

















Barratt Homes Manchester		Page 0
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Date 10.10.16 File FW Network 1, Rev D.mdx	Designed by CD Checked by SG	
Micro Drainage	Network 2014.1.1	

FOUL SEWERAGE DESIGN


Network Design Table for FW1 - PDS Export.FWS

« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.000	21.577	0.755	28.6	0.000	6	0.0	1.500	o	150	
1.001	10.136	0.507	20.0	0.000	0	0.0	1.500	o	150	
1.002	9.531	0.071	135.0	0.000	6	0.0	1.500	o	150	
1.003	36.247	0.324	111.9	0.000	0	0.0	1.500	o	150	
1.004	36.094	0.690	52.3	0.000	0	0.0	1.500	o	150	
1.005	9.292	0.069	135.0	0.000	3	0.0	1.500	o	150	
1.006	7.293	0.054	135.0	0.000	0	0.0	1.500	o	150	
1.007	29.244	0.491	59.6	0.000	0	0.0	1.500	o	150	
1.008	9.888	0.482	20.5	0.000	8	0.0	1.500	o	150	
2.000	46.275	1.361	34.0	0.000	200	0.0	1.500	o	150	
2.001	35.226	1.761	20.0	0.000	5	0.0	1.500	o	150	
2.002	10.901	0.081	134.6	0.000	5	0.0	1.500	o	150	
2.003	23.107	0.098	235.8	0.000	195	0.0	1.500	o	225	
2.004	25.222	1.264	20.0	0.000	0	0.0	1.500	o	225	
1.009	27.745	0.118	235.1	0.000	0	0.0	1.500	o	225	














Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	107.117	0.000	0.0	6	0.0	11	0.50	1.64	29.0	0.3
1.001	106.362	0.000	0.0	6	0.0	10	0.57	1.97	34.7	0.3
1.002	105.855	0.000	0.0	12	0.0	21	0.37	0.75	13.3	0.6
1.003	105.784	0.000	0.0	12	0.0	20	0.39	0.83	14.6	0.6
1.004	105.460	0.000	0.0	12	0.0	17	0.51	1.21	21.4	0.6
1.005	104.770	0.000	0.0	15	0.0	24	0.39	0.75	13.3	0.7
1.006	104.702	0.000	0.0	15	0.0	24	0.39	0.75	13.3	0.7
1.007	104.648	0.000	0.0	15	0.0	19	0.52	1.14	20.1	0.7
1.008	104.157	0.000	0.0	23	0.0	18	0.86	1.94	34.3	1.1
2.000	108.240	0.000	0.0	200	0.0	62	1.37	1.51	26.6	9.4
2.001	106.879	0.000	0.0	205	0.0	54	1.68	1.96	34.7	9.6
2.002	105.118	0.000	0.0	210	0.0	96	0.83	0.75	13.3	9.8
2.003	104.962	0.000	0.0	405	0.0	131	0.79	0.75	29.7	19.0
2.004	104.864	0.000	0.0	405	0.0	66	1.97	2.58	102.4	19.0
1.009	103.600	0.000	0.0	428	0.0	136	0.80	0.75	29.7	20.1

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FOUL SEWERAGE DESIGN

Network Design Table for FW1 - PDS Export.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.010	21.277	0.091	235.0	0.000	3	0.0	1.500	o	225	
1.011	9.211	0.039	235.0	0.000	7	0.0	1.500	o	225	
1.012	16.634	0.071	235.0	0.000	0	0.0	1.500	o	225	
1.013	34.291	1.593	21.5	0.000	2	0.0	1.500	o	225	
3.000	28.025	0.208	135.0	0.000	2	0.0	1.500	o	150	
3.001	23.238	0.332	70.0	0.000	0	0.0	1.500	o	150	
3.002	12.851	0.643	20.0	0.000	4	0.0	1.500	o	150	
3.003	28.939	1.453	19.9	0.000	7	0.0	1.500	o	150	
4.000	35.578	0.404	88.1	0.000	7	0.0	1.500	o	150	
4.001	13.249	0.103	128.9	0.000	4	0.0	1.500	o	150	
3.004	13.280	0.099	134.0	0.000	4	0.0	1.500	o	150	
5.000	32.509	1.086	29.9	0.000	4	0.0	1.500	o	150	
5.001	13.165	0.663	19.9	0.000	0	0.0	1.500	o	150	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse Add	Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.010	103.482	0.000	0.0	431	0.0	136	0.80	0.75	29.7	20.2
1.011	103.391	0.000	0.0	438	0.0	138	0.81	0.75	29.7	20.5
1.012	103.352	0.000	0.0	438	0.0	138	0.81	0.75	29.7	20.5
1.013	103.281	0.000	0.0	440	0.0	70	1.96	2.48	98.6	20.6
3.000	104.652	0.000	0.0	2	0.0	9	0.21	0.75	13.3	0.1
3.001	104.444	0.000	0.0	2	0.0	8	0.26	1.05	18.5	0.1
3.002	104.112	0.000	0.0	6	0.0	10	0.57	1.96	34.7	0.3
3.003	103.470	0.000	0.0	13	0.0	14	0.73	1.97	34.8	0.6
4.000	102.524	0.000	0.0	7	0.0	15	0.36	0.93	16.5	0.3
4.001	102.120	0.000	0.0	11	0.0	20	0.36	0.77	13.6	0.5
3.004	102.017	0.000	0.0	28	0.0	32	0.48	0.76	13.4	1.3
5.000	103.667	0.000	0.0	4	0.0	9	0.43	1.61	28.4	0.2
5.001	102.581	0.000	0.0	4	0.0	8	0.49	1.97	34.8	0.2

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FOUL SEWERAGE DESIGN

Network Design Table for FW1 - PDS Export.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
3.005	20.894	0.155	134.8	0.000	0	0.0	1.500	o	150	
1.014	17.155	0.073	235.0	0.000	0	0.0	1.500	o	225	
1.015	13.743	0.058	235.0	0.000	2	0.0	1.500	o	225	
1.016	21.770	0.093	235.0	0.000	0	0.0	1.500	o	225	
1.017	11.274	0.162	69.6	0.000	8	0.0	1.500	o	225	
6.000	34.974	0.259	135.0	0.000	5	0.0	1.500	o	150	
7.000	13.792	0.521	26.5	0.000	8	0.0	1.500	o	150	
6.001	51.228	0.379	135.0	0.000	0	0.0	1.500	o	150	
6.002	27.732	0.590	47.0	0.000	13	0.0	1.500	o	150	
6.003	10.422	0.077	135.0	0.000	5	0.0	1.500	o	150	
6.004	56.806	0.421	135.0	0.000	0	0.0	1.500	o	750	
1.018	3.254	0.024	135.0	0.000	0	0.0	1.500	o	150	
1.019	185.986	-4.482	-41.5	0.000	0	0.0	1.500	o	300	


Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse Add	Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
3.005	101.918	0.000	0.0	32	0.0	34	0.50	0.75	13.3	1.5
1.014	101.688	0.000	0.0	472	0.0	145	0.82	0.75	29.7	22.1
1.015	101.615	0.000	0.0	474	0.0	145	0.82	0.75	29.7	22.2
1.016	101.557	0.000	0.0	474	0.0	145	0.82	0.75	29.7	22.2
1.017	101.464	0.000	0.0	482	0.0	101	1.31	1.38	54.8	22.6
6.000	103.029	0.000	0.0	5	0.0	14	0.28	0.75	13.3	0.2
7.000	103.291	0.000	0.0	8	0.0	12	0.56	1.71	30.2	0.4
6.001	102.770	0.000	0.0	13	0.0	22	0.38	0.75	13.3	0.6
6.002	102.390	0.000	0.0	26	0.0	24	0.67	1.28	22.6	1.2
6.003	101.800	0.000	0.0	31	0.0	34	0.49	0.75	13.3	1.5
6.004	101.723	0.000	0.0	31	0.0	22	0.39	2.15	950.7	1.5
1.018	101.302	0.000	0.0	513	0.0	150	0.75	0.75	13.3	24.0
1.019	101.278	0.000	0.0	513	0.0	300	0.14	0.14	9.6	24.0

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FOUL SEWERAGE DESIGN

Network Design Table for FW1 - PDS Export.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.020	7.073	0.021	340.0	0.000	0	0.0	1.500	o	300	


Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)	
1.020	105.760	0.000	0.0	513	0.0	142	0.73	0.75	53.0	24.0

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Manhole Schedules for FW1 - PDS Export.FWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
1	108.762	1.645	Open Manhole	1350	1.000	107.117	150				
2	108.164	1.802	Open Manhole	1200	1.001	106.362	150	1.000	106.362	150	
3	107.960	2.105	Open Manhole	1350	1.002	105.855	150	1.001	105.855	150	
4	107.858	2.074	Open Manhole	1200	1.003	105.784	150	1.002	105.784	150	
5	107.505	2.045	Open Manhole	1200	1.004	105.460	150	1.003	105.460	150	
6	107.578	2.808	Open Manhole	1200	1.005	104.770	150	1.004	104.770	150	
7	107.447	2.745	Open Manhole	1200	1.006	104.702	150	1.005	104.702	150	
8	107.337	2.689	Open Manhole	1200	1.007	104.648	150	1.006	104.648	150	
9	106.880	2.723	Open Manhole	1200	1.008	104.157	150	1.007	104.157	150	
20	109.898	1.658	Open Manhole	1200	2.000	108.240	150				
21	108.550	1.671	Open Manhole	1200	2.001	106.879	150	2.000	106.879	150	
22	107.328	2.210	Open Manhole	1350	2.002	105.118	150	2.001	105.118	150	
23	106.952	1.990	Open Manhole	1200	2.003	104.962	225	2.002	105.037	150	
24	106.615	1.751	Open Manhole	1200	2.004	104.864	225	2.003	104.864	225	
10	106.852	3.252	Open Manhole	1200	1.009	103.600	225	1.008	103.675	150	
								2.004	103.600	225	
11	106.898	3.416	Open Manhole	1200	1.010	103.482	225	1.009	103.482	225	
12	106.549	3.158	Open Manhole	1200	1.011	103.391	225	1.010	103.391	225	
13	106.397	3.045	Open Manhole	1200	1.012	103.352	225	1.011	103.352	225	
14	106.160	2.879	Open Manhole	1350	1.013	103.281	225	1.012	103.281	225	
25	106.302	1.650	Open Manhole	1200	3.000	104.652	150				
26	106.321	1.877	Open Manhole	1200	3.001	104.444	150	3.000	104.444	150	
27	105.875	1.763	Open Manhole	1200	3.002	104.112	150	3.001	104.112	150	
28	105.655	2.185	Open Manhole	1200	3.003	103.470	150	3.002	103.470	150	
31	105.283	2.759	Open Manhole	1200	4.000	102.524	150				
32	105.918	3.798	Open Manhole	1200	4.001	102.120	150	4.000	102.120	150	
29	105.942	3.925	Open Manhole	1200	3.004	102.017	150	3.003	102.017	150	
								4.001	102.017	150	
33	105.617	1.950	Open Manhole	1200	5.000	103.667	150				
34	105.795	3.214	Open Manhole	1200	5.001	102.581	150	5.000	102.581	150	
30	105.781	3.863	Open Manhole	1200	3.005	101.918	150	3.004	101.918	150	
								5.001	101.918	150	
15	105.682	3.994	Open Manhole	1350	1.014	101.688	225	1.013	101.688	225	
								3.005	101.763	150	

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Manhole Schedules for FW1 - PDS Export.FWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
16	105.764	4.149	Open Manhole	1350	1.015	101.615	225	1.014	101.615	225	
17	105.885	4.328	Open Manhole	1200	1.016	101.557	225	1.015	101.557	225	
18	105.724	4.260	Open Manhole	1500	1.017	101.464	225	1.016	101.464	225	
36	105.595	2.566	Open Manhole	1200	6.000	103.029	150				
41	105.841	2.550	Open Manhole	1200	7.000	103.291	150				
37	106.021	3.251	Open Manhole	1200	6.001	102.770	150	6.000	102.770	150	
								7.000	102.770	150	
38	105.301	2.911	Open Manhole	1350	6.002	102.390	150	6.001	102.390	150	
39	104.996	3.196	Open Manhole	1200	6.003	101.800	150	6.002	101.800	150	
43	105.000	3.277	Open Manhole	2100	6.004	101.723	750	6.003	101.723	150	
19	105.800	4.498	Open Manhole	2400	1.018	101.302	150	1.017	101.302	225	
								6.004	101.302	750	
42	105.800	4.522	Open Manhole	1200	1.019	101.278	300	1.018	101.278	150	
44	108.350	2.590	Open Manhole	1200	1.020	105.760	300	1.019	105.760	300	
UU1802	108.570	2.831	Open Manhole	0		OUTFALL		1.020	105.739	300	