

Surface Water Drainage													
Manhole Number	Cover Level (m)	Invert Level (m)	Manhole Type and Size	Depth to Invert (m)	Depth to Soffit (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 C Figure B.15 1350mm dia. D400 - 150mm (d) 1220mm x 685mm	1.704	1.404	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	1.747	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	2.164	411912.994	413147.112	1.001	300	197.095	1.002	300	197.095
SW04	200.803	199.215m	Manhole Type C Figure B.15 1350mm dia. D400 - 150mm (d) 1220mm x 685mm	1.588	1.363	411914.218	413086.819				2.000	225	199.215
SW05	200.527	198.990m	Manhole Type C Figure B.15 1350mm dia. D400 - 150mm (d) 1220mm x 685mm	1.537	1.312	411909.591	413098.271	2.000	225	198.990	2.001	225	198.990
SW06	200.249	198.500m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.749	1.524	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	2.670	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	2.505	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	2.314	411955.585	413130.376	1.004	375	196.785	1.005	375	196.785
SW10	199.081	197.520m	Manhole Type C Figure B.15 1350mm dia. D400 - 150mm (d) 1220mm x 685mm	1.561	1.336	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	2.209	411970.371	413136.350	1.005 3.000	375 225	196.720 196.870	1.006	450	196.610
SW12	198.439	196.500m	Manhole Type B Figure B.9 1500mm dia. D400 - 150mm (d) 600mm x 600mm	1.904	1.454	411984.678	413102.283	1.006	450	196.500	1.007	450	196.500
SW13	197.377	195.660m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	1.717	1.192	411988.353	413071.821	1.007 15.000	450 150	195.735 196.035	1.008	525	195.660
SW14	200.299	198.925m	Manhole Type C Figure B.15 1350mm dia. D400 - 150mm (d) 1220mm x 685mm	1.374	1.149	411937.282	413025.857				4.000	225	198.925
SW15	199.362	196.795m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	2.567	2.267	411948.651	412997.716	4.000	225	196.870	4.001	300	196.795
SW16	195.563	190.240m	Manhole Type A Figure B.6 1800mm dia. D400 - 150mm (d) 600mm x 600mm	5.323	4.723	412008.525	413021.907	1.008 4.001	525 300	190.315 190.540	1.009	600	190.240
SW17	196.623	194.800m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.823	1.523	411960.666	412935.330	20.000	150	194.950	5.000	300	194.800
SW18	193.034	191.230m	Manhole Type B Figure B.9 1200mm dia. D400 - 150mm (d) 600mm x 600mm	1.804	1.504	412022.234	412960.205	5.000	300	191.230	5.001	300	191.230
SW19	192.500	189.530m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	2.980	2.380	412007.675	412940.463				6.000	600	189.530
SW20	191.900	189.425m	Manhole Type B Figure B.9 1800mm dia. D400 - 150mm (d) 600mm x 600mm	2.475	1.660	412054.266	412959.287	6.000	600	189.425	6.001	825	189.425
SW21	191.451	189.395m	Catchpit Manhole 500mm sump below incoming and outgoing pipes. 1800mm dia. D400 - 150mm (d) 600mm x 600mm	2.056	1.241	412049.452	412971.202	5.001 6.001	300 825	189.920 189.395	5.002	825	189.395
SW22	194.437	189.270m	Manhole Type A Figure B.6 1800mm dia. D400 - 150mm (d) 600mm x 600mm	5.167	4.352	412026.098	413029.007	1.009 5.002	600 825	189.485 189.270	1.010	825	189.270
SW23	193.673	189.185m	Hydrobrake Chamber 1800mm dia. D400 - 150mm (d) Twin 600mmx600mm Drawing: EE100008-223	4.488	3.559	412038.967	413037.039	1.010	825	189.235	1.011	225	189.185

Surface Water Drainage Laterals													
Manhole Number	Cover Level (m)	Invert Level (m)	Manhole Type and Size	Depth to Invert (m)	Depth to Soffit (m)	Easting	Northing	Outgoing Pipe Reference	Outgoing Pipe Diameter (mm)	Outgoing Pipe Invert Level (m)	Outgoing Pipe Material	Outgoing Pipe Length (m)	Outgoing Pipe Gradient (1:x)
LSW01	199.259	197.385m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.874	1.724	411897.912	413167.977	7.000	150	197.385	Osma UltraRib Plastic Class S bedding	4.103m	1:91.2
LSW02	199.116	197.400m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.716	1.566	411906.613	413169.632	8.000	150	197.400	Osma UltraRib Plastic Class S bedding	6.224m	1:95.8
LSW03	200.089	197.410m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	2.679	2.529	411918.613	413126.298	9.000	150	197.410	Osma UltraRib Plastic Class S bedding	2.627m	1:10.1
LSW04	200.917	199.325m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.592	1.442	411917.463	413088.130	10.000	150	199.325	Osma UltraRib Plastic Class S bedding	2.750m	1:78.6
LSW05	199.615	197.415m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	2.200	2.050	411957.033	413125.641	11.000	150	197.415	Osma UltraRib Plastic Class S bedding	4.057m	1:10.0
LSW06	199.128	197.655m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.473	1.323	411981.283	413149.890	12.000	150	197.655	Osma UltraRib Plastic Class S bedding	5.677m	1:94.6
LSW07	198.465	196.910m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.555	1.405	411992.793	413103.262	13.000	150	196.910	Osma UltraRib Plastic Class S bedding	7.274m	1:66.1
LSW08	198.293	196.165m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	2.128	1.978	411977.734	413080.333	14.000	150	196.165	Osma UltraRib Plastic Class S bedding	12.710m	1:97.8
LSW09	197.421	196.125m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.296	1.146	411996.209	413075.814	15.000	150	196.125	Osma UltraRib Plastic Concrete Protection Slab	8.813m	1:97.9
LSW10	200.471	199.040m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.431	1.281	411941.334	413027.921	16.000	150	199.040	Osma UltraRib Plastic Class S bedding	3.801m	1:95.0
LSW11	199.453	197.595m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.858	1.708	411951.367	412990.994	17.000	150	197.595	Osma UltraRib Plastic Class S bedding	6.500m	1:10.0
LSW12	196.456	191.930m	Manhole Type A Figure B.6 1200mm dia. Tracey Concrete D400 - 150mm (d) 600mm x 600mm	4.526	4.376	411995.597	413025.096	18.000	150	191.930	Osma UltraRib Plastic Class S bedding	12.422m	1:10.0
LSW13	195.629	191.325m	Manhole Type A Figure B.6 1200mm dia. Tracey Concrete D400 - 150mm (d) 600mm x 600mm	4.304	4.154	412011.214	413015.174	19.000	150	191.325	Osma UltraRib Plastic Class S bedding	6.350m	1:10.0
LSW14	196.801	194.990m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.811	1.661	411959.171	412939.030	20.000	150	194.990	Osma UltraRib Plastic Class S bedding	3.991m	1:99.8
LSW15	193.105	191.435m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.670	1.520	412019.997	412965.740	21.000	150	191.435	Osma UltraRib Plastic Class S bedding	5.220m	1:94.9
LSW16	192.250	190.670m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	1.580	1.430	412049.188	412987.206	22.000	150	190.670	Osma UltraRib Plastic Class S bedding	5.839m	1:10.1
LSW17	193.859	190.490m	Manhole Type A Figure B.6 1200mm dia. Tracey Concrete D400 - 150mm (d) 600mm x 600mm	3.369	3.219	412034.782	413020.694	23.000	150	190.490	Osma UltraRib Plastic Class S bedding	5.345m	1:10.0
LSW18	194.654	191.905m	Manhole Type D Figure B.37 450mm dia Osma Plastic Inspection Chamber C250 - 75mm (d) 350mm dia	2.749	2.599	412022.674	413035.891	24.000	150	191.905	Osma UltraRib Plastic Class S bedding	7.756m	1:11.3

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 must be 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 (**also refer Design and Construction Guidance for restrictions on tree planting adjacent to sewers**).
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 A1**).
9. Yorkshire Water policy is that brick manholes and 1050mm dia. manhole rings are not preferred. Instead, it is preferred that you use a type "B" manhole with 1200mm dia, 1350mm dia. or 1500mm dia 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".

P6	Drawing revised inline with Yorkshire Water comments	SG	21.09.26
P5	Drawing revised inline with Client comments	SG	28.07.26
P4	Drawing revised inline with Yorkshire Water comments	SG	22.07.26
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
rev	description	drawn	date
Preliminary			



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project:

Land off Roslyn Avenue, Netherton, Huddersfield

drawing title:

Surface Water Manhole Schedules

Drawing Number:	Drawn by:	Checked by:
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Project ref:	scale:	date:
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