H-3-264-818

Surface Water Manhole Schedule

Manhole No.	Cover Level (m)	Connected Pipes	Pipe Diameter (m)	Pipe Invert Level (m)	Depth to Invert (m)	Depth to Soffit (m)	Manhole Size (mm)	Manhole Type	Manhole Cover & Frame
SW.02	78.924	PN1.001	0.150	77.578	1.346	1.196	1500Ø	Type C	D400 1220x685
		PN1.000	0.150	77.578	1.346	1.196			
SW.03	78.648	PN1.002	0.150	77.243	1.405	1.255	1500Ø	Type C	D400 1220x685
		PN1.001	0.150	77.243	1.405	1.255			
SW.04	78.274	PN1.003	0.150	76.859	1.415	1.265	1500Ø	Type C	D400 1220x685
		PN1.002	0.150	76.859	1.415	1.265			
SW.05	78.047	PN1.004	0.225	76.535	1.512	1.287	1500Ø	Type C	D400 1220x685
		PN1.003	0.150	76.610	1.437	1.287			
SW.06	76.844	PN1.005	0.225	75.335	1.509	1.284	1500Ø	Type C	D400 1220x685
		PN1.004	0.225	75.335	1.509	1.284			
SW.07	76.625	PN1.006	0.225	75.208	1.417	1.192	1500Ø	Type C	D400 1220x685
		PN1.005	0.225	75.208	1.417	1.192			
SW.08	76.615	PN1.007	0.225	75.104	1.511	1.286	1500Ø	Type C	D400 1220x685
		PN1.006	0.225	75.104	1.511	1.286			
SW.10	76.474	PN2.001	0.225	74.973	1.501	1.276	1500Ø	Type C	D400 1220x685
		PN2.000	0.225	74.973	1.501	1.276			
SW.11	76.171	PN1.008	0.300	74.397	1.774	1.474	1500Ø	Type C	D400 1220x685
		PN1.007	0.225	74.472	1.699	1.474			
		PN2.001	0.225	74.472	1.699	1.474			
SW.12	75.607	PN1.009	0.300	73.993	1.614	1.314	1500Ø	Type C	D400 1220x685
		PN1.008	0.300	73.993	1.614	1.314			
SW.13	75.084	PN1.010	0.300	73.223	1.861	1.561	1500Ø	Type C	D400 1220x685
		PN1.009	0.300	73.223	1.861	1.561			
SW.15	74.593	PN1.011	0.375	72.975	1.618	1.243	1500Ø	Type C	D400 1220x685
		PN1.010	0.300	73.050	1.543	1.243			
		PN3.000	0.225	73.125	1.468	1.243			
SW.17	74.970	PN1.012	0.375	72.823	2.147	1.772	1500Ø	Type B	D400 600x600
		PN1.011	0.375	72.823	2.147	1.772			
		PN4.000	0.225	72.973	1.997	1.772			
SW.18	74.875	PN1.014	0.150	70.021	4.854	4.704	1800Ø	Control manhole see drawing 4120	D400 1220x675
		PN1.013	0.750	70.071	4.804	4.054			
SW.19	74.818	PN1.014	0.150	69.959	4.859	4.709	1500Ø	Type A	D400 600x600
		PN1.013	0.150	69.959	4.859	4.709			
SW20 Wash Out	74.704	SW Rising Main	Internal 78.7mm	72.678	2.026	1.947	1500Ø	TBC	D400 Clear Opening 1220x675 Double Twin 610 x 675
		SW Rising Main	Internal 78.7mm	72.678	2.026	1.947			
SW.21	79.826	PN1.016	0.150	78.365	1.461	1.311	1500Ø	Type C	D400 1220x685
		SW Rising Main	Internal 78.7mm	78.436	1.390	1.311			
SW Valve Chamber	74.780	SW Rising Main	Internal 78.7mm	73.580	1.200	1.121	1800 x 2400 mm	TBC	D400 Clear Opening 1220x675 Double Twin 610 x 675
		SW Rising Main	Internal 78.7mm	73.580	1.200	1.121			
SW Wetwell	74.730	SW Rising Main	Internal 78.7mm	73.580	1.150	1.071	1800Ø	TBC	D400 Clear Opening 1220x675 Double Twin 610 x 675
		PN1.015	0.150	69.922	4.808	4.729			

Surface Water Demarcation Chamber Schedule

Manhole No.	Cover Level (m)	Connected Pipes	Pipe Diameter (m)	Pipe Invert Level (m)	Depth to Invert (m)	Depth to Soffit (m)	Manhole Size (mm)	Manhole Type	Manhole Cover & Frame
SW.01	79.000	PN1.000	0.150	77.912	1.088	0.938	450Ø	Type D	450Ø Class B125
SW.09	76.570	PN2.000	0.225	75.125	1.445	1.220	1500Ø	Type C	B125 1220x685
SW.14	74.410	PN3.000	0.225	73.454	0.956	0.731	1500Ø	Type C	B125 1220x685
SW.16	74.975	PN4.000	0.225	73.402	1.573	1.348	1500Ø	Type C	B125 1220x685

Foul Water Manhole Schedule

Manhole No.	Cover Level (m)	Connected Pipes	Pipe Diameter (m)	Pipe Invert Level (m)	Depth to Invert (m)	Depth to Soffit (m)	Manhole Size (mm)	Manhole Type	Manhole Cover & Frame
FW.03	78.688	PN1.001	0.100	76.843	1.845	1.745	1200Ø	Type B	D400 600x600
		PN1.000	0.100	76.843	1.845	1.745			
		PN2.000	0.100	76.843	1.845	1.745			
FW.04	78.148	PN1.002	0.100	76.500	1.648	1.548	1200Ø	Type B	D400 600x600
		PN1.001	0.100	76.500	1.648	1.548			
FW.05	76.707	PN1.003	0.100	75.107	1.600	1.500	1200Ø	Type B	D400 600x600
		PN1.002	0.100	75.107	1.600	1.500			
FW.06	76.556	PN1.004	0.100	74.886	1.670	1.570	1200Ø	Type B	D400 600x600
		PN1.003	0.100	74.886	1.670	1.570			
FW.08	76.158	PN1.005	0.150	73.997	2.161	2.011	1200Ø	Type B	D400 600x600
		PN1.004	0.100	74.047	2.111	2.011			
		PN3.000	0.100	74.047	2.111	2.011			
FW.09	75.609	PN1.006	0.150	73.574	2.035	1.885	1200Ø	Type B	D400 600x600
		PN1.005	0.150	73.574	2.035	1.885			
FW.12	75.091	PN1.007	0.150	73.115	1.976	1.826	1500Ø	Type C	D400 1220x685
		PN1.006	0.150	73.115	1.976	1.826			
		PN4.000 Backdrop	0.100	74.165	0.926	0.826			
		PN5.000	0.150	73.115	1.976	1.826			
FW.15	74.507	PN1.008	0.150	72.547	1.960	1.810	1200Ø	Type B	D400 600x600
		PN1.007	0.150	72.547	1.960	1.810			
FW.16	74.596	PN1.009	0.150	72.486	2.110	1.960	1200Ø	Type B	D400 600x600
		PN1.008	0.150	72.486	2.110	1.960			
		PN7.000 Backdrop	0.100	73.668	0.928	0.828			
FW.17	74.520	PN1.010	0.150	72.406	2.114	1.964	1200Ø	Type B	D400 600x600
		PN1.009	0.150	72.406	2.114	1.964			
FW18 Wash Out	74.660	FW Rising Main	Internal 89.4mm	72.678	1.982	1.893	1500Ø	TBC	D400 Clear Opening 1220x675 Double Twin 610 x 675
		FW Rising Main	Internal 89.4mm	72.678	1.982	1.893			
FW.19	79.001	PN1.011	0.150	78.147	0.854	0.704	1500Ø	Type C	D400 1220x685
		FW Rising Main	Internal 89.4mm	78.207	0.794	0.704			
FW Valve Chamber	74.584	FW Rising Main	Internal 89.4mm	73.384	1.200	1.111	1800 x 2400 mm	TBC	D400 Clear Opening 1220x675 Double Twin 610 x 675
		FW Rising Main	Internal 89.4mm	73.384	1.200	1.111			
FW Wetwell	74.510	FW Rising Main	Internal 89.4mm	73.384	1.126	1.037	1800Ø	TBC	D400 Clear Opening 1220x675 Double Twin 610 x 675
		PN1.010	0.150	72.370	2.140	2.051			

Foul Water Demarcation Chamber Schedule

Manhole No.	Cover Level (m)	Connected Pipes	Pipe Diameter (m)	Pipe Invert Level (m)	Depth to Invert (m)	Depth to Soffit (m)	Manhole Size (mm)	Manhole Type	Manhole Cover & Frame
FW.01	78.885	PN2.000	0.100	77.613	1.272	1.172	450Ø	Type D	450Ø Class B125
FW.02	78.900	PN1.000	0.100	77.588	1.312	1.212	450Ø	Type E	450Ø Class B125 Restricted Opening
FW.07	76.450	PN3.000	0.100	74.189	2.261	2.161	450Ø	Type D	450Ø Class B125 Restricted Opening
FW.10	75.100	PN5.000	0.150	73.643	1.457	1.307	1500Ø	Type C	B125 1220x685
FW.11	75.300	PN4.000	0.100	74.265	1.035	0.935	450Ø	Type E	450Ø Class B125
FW.13	74.933	PN7.000	0.100	73.801	1.132	1.032	450Ø	Type E	450Ø Class B125
FW.14	74.390	PN6.000	0.100	72.731	1.659	1.559	450Ø	Type D	450Ø Class B125 Restricted Opening

Drainage Notes

CDM Regulations - Drainage

1. All design work has been carried out with health & safety aspects given full consideration. Wherever possible risks have been eliminated from the design, however due to the nature of this type of work it is not possible to remove all risk.

The contractor shall provide satisfactory responses via suitable method statements as to the manner in which they propose to carry out the work and deal with any highlighted risk, in particular the following :-

· All trench excavations, regardless of depth.
· Guarding to edges of excavations to prevent injury.
· Guarding of the works outside normal working hours.
· Undermining of adjacent roads or structures.
· Confined spaces operations.
· Dealing with existing services.
· Traffic management on existing highways.
· Procedures to be followed in the event of an emergency.
· Methods of working where ground contamination may be present. ·
Dealing with existing sewer flows.

The above list is by no means exhaustive, but does highlight operations that present a risk to both contractors and the general public.

1. 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.

2. Manhole covers shall/must have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.

3. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.

4. 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.

5. Cover slabs must carry the BSI kite mark or will be rejected by the 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 600 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.

6. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.

7. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.

8. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.

9. 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.

10. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (**Table A2**).

11. 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.

12. 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 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.

13. All levels related to Met Geo-environmental P20-00984. Using the OS GPS Network and applying OSGM15 National Geoid Model to obtain local area corrections.

14. 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.

15. 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".

Note:

No work is to be carried out until the appropriate techincal approvals are in place and relevant planning conditions are discharged. Any work carried out on site before technical approval is obtained and planning conditions are discharged is entirely at the contractors risk.

Rev	Revision	By	Chk	Date
P5	All levels updated to suit latest road level changes	LW	MH	16.09.22
P4	Altered to accommodate dual rising main	LW	MH	08/08/2022
P3	Altered to suit pump station	LW	MH	10/06/2022
P2	Updated to suit layout changes	LW	MH	04/03/2022
P1	Initial Issue	LW	MH	28/01/2022

SCALE @ A1: As Indicated
ISSUING OFFICE: Leeds
MSJ PROJECT NUMBER: 219112
STATUS: S0
PURPOSE OF ISSUE: WORK IN PROGRESS

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PROJECT: High Street, Shafton

TITLE: Adoptable Manhole Schedules

CLIENT: Vistry Partnerships

DRAWING NUMBER: 219112-MSJ-ZZ-XX-DR-D-4007
REV: P5