Yorkshire Water Ref: S104-2025-081

Surface Water Drainage

Manhole Number	Cover Level (m)	Invert Level (m)	Manhole Type and Size	Depth to Invert (m)	Easting	Northing	Incoming Pipe Reference	Incoming Pipe Diameter (mm)	Incoming Pipe Invert Level	Outgoing Pipe Reference	Outgoing Pipe Diameter (mm)	Outgoing Pipe Invert Level (m)
SW01	198.934	197.230m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.704	411898.397	413174.617				1.000	300	197.230
SW02	199.217	197.170m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	2.047	411903.689	413161.519	1.000	300	197.170	1.001	300	197.170
SW03	199.559	197.095m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	2.464	411912.994	413147.112	1.001	300	197.095	1.002	300	197.095
SW04	200.803	199.215m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.588	411914.218	413086.819				2.000	225	199.215
SW05	200.527	198.990m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.537	411909.591	413098.271	2.000	225	198.990	2.001	225	198.990
SW06	200.248	198.500m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.748	411912.654	413111.496	2.001	225	198.500	2.002	225	198.500
SW07	199.945	196.900m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	3.045	411923.463	413121.200	1.002 2.002	300 225	196.975 197.050	1.003	375	196.900
SW08	199.740	196.860m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	2.880	411934.150	413125.517	1.003	375	196.860	1.004	375	196.860
SW09	199.474	196.785m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	2.689	411955.585	413130.376	1.004	375	196.785	1.005	375	196.785
SW10	199.081	197.520m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.561	411983.690	413143.931				3.000	225	197.520
SW11	199.269	196.610m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	2.659	411970.371	413136.350	1.005 3.000	375 225	196.720 196.870	1.006	450	196.610
SW12	198.439	196.535m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	1.904	411984.678	413102.283	1.006	450	196.535	1.007	450	196.535
SW13	197.377	195.660m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	1.717	411988.353	413071.821	1.007	450	195.735	1.008	525	195.660
SW14	200.299	198.925m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.374	411937.282	413025.857				4.000	225	198.925
SW15	199.362	196.795m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	2.567	411948.651	412997.716	4.000	225	196.870	4.001	300	196.795
SW16	195.563	190.165m	Manhole Type A Figure B.6 1800mm dia. D400 - 150mm (d) 600mm x 600mm	5.398	412008.525	413021.907	1.008 4.001	525 300	190.240 190.465	1.009	525	190.240
SW17	196.595	194.800m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.795	411960.666	412935.330	Lateral 14	150	194.875	5.000	225	194.800
SW18	193.009	191.105m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.904	412022.234	412960.205	5.000	225	191.180	5.001	300	191.105
SW19	193.224	189.305m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	3.000	412007.675	412940.463				6.000	825	189.305
SW20	191.629	189.200m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	2.429	412054.962	412959.568	6.000	825	189.200	6.001	825	189.200
SW21	191.387	189.170m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	2.217	412050.148	412971.483	5.001 6.001	300 825	189.695 189.170	5.002	825	189.170
SW22	194.393	189.045m	Manhole Type A Figure B.6 1800mm dia. D400 - 150mm (d) 600mm x 600mm	5.348	412026.793	413029.288	1.009 5.002	525 825	189.760 189.045	1.010	825	189.045
SW23	193.529	189.005m	Hydrobrake Chamber 1800mm dia. D400 - 150mm (d) 1220mm x 685mm Drawing. EE100008-222	4.524	412041.716	413038.598	1.010	825	189.005	1.011	225	189.005

Surface Water Drainage Laterals

Manhole Number	Cover Level (m)	Invert Level (m)	Manhole Type and Size	Depth to Invert (m)	Easting	Northing	Incoming Pipe Reference	Incoming Pipe Diameter (mm)	Incoming Pipe Invert Level	Outgoing Pipe Reference	Outgoing Pipe Diameter (mm)	Outgoing Pipe Invert Level (m)
LSW01	199.260	197.305m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.243	411897.912	413167.977				Lateral 01	150	197.305
LSW02	199.116	197.315m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.099	411906.613	413169.632				Lateral 02	150	197.315
LSW03	200.173	197.395m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	2.156	411918.613	413126.298				Lateral 03	150	197.395
LSW04	200.899	199.320m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.579	411917.463	413088.130				Lateral 04	150	199.320
LSW05	199.553	197.050m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	2.503	411957.820	413124.844				Lateral 05	150	197.050
LSW06	199.093	197.645m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.448	411981.283	413149.890				Lateral 06	150	197.645
LSW07	198.467	196.890m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.577	411992.793	413103.262				Lateral 07	150	196.890
LSW08	198.180	196.135m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	2.045	411977.734	413080.333				Lateral 08	150	196.135
LSW09	197.289	196.095m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.194	411996.555	413075.134				Lateral 09	150	196.095
LSW10	200.425	199.105m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.320	411941.482	413027.554				Lateral 10	150	199.105
LSW11	199.488	196.995m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	2.493	411951.367	412990.994				Lateral 11	150	196.995
LSW12	196.458	193.055m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	3.250	411995.597	413025.096				Lateral 12	150	193.055
LSW13	195.641	192.450m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	3.191	412011.214	413015.174				Lateral 13	150	192.450
LSW14	196.772	194.905m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.867	411959.171	412939.030				Lateral 14	150	194.905
LSW15	193.064	191.220m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.844	412019.997	412965.740				Lateral 15	150	191.220
LSW16	191.602	189.860m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	1.742	412050.624	412982.316				Lateral 16	150	189.860
LSW17	193.917	190.220m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	3.250	412034.932	413021.155				Lateral 17	150	190.220
LSW18	194.642	191.905m	Manhole Type B Figure B.37 450mm dia. D400 - 150mm (d) 450mm x 450mm	2.737	412022.674	413035.891				Lateral 18	150	191.905

General Notes

1. Do not scale this drawing.
2. All dimensions are in millimeters unless stated otherwise.
3. This drawing is to be read in conjunction with all other relevant drawings & specifications.
4. All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.
5. No works shall commence on site until approval has been obtained from all relevant Agencies / Authorities.
6. All dimensions referred to in this drawing must be verified.

Yorkshire Water Notes

1. All adoptable sewer works and material to be in accordance with “Design and Construction Guidance (DCG)/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. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
6. Sewers must have 5 metres clearance from trees and hedges or the width of the canopy at mature height.
7. 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.
8. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
9. Yorkshire Water policy is that brick manholes and Type “C” 1050mm diameter manhole rings are not preferred. Instead, it is preferred that you use a type “B” manhole with 1200mm diameter or 1350mm diameter rings, with the opening sited over the channel where depth of cover to pipe soffit is 1 - 1.5m.
10. 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.
11. 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 WIS 4-35-01 and BS EN13476.
12. 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.
13. 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".

rev	description	drawn	date
P3	Drawing revised inline with Yorkshire Water comments	SG	16.03.26
P2	Drawing updated to suit revised site layout plan.	SG	04.11.25
P1	First Issue	SG	29.09.25

Preliminary

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client: HARRON HOMES

project: Land off Roslyn Avenue, Netherton, Huddersfield

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