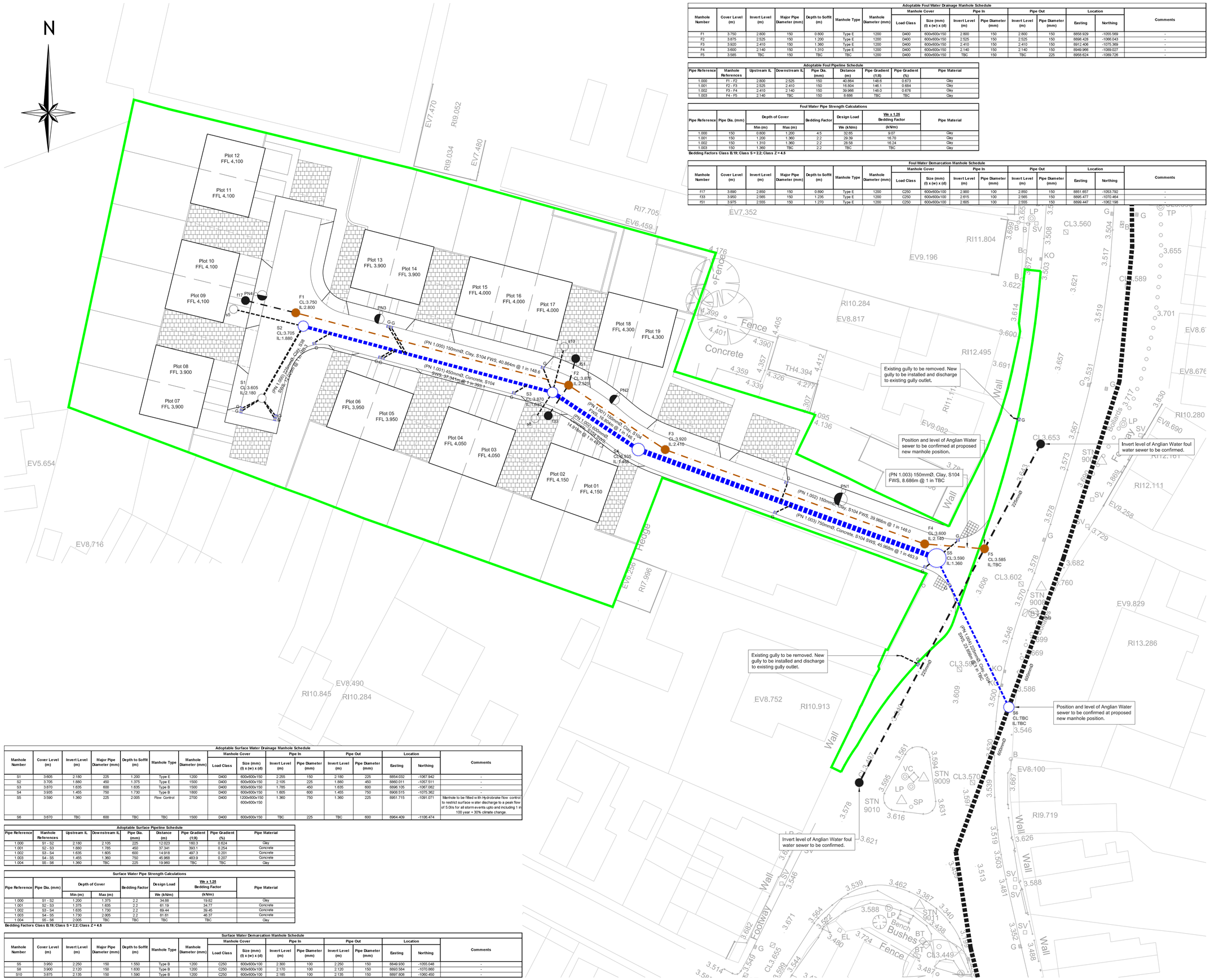


Adoptable Foul Water Drainage Manhole Schedule

Manhole Number	Cover Level (m)	Invert Level (m)	Major Pipe Diameter (mm)	Depth to Soffit (m)	Manhole Type	Manhole Diameter (mm)	Manhole Cover		Pipe In		Pipe Out		Location		Comments
							Load Class	Size (mm) (l) x (w) x (d)	Invert Level (m)	Pipe Diameter (mm)	Invert Level (m)	Pipe Diameter (mm)	Easting	Northing	
F1	3.750	2.800	150	0.800	Type E	1200	D400	600x600x150	2.800	150	2.800	150	8858.929	-1055.569	-
F2	3.875	2.525	150	1.200	Type E	1200	D400	600x600x150	2.525	150	2.525	150	8898.428	-1066.043	-
F3	3.920	2.410	150	1.360	Type E	1200	D400	600x600x150	2.410	150	2.410	150	8912.406	-1075.369	-
F4	3.600	2.140	150	1.310	Type E	1200	D400	600x600x150	2.140	150	2.140	150	8949.966	-1089.027	-
F5	3.585	TBC	150	TBC	TBC	1200	D400	600x600x150	TBC	150	TBC	225	8958.624	-1089.726	-

Adoptable Foul Pipeline Schedule

Pipe Reference	Manhole References	Upstream IL	Downstream IL	Pipe Dia. (mm)	Distance (m)	Pipe Gradient (1:X)	Pipe Gradient (%)	Pipe Material
1.000	F1 - F2	2.800	2.525	150	40.864	148.6	0.673	Clay
1.001	F2 - F3	2.525	2.410	150	16.804	146.1	0.684	Clay
1.002	F3 - F4	2.410	2.140	150	39.966	148.0	0.676	Clay
1.003	F4 - F5	2.140	TBC	150	8.686	TBC	TBC	Clay

Foul Water Pipe Strength Calculations

Pipe Reference	Pipe Dia. (mm)	Depth of Cover		Bedding Factor	Design Load	We x 1.25 Bedding Factor	Pipe Material
		Min (m)	Max (m)		We (kN/m)	(kN/m)	
1.000	150	0.800	1.200	4.5	32.65	9.07	Clay
1.001	150	1.200	1.360	2.2	29.39	16.70	Clay
1.002	150	1.310	1.360	2.2	28.58	16.24	Clay
1.003	150	1.360	TBC	2.2	TBC	TBC	Clay

Bedding Factors Class B.19; Class S = 2.2; Class Z = 4.5

Foul Water Demarcation Manhole Schedule

Manhole Number	Cover Level (m)	Invert Level (m)	Major Pipe Diameter (mm)	Depth to Soffit (m)	Manhole Type	Manhole Diameter (mm)	Manhole Cover		Pipe In		Pipe Out		Location		Comments
							Load Class	Size (mm) (l) x (w) x (d)	Invert Level (m)	Pipe Diameter (mm)	Invert Level (m)	Pipe Diameter (mm)	Easting	Northing	
f17	3.890	2.850	150	0.890	Type E	1200	C250	600x600x100	2.900	100	2.850	150	8851.657	-1053.792	-
f33	3.900	2.565	150	1.235	Type E	1200	C250	600x600x100	2.615	100	2.565	150	8895.477	-1070.464	-
f51	3.975	2.555	150	1.270	Type E	1200	C250	600x600x100	2.605	100	2.555	150	8899.447	-1062.198	-

Adoptable Surface Water Drainage Manhole Schedule

Manhole Number	Cover Level (m)	Invert Level (m)	Major Pipe Diameter (mm)	Depth to Soffit (m)	Manhole Type	Manhole Diameter (mm)	Manhole Cover		Pipe In		Pipe Out		Location		Comments
							Load Class	Size (mm) (l) x (w) x (d)	Invert Level (m)	Pipe Diameter (mm)	Invert Level (m)	Pipe Diameter (mm)	Easting	Northing	
S1	3.605	2.180	225	1.200	Type E	1200	D400	600x600x150	2.255	150	2.180	225	8854.032	-1067.942	-
S2	3.705	1.880	450	1.375	Type E	1500	D400	600x600x150	2.105	225	1.880	450	8860.011	-1057.511	-
S3	3.870	1.635	600	1.635	Type B	1500	D400	600x600x150	1.785	450	1.635	600	8896.105	-1067.082	-
S4	3.935	1.455	750	1.730	Type B	1800	D400	600x600x150	1.605	600	1.455	750	8908.515	-1075.362	-
S5	3.590	1.360	225	2.005	Flow Control	2700	D400	1200x600x150 600x600x150	1.360	750	1.360	225	8951.715	-1091.071	Manhole to be fitted with Hydrobrake flow control to restrict surface water discharge to a peak flow of 5.0l/s for all storm events upto and including 1 in 100 year + 30% climate change.
S6	3.670	TBC	600	TBC	TBC	1500	D400	600x600x150	TBC	225	TBC	600	8964.409	-1106.474	

Adoptable Surface Pipeline Schedule

Pipe Reference	Manhole References	Upstream IL	Downstream IL	Pipe Dia. (mm)	Distance (m)	Pipe Gradient (1:X)	Pipe Gradient (%)	Pipe Material
1.000	S1 - S2	2.180	2.105	225	12.023	160.3	0.624	Clay
1.001	S2 - S3	1.880	1.785	450	37.341	393.1	0.254	Concrete
1.002	S3 - S4	1.635	1.605	600	14.918	497.3	0.201	Concrete
1.003	S4 - S5	1.455	1.360	750	45.968	483.9	0.207	Concrete
1.004	S5 - S6	1.360	TBC	225	19.960	TBC	TBC	Clay

Surface Water Pipe Strength Calculations

Pipe Reference	Pipe Dia. (mm)	Depth of Cover		Bedding Factor	Design Load	We x 1.25 Bedding Factor	Pipe Material
		Min (m)	Max (m)		We (kN/m)	(kN/m)	
1.000	S1 - S2	1.200	1.375	2.2	34.68	19.82	Clay
1.001	S2 - S3	1.375	1.635	2.2	61.19	34.77	Concrete
1.002	S3 - S4	1.635	1.730	2.2	69.44	39.45	Concrete
1.003	S4 - S5	1.730	2.005	2.2	81.61	46.37	Concrete
1.004	S5 - S6	2.005	TBC	TBC	TBC	TBC	Clay

Bedding Factors Class B.19; Class S = 2.2; Class Z = 4.5

Surface Water Demarcation Manhole Schedule

Manhole Number	Cover Level (m)	Invert Level (m)	Major Pipe Diameter (mm)	Depth to Soffit (m)	Manhole Type	Manhole Diameter (mm)	Manhole Cover		Pipe In		Pipe Out		Location		Comments
							Load Class	Size (mm) (l) x (w) x (d)	Invert Level (m)	Pipe Diameter (mm)	Invert Level (m)	Pipe Diameter (mm)	Easting	Northing	
S5	3.950	2.250	150	1.550	Type B	1200	C250	600x600x100	2.300	100	2.250	150	8849.930	-1055.048	-
S8	3.900	2.120	150	1.630	Type B	1200	C250	600x600x100	2.170	100	2.120	150	8893.584	-1070.860	-
S10	3.875	2.135	150	1.590	Type B	1200	C250	600x600x100	2.185	100	2.135	150	8897.808	-1060.450	-

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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 on site before commencing work of any kind.

Lincolnshire County Council Highways Notes

1. "The specification in all respects shall be in accordance with the current Lincolnshire Development Road and Sustainable Drainage Design Guide" and "Development Road and Sustainable Drainage Specification and Construction" publications in force in the county at the time of construction.
2. The minimum longitudinal fall for highways, without channel blocks shall be 1 in 150, and with channel blocks 1 in 250 (see Clause 10.1).
3. In addition, ensure that the first section of any side road falls away from the road from the road to which it is connecting. If general topography requires it to rise, this change of direction should take place after the first set of gullies. This is to ensure a 'false channel' with associated drainage problems is not created in the bellmouth of junctions.
4. "General deterioration of the existing highway/footway/verges created through construction of the new Section 38 Development will be reinstated to the current Development Road Specification at the developers' own cost at the agreement of the inspecting Highway Officer".
5. "All signs and line markings are to be agreed with the Senior Highways Officer prior to construction".
6. "No Private surface water shall discharge onto the adoptable highway"

Revision	Description	Date
P3	Finished floor levels revised. Lateral manhole numbers revised.	13.12.2016
P2	Build outs removed. Surface water drainage outfall position revised.	08.11.2016
P1	First Issue	01.11.2016

PRELIMINARY

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Project
Seagate Homes,
Church Street, Holbeach, Lincolnshire

Title
Section 104 Layout

Drawn by	Checked by	Paper Size
SG	SG	A1

Drawing Number	Revision	Scale
05-0082-003	P3	1:250

Date 01.11.2016