

SURFACE WATER MANHOLE SCHEDULE

Sheet 1 of 2

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
			Code	Inverts	Dimensions (mm)		Manhole	Cover	
S1	117.100 1.225		1 Lateral	115.725	150	1500	C	D400	
			2 Lateral	115.725	150				
			0 1.000	115.650	225				
E. 414569.274 N. 415416.050									
S2	115.500 1.975		1 1.000	113.300	225	1200	B	D400	
			2 Lateral	113.375	150				
			3 Lateral	113.375	150				
E. 414597.574 N. 415399.309									
S3	111.558 1.908		1 1.001	109.500	225	1500	C	D400	
			2 Lateral	109.575	150				
			0 1.002	109.425	300				
E. 414640.145 N. 415374.127									
S4	109.600 1.200		1 2.000	108.250	150	1500	C	D400	
			0 1.002	108.775	300				
			0 1.003	108.700	375				
E. 414668.301 N. 415393.626									
S5	110.300 1.225		1 1.003	108.650	375	1500	C	D400	
			0 1.004	108.850	TANK				
			0 1.004	108.850	TANK				
E. 414656.016 N. 415385.919									
S6_IN	110.750 1.376		1 1.004	106.850	TANK	1220 x 675	ACCESS COVER	See Carlow Concrete DWG STS3273-001 to STS3272-007	D400
			0 1.004	106.850	TANK				
			0 1.004	106.850	TANK				
E. 414650.432 N. 415394.818									
S6	110.750 1.376		1 1.004	106.800	TANK	1220 x 675	ACCESS COVER	See Carlow Concrete DWG STS3273-001 to STS3272-007	D400
			0 1.005	106.800	450				
			0 1.005	106.750	450				
E. 414649.399 N. 415395.429									
S7	111.300 1.950		1 1.004	106.800	TANK	1220 x 675	ACCESS COVER	See Carlow Concrete DWG STS3273-001 to STS3272-007	D400
			0 1.005	106.800	450				
			0 1.005	106.750	450				
E. 414643.652 N. 415464.958									
S7_OUT	111.200 4.275		1 1.005	106.750	450	5.0 1/2 @ 2.200m SHE-0089-5000-2200-5000 HYDROBRAKE MANHOLE MANHOLE DIA 1800mm			
			2 2.000	107.050	150				
			0 1.006	106.700	225				
E. 414646.579 N. 415405.811									

SURFACE WATER MANHOLE SCHEDULE

Sheet 2 of 2

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types		
			Code	Inverts	Dimensions (mm)		Manhole	Cover	
S9	111.400 4.560		1 1.006	106.615	225	1200	A	D400	
			0 1.007	106.615	225				
			1 1.008	106.015	225				
E. 414640.852 N. 415417.046									
S10	111.696 5.471		1 1.009	105.744	225	1500	C	D400	
			0 1.009	105.744	225				
			0 1.010	105.744	225				
E. 414562.872 N. 415461.982									
S11	107.202 1.233		1 1.009	105.744	225	1500	C	D400	
			0 1.010	105.744	225				
			0 1.010	105.744	225				
E. 414582.069 N. 415494.640									
S7A	111.300 4.111		1 EX COMB	105.600	300	900 x 600	ACCESS COVER	See Carlow Concrete DWG STS3273-001 to STS3272-007	D400
			2 1.010	105.675	225				
			0 EX COMB	105.600	300				
E. 414639.831 N. 415388.047									
S7B	111.300 4.120		1 EX COMB	105.600	300	900 x 600	ACCESS COVER	See Carlow Concrete DWG STS3273-001 to STS3272-007	D400
			2 1.010	105.675	225				
			0 EX COMB	105.600	300				
E. 414635.906 N. 415390.369									
C1	106.896 0.996		1 EX COMB	105.600	300	1500	C	D400	
			2 1.010	105.675	225				
			0 EX COMB	105.600	300				
E. 414582.666 N. 415498.790									

FOUL WATER MANHOLE SCHEDULE

Sheet 1 of 1

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
			Code	Inverts	Diams		Manhole	Cover
F1	116.937 1.837		1 Lateral	114.950	150	1200	B	D400
			2 Lateral	114.950	150			
			0 1.000	114.950	150			
E. 414572.857 N. 415411.688								
F2	112.580 1.230		1 1.000	111.200	150	1500	C	D400
			2 Lateral	111.200	150			
			0 1.001	111.200	150			
E. 414627.493 N. 415379.869								
F3	111.350 1.200		1 1.001	110.000	150	1500	C	D400
			0 1.002	110.000	150			
			0 1.002	110.000	150			
E. 414643.780 N. 415407.413								
F4	111.450 1.418		1 1.002	109.882	150	1500	C	D400
			0 1.003	109.882	150			
			0 1.003	109.246	150			
E. 414636.725 N. 415420.964								
F5	111.400 2.004		1 1.003	109.246	150	1200	B	D400
			0 1.004	109.246	150			
			0 1.004	109.246	150			
E. 414565.956 N. 415463.706								
C2	110.550 1.320		1 EX COMB	108.930	300	1500	C	D400
			2 1.004	109.080	150			
			0 EX COMB	108.930	300			
E. 414565.926 N. 415472.127								

ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 AND THE DUTIES AND RESPONSIBILITIES CONTAINED THEREIN

- Yorkshire Water Notes
- All adoptable sewer works and material to be in accordance with "Code for Adoption". 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 BS EN 124 with 150mm deep frames in highways.
 - Filled ground must be filled and consolidated under the supervision 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 run-off into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section regarding the disposal of the filter drain/land drainage run-off.
 - The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 - Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
 - Sewers to be laid in Class "S" Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 900mm in nonvehicular access areas) then a concrete slab should be provided above granular bed and surround.
 - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
 - Yorkshire Water policy is that Type "C" brick manholes and 1050mm diameter manhole rings are not preferred, instead, it is preferred that you use a type "B" manhole with 1200mm diameter or 1500mm diameter 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 BS1 Kitemarked (certified to WS 4-35-01 and BS/EN13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and Yorkshire Water would require clay ware channel in manholes.
 - The minimum crushing strength for clay pipes should be as follows: 100mm dia. 40KN/m, 150mm dia. 40KN/m, 225mm dia. 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 WS 4-35-01 and BS EN13476.
 - Where a B125 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Screw down covers are not acceptable.
 - There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm; if crossover is near the rocker then the clearance needed may need to be increased.

General Notes

- Precast concrete manhole units shall comply with the relevant provisions of BS EN 1917 and BS 5911-3 and shall be manufactured from concrete with a Design Chemical Class DC-4 unless the sewerage company can be satisfied that a lower class will resist attack from soils and groundwater. Units which bed into bases shall be manufactured so that imposed vertical loads are transmitted directly via the full wall thickness of the unit. The profiles of joints between units and the underside of slabs shall be capable of withstanding applied loadings from such slabs and spigot-ended sections shall only be used where the soffit of the slab is recessed to receive them.
- All levels of existing drainage to be confirmed prior to work commencing on site.
- The contractor must allow for any fees required for road and sewer opening permits, sewer connections and make the appropriate applications.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	By	Date	Revision	Chk	Appd
J	MD	12.02.25	YW comments--manholes added at C1 & C2	MD	MI
I	JMG	04.02.25	Updated to suit Yorkshire Water Comments	MD	MI
H	MD	16.01.25	Updated to suit Yorkshire Water Comments	MI	MI
G	MD	16.12.24	MH details revised to offsite drainage layout	MI	MI
F	MD	23.05.24	MH details revised to new drainage layout	MI	MI
E	RJ	23.06.22	Manhole details updated	MI	MI
D	RJ	13.05.22	Amended to new site layout	MI	MI
C	RJ	14.03.22	Amended to suit section 104 comments	MI	MI
B	MB	04.11.21	Amended to suit section 104 comments	MI	MI
A	BHB	07.06.21	Amended to Yorkshire Water Comments	RJ	MI
/	JG	12.04.21	Preliminary	RJ	MI

ARP ASSOCIATES
Chartered Consulting Engineers

Northwest House ● 5 & 6 Northwest Business Park ● Servia Hill, Leeds ● LS6 2QH
0113 245 8498 ● 0113 244 3864 ● leeds@arpassociates.co.uk ● www.arpassociates.co.uk

ARP Associates is a trading division of ARP Geotechnical Ltd, a company registered in England and Wales with company number 3771811, whose registered office is at 5/6 Northwest Business Park, Servia Hill, Leeds LS6 2QH

TITLE
MANHOLE SCHEDULE

PROJECT
PLANE STREET, HUDDERSFIELD

CLIENT
UNITY HOUSING ASSOCIATION

DRAWING STATUS
FOR APPROVAL

Scale: NTS Date: APR 21 Drawn: RJ Chk: MI

Drg. No. 0257/05/11.00 Rev: J

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES