked HM	
Drg.No. YH743/3B	Date 13/01/2021	