YW Ref:- H-3-263-560

Do Not Scale

Adoptable

MH. Ref	Incoming Invert Levels	MH Diag	Outgoing Invert Levels	Cover Levels	Depth to Soffit	Chamber Type	Chamber Size (mm)	Cover Type	Cover Size (mm)
S2	Ⓘ85.060 100Ø		Ⓞ85.010 150Ø	86.360	1.200	PPIC	460Ø	D400	600x600
S3	Ⓘ84.736 150Ø		Ⓞ84.736 150Ø	86.236	1.350	B1/E	1200Ø	D400	600x600
S4	Ⓘ83.000 100Ø		Ⓞ82.950 150Ø	84.336	1.236	PPIC	460Ø	D400	600x600
S5	Ⓘ82.880 100Ø Ⓘ82.830 150Ø		Ⓞ82.830 150Ø	85.191	2.211	B	1200Ø	D400	600x600
S10	Ⓘ82.872 100Ø		Ⓞ82.822 150Ø	85.627	2.655	PPIC	460Ø	D400	600x600
S11	Ⓘ84.100 150Ø BD Ⓘ82.350 150Ø		Ⓞ82.350 150Ø	85.601	3.101	A	1200Ø	D400	600x600
S15	Ⓘ84.234 100Ø		Ⓞ84.184 150Ø	85.635	1.301	PPIC	460Ø	D400	600x600
S16	Ⓘ83.970 150Ø BD Ⓘ80.880 1500Ø		Ⓞ80.880 1500Ø	85.442	3.062	Refer to drawing 00.15021/110			
S16a	Ⓘ80.920 1500Ø		Ⓞ80.920 1500Ø	85.532	3.112	Refer to drawing 00.15021/111			
S19	Ⓘ83.800 100Ø		Ⓞ83.750 150Ø	85.420	1.520	PPIC	460Ø	D400	600x600
S20	Ⓘ82.170 100Ø		Ⓞ80.820 1500Ø	84.935	2.615	Refer to drawing 00.15021/112			
S24	Ⓘ82.480 100Ø		Ⓞ82.430 150Ø	83.614	1.034	PPIC	460Ø	B125	600x600
S25	Ⓘ82.390 150Ø Ⓘ80.800 1500Ø		Ⓞ80.750 150Ø	84.354	2.054	Refer to drawing 00.15021/113			
S26	Ⓘ80.662 150Ø		Ⓞ80.662 150Ø	83.579	2.767	B	1200Ø	D400	600x600
S27	Ⓘ80.570 150Ø		Ⓞ80.570 150Ø	82.587	1.867	B	1200Ø	B125	600x600
S28	Ⓘ78.444 150Ø		Ⓞ78.444 150Ø	79.944	1.350	B1/E	1200Ø	D400	600x600

Private

MH. Ref	Incoming Invert Levels	MH Diag	Outgoing Invert Levels	Cover Levels	Depth to Soffit	Chamber Type	Chamber Size (mm)	Cover Type	Cover Size (mm)
S1	Ⓘ85.973 100Ø		Ⓞ85.973 100Ø	87.482	1.409	PPIC	460Ø	D400	600x600
S6	Ⓘ83.291 100Ø		Ⓞ83.291 100Ø	83.991	0.600	PPIC	460Ø	B125	460Ø
S7	Ⓘ83.074 100Ø		Ⓞ83.074 100Ø	84.968	1.794	PPIC	460Ø	B125	460Ø
S8	Ⓘ84.700 100Ø		Ⓞ84.700 100Ø	85.490	0.690	PPIC	460Ø	B125	460Ø
S9	Ⓘ83.000 100Ø		Ⓞ83.000 100Ø	85.555	2.455	PPIC	460Ø	D400	600x600
S12	Ⓘ84.600 100Ø		Ⓞ84.600 100Ø	85.489	0.739	PPIC	460Ø	B125	460Ø
S13	Ⓘ84.900 100Ø		Ⓞ84.900 100Ø	85.769	0.719	PPIC	460Ø	B125	460Ø
S17	Ⓘ84.600 100Ø		Ⓞ84.600 100Ø	85.481	0.781	PPIC	460Ø	B125	460Ø
S18	Ⓘ84.200 100Ø		Ⓞ84.200 100Ø	85.617	1.317	PPIC	460Ø	B125	460Ø
S21	Ⓘ83.500 100Ø		Ⓞ83.500 100Ø	84.441	0.841	PPIC	460Ø	B125	460Ø
S21a	Ⓘ83.373 100Ø		Ⓞ83.373 100Ø	85.443	1.970	PPIC	460Ø	B125	460Ø
S23	Ⓘ82.700 100Ø		Ⓞ82.700 100Ø	83.667	0.867	PPIC	460Ø	B125	460Ø

Adoptable

MH. Ref	Incoming Invert Levels	MH Diag	Outgoing Invert Levels	Cover Levels	Depth to Soffit	Chamber Type	Chamber Size (mm)	Cover Type	Cover Size (mm)
F2	Ⓘ83.300 100Ø		Ⓞ83.250 150Ø	86.296	2.896	PPIC	460Ø	D400	600x600
F10	Ⓘ83.120 100Ø		Ⓞ83.070 150Ø	85.571	2.351	PPIC	460Ø	D400	600x600
F11	Ⓘ83.000 150Ø		Ⓞ83.000 150Ø	85.578	2.428	B	1200Ø	D400	600x600
F21	Ⓘ84.150 100Ø		Ⓞ84.100 150Ø	85.643	1.393	PPIC	460Ø	D400	600x600
F26	Ⓘ82.900 100Ø		Ⓞ82.850 150Ø	85.008	2.008	PPIC	460Ø	D400	600x600
F27	Ⓘ82.800 150Ø		Ⓞ82.800 150Ø	85.125	2.175	B	1200Ø	D400	600x600
F28	Ⓘ82.760 150Ø		Ⓞ82.760 150Ø	84.887	1.977	B	1200Ø	D400	600x600
F30	Ⓘ82.300 150Ø		Ⓞ82.300 150Ø	83.485	1.035	B1/E	1200Ø	D400	600x600
F33	Ⓘ82.180 150Ø		Ⓞ82.180 150Ø	83.673	1.343	B1/E	1200Ø	D400	600x600
F36	Ⓘ81.920 100Ø BD Ⓘ80.420 150Ø		Ⓞ80.420 150Ø	82.836	2.266	B	1200Ø	D400	600x600
F37	Ⓘ78.400 150Ø		Ⓞ78.400 150Ø	80.258	1.708	B	1200Ø	D400	600x600

Private

MH. Ref	Incoming Invert Levels	MH Diag	Outgoing Invert Levels	Cover Levels	Depth to Soffit	Chamber Type	Chamber Size (mm)	Cover Type	Cover Size (mm)
F1	Ⓘ86.620 100Ø		Ⓞ86.620 100Ø	87.375	0.655	PPIC	460Ø	B125	460Ø
F3	Ⓘ83.550 100Ø		Ⓞ83.550 100Ø	84.335	0.685	PPIC	460Ø	B125	460Ø
F4	Ⓘ83.820 100Ø		Ⓞ83.820 100Ø	84.475	0.555	PPIC	460Ø	B125	460Ø
F5	Ⓘ84.170 100Ø		Ⓞ84.170 100Ø	84.879	0.609	PPIC	460Ø	D400	600x600
F6	Ⓘ84.170 100Ø		Ⓞ84.170 100Ø	84.879	0.609	PPIC	460Ø	D400	600x600
F7	Ⓘ83.380 100Ø		Ⓞ83.380 100Ø	84.931	1.451	PPIC	460Ø	D400	600x600
F8	Ⓘ84.820 100Ø		Ⓞ84.820 100Ø	85.529	0.609	PPIC	460Ø	D400	600x600
F9	Ⓘ84.820 100Ø		Ⓞ84.820 100Ø	85.529	0.609	PPIC	460Ø	D400	600x600
F12	Ⓘ84.720 100Ø		Ⓞ84.720 100Ø	85.475	0.655	PPIC	460Ø	D400	600x600
F13	Ⓘ84.720 100Ø		Ⓞ84.720 100Ø	85.461	0.641	PPIC	460Ø	D400	600x600
F14	Ⓘ84.750 100Ø		Ⓞ84.750 100Ø	85.500	0.650	PPIC	460Ø	B125	460Ø
F15	Ⓘ84.820 100Ø		Ⓞ84.820 100Ø	85.500	0.580	PPIC	460Ø	B125	460Ø
F16	Ⓘ84.820 100Ø		Ⓞ84.820 100Ø	85.521	0.601	PPIC	460Ø	D400	600x600
F17	Ⓘ85.120 100Ø		Ⓞ85.120 100Ø	85.793	0.573	PPIC	460Ø	D400	600x600
F18	Ⓘ85.120 100Ø		Ⓞ85.120 100Ø	85.765	0.545	PPIC	460Ø	D400	600x600
F19	Ⓘ85.120 100Ø		Ⓞ85.120 100Ø	85.760	0.540	PPIC	460Ø	D400	600x600
F22	Ⓘ84.620 100Ø		Ⓞ84.620 100Ø	85.475	0.755	PPIC	460Ø	D400	600x600
F23	Ⓘ84.500 100Ø		Ⓞ84.500 100Ø	85.468	0.755	PPIC	460Ø	D400	600x600
F24	Ⓘ84.186 100Ø		Ⓞ84.186 100Ø	84.886	0.600	PPIC	460Ø	B125	460Ø
F25	Ⓘ84.072 100Ø		Ⓞ84.072 100Ø	84.772	0.600	PPIC	460Ø	D400	600x600
F29	Ⓘ83.420 100Ø		Ⓞ83.420 100Ø	84.500	0.980	PPIC	460Ø	B125	460Ø
F31	Ⓘ83.020 100Ø		Ⓞ83.020 100Ø	83.941	0.821	PPIC	460Ø	D400	600x600
F32	Ⓘ82.960 100Ø		Ⓞ82.960 100Ø	83.746	0.686	PPIC	460Ø	B125	460Ø
F34	Ⓘ84.320 100Ø		Ⓞ84.320 100Ø	84.920	0.500	PPIC	460Ø	B125	460Ø
F35	Ⓘ83.870 100Ø		Ⓞ83.870 100Ø	84.920	0.950	PPIC	460Ø	B125	460Ø

DESIGN REVIEW

Design review by: | Checked by:

Residual hazards:

1. For general notes refer to drawing 002.

DRAWING NOTES

Yorkshire Water Notes

1. All adoptable sewers to be BSI Kitemark (certified to WIS 4-35-01).
2. Adoptable sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths.
3. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel 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.
4. All adoptable sewer works and material to be in accordance with "Sewers for Adoption" 6th Edition, The Relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
5. 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.
6. Filled ground must be filled and consolidated under the supervision and to the satisfaction of Yorkshire Water before any sewer works are carried out.
7. Yorkshire Water is not obliged to accept new 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 with regard to the disposal of the filter drain/land drainage run-off.
8. Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire Water Inspector. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
9. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
10. "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)".
11. 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 none vehicular access then a concrete slab should be provide above granular bed and surround.
12. Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
13. 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.
14. Yorkshire Water policy is not to accept Type "C" brick manholes and 1050mm dia manhole 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.
15. Design done in accordance with SFA 6
16. Plastic channel sections in manholes are not acceptable and Yorkshire Water would prefer clayware channel 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.
17. 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 loading 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 Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.
18. Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.

Date	Revision	By	Chkd	Rev
29.09.17	S2, S4, S10, S15, S19, S24, F2, F10, F21 & F26 amended to PPIC	JR	CB	P3
10.06.16	900Ø manhole diameters changed to 1200Ø	JR	CB	P2
18.05.16	Initial Issue	JR	CB	P1

ADEPT
Civil and Structural Consulting Engineers
Engineering Better Solutions Together
Tel 0113 239 4518
Web www.adeptcsce.com
email inbox@adeptcsce.com
14 Festoon Rooms, Sunny Bank Mill
Farsley, Leeds LS28 5UJ
85 Tottenham Court Road
London, W1T 4TQ - Tel: 020 3287 6677

Project
Hill End Road, Mapplewell

Title
Manhole Schedule

Client
ESH Property Services

Scale @ A1	Drawn	Checked
1:20	JR	CB
Date: May 2016	Status: Preliminary	
Drg. No. 00.15021/130	Rev. P3	

L:\adept_projects\00_clients\2015\00.15021 - Hill End Road, Mapplewell\4 - Drawings\00.15021 101 P3 Proposed Drainage Layout.dwg, 10/6/2017 3:50 PM,