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Park House	MIDNANT FARM, PRESTATYN	
Sandpiper Court	Foul Design	
Chester CH4 9QU	Preliminary	
Date 24/11/2022	Designed by Coopers	
File 8007 N1 FW01.MDX	Checked by AJ	
Micro Drainage	Network 2020.1.3	

FOUL SEWERAGE DESIGN















Design Criteria for 8007 FW01.FWS

Pipe Sizes 8007 FW01 Manhole Sizes 8007 FW01

Industrial Flow (l/s/ha)	0.00	Add Flow / Climate Change (%)	10
Industrial Peak Flow Factor	0.00	Minimum Backdrop Height (m)	1.500
Flow Per Person (l/per/day)	225.00	Maximum Backdrop Height (m)	1.500
Persons per House	3.00	Min Design Depth for Optimisation (m)	1.200
Domestic (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.75
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	150

Designed with Level Soffits

Network Design Table for 8007 FW01.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	13.628	0.888	15.3	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.001	13.650	1.263	10.8	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.002	16.316	1.626	10.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.003	27.300	2.749	9.9	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
2.000	31.848	2.750	11.6	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
2.001	23.686	1.332	17.8	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
2.002	15.240	0.479	31.8	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
2.003	6.909	0.188	36.7	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
2.004	16.322	0.116	140.7	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.004	24.858	2.165	11.5	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.005	28.457	0.611	46.6	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.006	18.465	0.509	36.3	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.007	15.192	0.850	17.9	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.008	76.394	4.100	18.6	0.000	0	0.0	1.500	o	150	Pipe/Conduit	

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	27.411	0.000	0.0	0	0.0	0	0.00	2.24	39.7	0.0
1.001	26.523	0.000	0.0	0	0.0	0	0.00	2.67	47.3	0.0
1.002	25.260	0.000	0.0	0	0.0	0	0.00	2.78	49.1	0.0
1.003	23.634	0.000	0.0	0	0.0	0	0.00	2.79	49.3	0.0
2.000	25.750	0.000	0.0	0	0.0	0	0.00	2.58	45.7	0.0
2.001	23.000	0.000	0.0	0	0.0	0	0.00	2.08	36.8	0.0
2.002	21.668	0.000	0.0	0	0.0	0	0.00	1.56	27.5	0.0
2.003	21.189	0.000	0.0	0	0.0	0	0.00	1.45	25.6	0.0
2.004	21.001	0.000	0.0	0	0.0	0	0.00	0.74	13.0	0.0
1.004	20.885	0.000	0.0	0	0.0	0	0.00	2.60	45.9	0.0
1.005	18.720	0.000	0.0	0	0.0	0	0.00	1.29	22.7	0.0
1.006	18.109	0.000	0.0	0	0.0	0	0.00	1.46	25.8	0.0
1.007	17.600	0.000	0.0	0	0.0	0	0.00	2.08	36.7	0.0
1.008	16.750	0.000	0.0	0	0.0	0	0.00	2.04	36.0	0.0

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Network Design Table for 8007 FW01.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.009	24.142	1.500	16.1	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.010	12.048	0.500	24.1	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.011	31.920	1.500	21.3	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.012	20.471	0.455	45.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse Flow (l/s)	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.009	12.650	0.000	0.0	0	0.0	0	0.00	2.19	38.7	0.0
1.010	11.150	0.000	0.0	0	0.0	0	0.00	1.79	31.6	0.0
1.011	10.650	0.000	0.0	0	0.0	0	0.00	1.90	33.7	0.0
1.012	9.150	0.000	0.0	0	0.0	0	0.00	1.31	23.1	0.0

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Manhole Schedules for 8007 FW01.FWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	Pipe Out			Pipes In			Backdrop (mm)
					PN	Invert Level (m)	Diameter (mm)	PN	Invert Level (m)	Diameter (mm)	
1	28.761	1.350	Open Manhole	1200	1.000	27.411	150				
2	27.873	1.350	Open Manhole	1200	1.001	26.523	150	1.000	26.523	150	
3	26.610	1.350	Open Manhole	1200	1.002	25.260	150	1.001	25.260	150	
4	24.984	1.350	Open Manhole	1200	1.003	23.634	150	1.002	23.634	150	
5	28.465	2.715	Open Manhole	1200	2.000	25.750	150				
6	25.248	2.248	Open Manhole	1200	2.001	23.000	150	2.000	23.000	150	
7	23.018	1.350	Open Manhole	1200	2.002	21.668	150	2.001	21.668	150	
8	22.539	1.350	Open Manhole	1200	2.003	21.189	150	2.002	21.189	150	
9	22.351	1.350	Open Manhole	1200	2.004	21.001	150	2.003	21.001	150	
10	22.235	1.350	Open Manhole	1200	1.004	20.885	150	1.003	20.885	150	
								2.004	20.885	150	
11	20.070	1.350	Open Manhole	1200	1.005	18.720	150	1.004	18.720	150	
12	19.459	1.350	Open Manhole	1200	1.006	18.109	150	1.005	18.109	150	
13	18.950	1.350	Open Manhole	1200	1.007	17.600	150	1.006	17.600	150	
14	18.100	1.350	Open Manhole	1200	1.008	16.750	150	1.007	16.750	150	
15	14.000	1.350	Open Manhole	1200	1.009	12.650	150	1.008	12.650	150	
16	12.500	1.350	Open Manhole	1200	1.010	11.150	150	1.009	11.150	150	
17	12.000	1.350	Open Manhole	1200	1.011	10.650	150	1.010	10.650	150	
18	10.500	1.350	Open Manhole	1200	1.012	9.150	150	1.011	9.150	150	
19	9.800	1.105	Open Manhole	0		OUTFALL		1.012	8.695	150	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
1	307824.646	383098.838	307824.646	383098.838	Required	
2	307816.939	383110.079	307816.939	383110.079	Required	
3	307805.493	383117.516	307805.493	383117.516	Required	
4	307789.810	383122.018	307789.810	383122.018	Required	
5	307769.687	383057.527	307769.687	383057.527	Required	
6	307752.459	383084.312	307752.459	383084.312	Required	
7	307739.239	383103.966	307739.239	383103.966	Required	

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Manhole Schedules for 8007 FW01.FWS

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
8	307751.817	383112.571	307751.817	383112.571	Required	
9	307756.262	383117.860	307756.262	383117.860	Required	
10	307764.404	383132.006	307764.404	383132.006	Required	
11	307742.659	383144.052	307742.659	383144.052	Required	
12	307719.759	383160.946	307719.759	383160.946	Required	
13	307730.213	383176.167	307730.213	383176.167	Required	
14	307739.586	383188.123	307739.586	383188.123	Required	
15	307681.149	383237.327	307681.149	383237.327	Required	
16	307696.734	383255.765	307696.734	383255.765	Required	
17	307701.500	383266.830	307701.500	383266.830	Required	
18	307707.327	383298.214	307707.327	383298.214	Required	
19	307702.782	383318.174			No Entry	

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PIPELINE SCHEDULES for 8007 FW01.FWS

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	150	1	28.761	27.411	1.200	Open Manhole	1200
1.001	o	150	2	27.873	26.523	1.200	Open Manhole	1200
1.002	o	150	3	26.610	25.260	1.200	Open Manhole	1200
1.003	o	150	4	24.984	23.634	1.200	Open Manhole	1200
2.000	o	150	5	28.465	25.750	2.565	Open Manhole	1200
2.001	o	150	6	25.248	23.000	2.098	Open Manhole	1200
2.002	o	150	7	23.018	21.668	1.200	Open Manhole	1200
2.003	o	150	8	22.539	21.189	1.200	Open Manhole	1200
2.004	o	150	9	22.351	21.001	1.200	Open Manhole	1200
1.004	o	150	10	22.235	20.885	1.200	Open Manhole	1200
1.005	o	150	11	20.070	18.720	1.200	Open Manhole	1200
1.006	o	150	12	19.459	18.109	1.200	Open Manhole	1200
1.007	o	150	13	18.950	17.600	1.200	Open Manhole	1200
1.008	o	150	14	18.100	16.750	1.200	Open Manhole	1200
1.009	o	150	15	14.000	12.650	1.200	Open Manhole	1200
1.010	o	150	16	12.500	11.150	1.200	Open Manhole	1200
1.011	o	150	17	12.000	10.650	1.200	Open Manhole	1200
1.012	o	150	18	10.500	9.150	1.200	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	13.628	15.3	2	27.873	26.523	1.200	Open Manhole	1200
1.001	13.650	10.8	3	26.610	25.260	1.200	Open Manhole	1200
1.002	16.316	10.0	4	24.984	23.634	1.200	Open Manhole	1200
1.003	27.300	9.9	10	22.235	20.885	1.200	Open Manhole	1200
2.000	31.848	11.6	6	25.248	23.000	2.098	Open Manhole	1200
2.001	23.686	17.8	7	23.018	21.668	1.200	Open Manhole	1200
2.002	15.240	31.8	8	22.539	21.189	1.200	Open Manhole	1200
2.003	6.909	36.7	9	22.351	21.001	1.200	Open Manhole	1200
2.004	16.322	140.7	10	22.235	20.885	1.200	Open Manhole	1200
1.004	24.858	11.5	11	20.070	18.720	1.200	Open Manhole	1200
1.005	28.457	46.6	12	19.459	18.109	1.200	Open Manhole	1200
1.006	18.465	36.3	13	18.950	17.600	1.200	Open Manhole	1200
1.007	15.192	17.9	14	18.100	16.750	1.200	Open Manhole	1200
1.008	76.394	18.6	15	14.000	12.650	1.200	Open Manhole	1200
1.009	24.142	16.1	16	12.500	11.150	1.200	Open Manhole	1200
1.010	12.048	24.1	17	12.000	10.650	1.200	Open Manhole	1200
1.011	31.920	21.3	18	10.500	9.150	1.200	Open Manhole	1200
1.012	20.471	45.0	19	9.800	8.695	0.955	Open Manhole	0