

.	C-04841-C
.	Wykham Park Farm
.	Catchment 1
Date 14/09/2020	Designed by SM
File WPF-HYD-XX-XX-CA-C-0001 FEH.pdf...	Checked by Sean Mitchinson
Innovyze	Network 2018.1.1



Network Design Table for STORM NETWORK 4

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
6.001	65.841	0.174	378.4	0.776	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.008	98.751	0.565	174.8	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	
7.000	64.583	0.040	1614.6	1.050	5.00	0.0	0.600		o	600	Pipe/Conduit	
8.000	44.952	0.189	237.8	0.080	5.00	0.0	0.600		o	300	Pipe/Conduit	
8.001	74.045	0.312	237.3	0.077	0.00	0.0	0.600		o	300	Pipe/Conduit	
8.002	25.856	0.109	237.2	0.029	0.00	0.0	0.600		o	300	Pipe/Conduit	
8.003	26.185	0.111	235.9	0.027	0.00	0.0	0.600		o	300	Pipe/Conduit	
8.004	28.942	0.122	237.2	0.032	0.00	0.0	0.600		o	300	Pipe/Conduit	
8.005	64.553	0.272	237.3	0.066	0.00	0.0	0.600		o	300	Pipe/Conduit	
9.000	16.387	1.140	14.4	0.023	5.00	0.0	0.600		o	225	Pipe/Conduit	
8.006	41.921	0.177	236.8	0.027	0.00	0.0	0.600		o	450	Pipe/Conduit	
7.001	19.823	0.040	495.6	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.009	11.563	0.029	398.7	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	
1.010	27.046	0.054	500.9	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	
10.000	70.869	0.142	499.1	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	
10.001	67.414	0.828	81.4	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.011	40.366	0.101	399.7	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	
11.000	51.141	0.110	464.9	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
6.001	50.00	6.91	129.580	0.776	0.0	0.0	0.0	1.25	352.3	126.1
1.008	35.02	12.37	129.029	2.910	0.0	0.0	0.0	1.89	27849.4	331.2
7.000	50.00	6.80	129.373	1.050	0.0	0.0	0.0	0.60	168.8	170.6
8.000	50.00	5.74	130.100	0.080	0.0	0.0	0.0	1.02	71.8	13.0
8.001	50.00	6.95	129.911	0.157	0.0	0.0	0.0	1.02	71.8	25.5
8.002	49.82	7.38	129.599	0.186	0.0	0.0	0.0	1.02	71.9	30.1
8.003	47.94	7.80	129.490	0.213	0.0	0.0	0.0	1.02	72.1	33.2
8.004	46.05	8.28	129.379	0.245	0.0	0.0	0.0	1.02	71.8	36.7
8.005	42.42	9.34	129.257	0.311	0.0	0.0	0.0	1.02	71.8	42.9
9.000	50.00	5.08	130.200	0.023	0.0	0.0	0.0	3.47	137.9	3.7
8.006	40.85	9.87	128.835	0.361	0.0	0.0	0.0	1.32	209.4	47.9
7.001	40.02	10.17	128.508	1.411	0.0	0.0	0.0	1.09	307.4	183.5
1.009	34.73	12.52	128.464	4.321	0.0	0.0	0.0	1.25	18438.5	487.6
1.010	33.98	12.93	128.435	4.321	0.0	0.0	0.0	1.12	16451.6	487.6
10.000	50.00	6.09	129.351	0.000	0.0	0.0	0.0	1.08	306.3	0.0
10.001	50.00	6.51	129.209	0.000	0.0	0.0	0.0	2.70	763.5	0.0
1.011	33.05	13.46	128.381	4.321	0.0	0.0	0.0	1.25	18416.8	487.6
11.000	50.00	5.76	129.210	0.000	0.0	0.0	0.0	1.12	317.4	0.0

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Network Design Table for STORM NETWORK 4


















PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
11.001	37.134	0.080	464.2	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
11.002	81.296	0.157	517.8	1.026	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
1.012	145.561	0.283	514.3	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	🔒
12.000	57.073	0.038	1501.9	0.380	5.00	0.0	0.600		o	600	Pipe/Conduit	🔒
12.001	18.603	0.038	489.6	0.250	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
12.002	80.219	0.157	510.9	0.380	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
1.013	119.235	0.298	400.1	0.130	0.00	0.0		0.032		-5	Pipe/Conduit	🔒
13.000	85.973	0.154	558.3	0.075	5.00	0.0	0.600		o	600	Pipe/Conduit	🔒
13.001	57.805	0.189	305.8	0.390	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
14.000	112.108	1.125	99.7	0.010	5.00	0.0	0.600		o	300	Pipe/Conduit	🔒
14.001	32.933	0.180	183.0	0.175	0.00	0.0	0.600		o	300	Pipe/Conduit	🔒
13.002	33.840	0.077	439.5	0.350	0.00	0.0		0.032		-5	Pipe/Conduit	🔒
13.003	39.375	0.078	504.8	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	🔒
15.000	89.836	0.180	499.1	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	🔒
15.001	104.628	0.216	484.4	0.695	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
16.000	82.412	0.165	499.5	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	🔒
16.001	68.684	0.151	454.9	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	🔒
13.004	63.251	0.073	866.5	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	🔒
13.005	11.280	0.073	154.5	0.000	0.00	0.0		0.032	o	300	Pipe/Conduit	🔒

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
11.001	50.00	6.31	129.100	0.000	0.0	0.0	0.0	1.12	317.7	0.0
11.002	48.89	7.58	129.020	1.026	0.0	0.0	0.0	1.06	300.6	163.0
1.012	29.82	15.66	128.280	5.347	0.0	0.0	0.0	1.10	16234.3	518.1
12.000	50.00	6.54	128.888	0.380	0.0	0.0	0.0	0.62	175.1	61.7
12.001	50.00	6.82	128.774	0.630	0.0	0.0	0.0	1.09	309.3	102.4
12.002	46.87	8.07	128.737	1.010	0.0	0.0	0.0	1.07	302.7	153.8
1.013	27.92	17.25	127.997	6.487	0.0	0.0	0.0	1.25	18406.4	588.5
13.000	50.00	6.40	129.933	0.075	0.0	0.0	0.0	1.02	289.4	12.2
13.001	50.00	7.09	129.779	0.465	0.0	0.0	0.0	1.39	392.2	75.6
14.000	50.00	6.19	129.925	0.010	0.0	0.0	0.0	1.58	111.3	1.6
14.001	50.00	6.66	128.800	0.185	0.0	0.0	0.0	1.16	81.9	30.1
13.002	48.97	7.57	128.620	1.000	0.0	0.0	0.0	1.19	17562.7	159.1
13.003	46.53	8.16	128.543	1.000	0.0	0.0	0.0	1.11	16387.0	159.1
15.000	50.00	6.38	129.832	0.000	0.0	0.0	0.0	1.08	306.3	0.0
15.001	47.27	7.97	129.652	0.695	0.0	0.0	0.0	1.10	310.9	106.8
16.000	50.00	6.27	129.962	0.000	0.0	0.0	0.0	1.08	306.2	0.0
16.001	50.00	7.28	128.616	0.000	0.0	0.0	0.0	1.14	321.0	0.0
13.004	42.25	9.39	128.465	1.695	0.0	0.0	0.0	0.85	12508.1	232.7
13.005	41.01	9.81	128.393	1.695	0.0	0.0	0.0	0.45	31.6	232.7

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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
17.000	63.994	0.133	481.2	0.202	5.00	0.0	0.600		o	600	Pipe/Conduit	
17.001	135.674	0.316	429.3	0.202	0.00	0.0	0.600		o	600	Pipe/Conduit	
17.002	49.155	0.084	585.2	0.202	0.00	0.0	0.600		o	600	Pipe/Conduit	
13.006	26.234	0.090	291.5	0.038	0.00	0.0	0.600		o	300	Pipe/Conduit	
18.000	97.169	0.550	176.7	0.175	5.00	0.0	0.600		o	450	Pipe/Conduit	
19.000	77.335	0.390	198.3	0.110	5.00	0.0	0.600		o	300	Pipe/Conduit	
19.001	17.499	1.490	11.7	0.110	0.00	0.0	0.600		o	300	Pipe/Conduit	
18.001	91.035	0.255	357.0	0.100	0.00	0.0	0.600		o	450	Pipe/Conduit	
20.000	67.415	0.560	120.4	0.035	5.00	0.0	0.600		o	300	Pipe/Conduit	
20.001	20.866	0.905	23.1	0.275	0.00	0.0	0.600		o	450	Pipe/Conduit	
18.002	59.967	0.130	461.3	0.086	0.00	0.0	0.600		o	525	Pipe/Conduit	
18.003	15.407	0.030	513.6	0.088	0.00	0.0	0.600		o	600	Pipe/Conduit	
13.007	16.449	0.050	329.0	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	
13.008	83.269	0.167	498.6	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	
21.000	47.151	0.094	501.6	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	
21.001	60.295	0.145	415.8	0.540	0.00	0.0	0.600		o	600	Pipe/Conduit	
13.009	43.449	0.314	138.4	0.000	0.00	0.0		0.032		-5	Pipe/Conduit	

Network Results Table

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17.000	50.00	5.97	129.816	0.202	0.0	0.0	0.0	1.10	312.0	32.8
17.001	47.54	7.90	129.683	0.404	0.0	0.0	0.0	1.17	330.5	62.4
17.002	44.45	8.72	129.367	0.606	0.0	0.0	0.0	1.00	282.6	87.5
13.006	39.70	10.29	128.320	2.339	0.0	0.0	0.0	0.92	64.7<	301.8
18.000	50.00	6.06	129.270	0.175	0.0	0.0	0.0	1.53	242.8	28.4
19.000	50.00	6.16	130.750	0.110	0.0	0.0	0.0	1.11	78.7	17.9
19.001	50.00	6.22	130.360	0.220	0.0	0.0	0.0	4.61	326.0	35.7
18.001	48.65	7.64	128.720	0.495	0.0	0.0	0.0	1.07	170.2	78.3
20.000	50.00	5.78	130.080	0.035	0.0	0.0	0.0	1.43	101.2	5.7
20.001	50.00	5.87	129.370	0.310	0.0	0.0	0.0	4.25	675.6	50.4
18.002	44.86	8.60	128.390	0.891	0.0	0.0	0.0	1.04	224.3	129.9
18.003	44.02	8.84	128.260	0.979	0.0	0.0	0.0	1.07	301.9	140.1
13.007	39.19	10.49	128.230	3.318	0.0	0.0	0.0	1.38	20298.9	422.5
13.008	36.32	11.73	128.180	3.318	0.0	0.0	0.0	1.12	16488.4	422.5
21.000	50.00	5.73	128.739	0.000	0.0	0.0	0.0	1.08	305.5	0.0
21.001	50.00	6.57	128.645	0.540	0.0	0.0	0.0	1.19	335.9	87.7
13.009	35.62	12.07	128.013	3.858	0.0	0.0	0.0	2.13	31299.5	446.6

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1.014	33.510	0.084	398.9	0.000	0.00	0.0		0.032	-6		Pipe/Conduit	
1.015	51.333	0.103	498.4	0.000	0.00	0.0		0.032	-6		Pipe/Conduit	
22.000	71.702	0.143	501.4	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	
22.001	65.051	0.145	448.6	0.871	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.016	72.773	0.132	551.3	0.000	0.00	0.0		0.032	-6		Pipe/Conduit	
23.000	11.520	1.158	9.9	0.025	5.00	0.0		0.650	o	450	Pipe/Conduit	
23.001	75.331	0.147	512.5	0.323	0.00	0.0	0.600		o	600	Pipe/Conduit	
23.002	53.165	0.110	483.3	0.323	0.00	0.0	0.600		o	600	Pipe/Conduit	
23.003	21.365	0.040	534.1	0.429	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.017	22.973	0.060	382.9	0.000	0.00	0.0		0.032	-7		Pipe/Conduit	
1.018	48.298	0.097	497.9	0.000	0.00	0.0		0.032	-7		Pipe/Conduit	
24.000	90.622	0.181	500.7	0.617	5.00	0.0	0.600		o	600	Pipe/Conduit	
24.001	76.157	0.167	456.0	0.617	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.019	27.123	0.062	437.5	0.000	0.00	0.0		0.032	-7		Pipe/Conduit	
1.020	12.321	0.061	202.0	0.000	0.00	0.0	0.600		o	300	Pipe/Conduit	
1.021	39.334	0.500	78.7	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	
1.022	69.753	0.300	232.5	1.086	0.00	0.0	0.600		o	1050	Pipe/Conduit	
25.000	50.606	0.143	353.9	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	
25.001	57.511	0.150	383.4	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	
25.002	64.141	0.471	136.2	0.000	0.00	0.0		0.032	\	-2	Pipe/Conduit	

Network Results Table

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1.014	27.44	17.68	127.699	10.345	0.0	0.0	0.0	1.28	19383.8	922.7
1.015	26.68	18.43	127.615	10.345	0.0	0.0	0.0	1.14	17342.3	922.7
22.000	50.00	6.11	127.800	0.000	0.0	0.0	0.0	1.08	305.5	0.0
22.001	50.00	7.05	127.657	0.871	0.0	0.0	0.0	1.14	323.2	141.5
1.016	25.63	19.55	127.512	11.216	0.0	0.0	0.0	1.09	16488.8	934.4
23.000	50.00	6.69	128.875	0.025	0.0	0.0	0.0	0.11	18.1	4.1
23.001	47.70	7.86	127.567	0.348	0.0	0.0	0.0	1.07	302.2	53.9
23.002	44.63	8.67	127.420	0.671	0.0	0.0	0.0	1.10	311.3	97.3
23.003	43.47	9.01	127.310	1.100	0.0	0.0	0.0	1.05	295.9	155.4
1.017	25.38	19.83	127.380	12.316	0.0	0.0	0.0	1.36	21783.4	1016.0
1.018	24.81	20.50	127.320	12.316	0.0	0.0	0.0	1.19	19102.0	1016.0
24.000	50.00	6.40	127.571	0.617	0.0	0.0	0.0	1.08	305.8	100.3
24.001	49.19	7.52	127.390	1.234	0.0	0.0	0.0	1.13	320.6	197.3
1.019	24.52	20.86	127.223	13.550	0.0	0.0	0.0	1.27	20379.1	1079.8
1.020	24.37	21.05	127.161	13.550	0.0	0.0	0.0	1.10	77.9	1079.8
1.021	24.19	21.29	127.100	13.550	0.0	0.0	0.0	2.75	776.8	1079.8
1.022	23.79	21.80	126.600	14.636	0.0	0.0	0.0	2.26	1953.3	1131.8
25.000	50.00	5.65	127.813	0.000	0.0	0.0	0.0	1.29	364.4	0.0
25.001	50.00	6.43	127.670	0.000	0.0	0.0	0.0	1.24	349.9	0.0
25.002	50.00	6.90	127.520	0.000	0.0	0.0	0.0	2.28	19227.1	0.0

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26.000	46.461	0.160	290.4	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	
26.001	63.247	0.156	405.4	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	
25.003	57.754	0.061	946.8	0.000	0.00	0.0	0.032	\/	-2	Pipe/Conduit		
25.004	3.388	0.061	55.5	0.000	0.00	0.0	0.650	o	600	Pipe/Conduit		
27.000	45.850	0.167	274.6	0.000	5.00	0.0	0.600		o	600	Pipe/Conduit	
27.001	36.748	0.147	250.0	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	
27.002	24.754	0.042	589.4	0.000	0.00	0.0	0.600		o	750	Pipe/Conduit	
25.005	26.219	0.159	164.9	0.034	0.00	0.0	0.600		o	750	Pipe/Conduit	
25.006	17.126	0.103	166.3	0.000	0.00	0.0	0.600		o	750	Pipe/Conduit	
28.000	31.733	0.127	249.9	0.205	5.00	0.0	0.600		o	450	Pipe/Conduit	
28.001	18.972	0.076	249.6	0.000	0.00	0.0	0.600		o	450	Pipe/Conduit	
28.002	60.736	0.118	514.7	0.137	0.00	0.0	0.600		o	750	Pipe/Conduit	
29.000	55.597	0.225	247.1	0.342	5.00	0.0	0.600		o	450	Pipe/Conduit	
28.003	74.969	0.151	496.5	0.093	0.00	0.0	0.600		o	750	Pipe/Conduit	
30.000	94.479	0.667	141.6	0.064	5.00	0.0	0.600		o	300	Pipe/Conduit	
30.001	8.379	0.131	64.0	0.000	0.00	0.0	0.600		o	450	Pipe/Conduit	
31.000	108.731	0.722	150.6	0.152	5.00	0.0	0.600		o	300	Pipe/Conduit	
30.002	50.345	0.427	117.9	0.098	0.00	0.0	0.600		o	525	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
26.000	50.00	5.54	127.365	0.000	0.0	0.0	0.0	1.42	402.6	0.0
26.001	50.00	6.42	127.205	0.000	0.0	0.0	0.0	1.20	340.2	0.0
25.003	47.10	8.01	127.049	0.000	0.0	0.0	0.0	0.87	7292.0	0.0
25.004	43.57	8.98	126.988	0.000	0.0	0.0	0.0	0.06	16.5	0.0
27.000	50.00	5.52	127.283	0.000	0.0	0.0	0.0	1.46	414.2	0.0
27.001	50.00	5.92	127.116	0.000	0.0	0.0	0.0	1.54	434.2	0.0
27.002	50.00	6.28	126.969	0.000	0.0	0.0	0.0	1.15	506.0	0.0
25.005	42.92	9.18	126.927	0.034	0.0	0.0	0.0	2.18	961.6	4.7
25.006	42.51	9.31	126.768	0.034	0.0	0.0	0.0	2.17	957.6	4.7
28.000	50.00	5.41	128.317	0.205	0.0	0.0	0.0	1.28	203.8	33.3
28.001	50.00	5.66	128.190	0.205	0.0	0.0	0.0	1.28	203.9	33.3
28.002	50.00	6.48	127.814	0.342	0.0	0.0	0.0	1.23	541.9	55.6
29.000	50.00	5.72	128.221	0.342	0.0	0.0	0.0	1.29	205.0	55.6
28.003	49.33	7.48	127.696	0.777	0.0	0.0	0.0	1.25	551.8	124.6
30.000	50.00	6.19	129.129	0.064	0.0	0.0	0.0	1.32	93.2	10.4
30.001	50.00	6.25	128.312	0.064	0.0	0.0	0.0	2.55	404.8	10.4
31.000	50.00	6.42	129.053	0.152	0.0	0.0	0.0	1.28	90.4	24.7
30.002	50.00	6.82	128.106	0.314	0.0	0.0	0.0	2.06	446.4	51.0

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Network Design Table for STORM NETWORK 4



PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k	n	HYD SECT	DIA (mm)	Section Type	Auto Design
28.004	25.427	0.051	498.6	0.046	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
28.005	64.150	0.160	400.9	0.103	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
28.006	39.398	0.080	492.5	0.063	0.00	0.0	0.600		o	900	Pipe/Conduit	🔒
32.000	38.410	0.085	451.9	0.366	5.00	0.0	0.600		o	750	Pipe/Conduit	🔒
32.001	36.887	0.081	455.4	0.000	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
32.002	21.766	0.048	453.5	0.366	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
32.003	58.244	0.129	451.5	0.366	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
32.004	59.283	0.131	452.5	0.183	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
32.005	22.713	0.050	454.3	0.266	0.00	0.0	0.600		o	825	Pipe/Conduit	🔒
32.006	66.076	0.251	263.3	0.000	0.00	0.0	0.600		o	825	Pipe/Conduit	🔒
28.007	63.947	0.126	507.5	0.199	0.00	0.0	0.600		o	900	Pipe/Conduit	🔒
33.000	79.823	0.234	341.1	0.306	6.00	0.0	0.600		o	750	Pipe/Conduit	🔒
33.001	35.574	0.111	320.5	0.306	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
33.002	13.359	0.027	494.8	0.306	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
28.008	45.741	0.114	401.2	0.055	0.00	0.0	0.600		o	1200	Pipe/Conduit	🔒
28.009	55.369	0.158	350.4	0.077	0.00	0.0	0.600		o	1200	Pipe/Conduit	🔒
34.000	12.099	0.031	390.3	0.457	5.00	0.0	0.600		o	750	Pipe/Conduit	🔒
34.001	15.094	0.253	59.7	0.435	0.00	0.0	0.600		o	750	Pipe/Conduit	🔒
28.010	15.881	0.041	387.3	0.000	0.00	0.0	0.600		o	1200	Pipe/Conduit	🔒
25.007	17.122	0.025	684.9	0.000	0.00	0.0	0.600		o	1200	Pipe/Conduit	🔒
25.008	134.998	0.040	3375.0	1.300	0.00	0.0	0.600		o	1200	Pipe/Conduit	🔒

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
28.004	47.86	7.82	127.545	1.137	0.0	0.0	0.0	1.25	550.7	176.8
28.005	44.90	8.59	127.494	1.240	0.0	0.0	0.0	1.39	614.7	180.9
28.006	43.30	9.06	127.184	1.303	0.0	0.0	0.0	1.41	893.9	183.4
32.000	50.00	5.49	127.954	0.366	0.0	0.0	0.0	1.31	578.7	59.5
32.001	50.00	5.96	127.869	0.366	0.0	0.0	0.0	1.30	576.4	59.5
32.002	50.00	6.24	127.788	0.732	0.0	0.0	0.0	1.31	577.7	118.9
32.003	50.00	6.98	127.740	1.098	0.0	0.0	0.0	1.31	578.9	178.4
32.004	48.25	7.73	127.611	1.281	0.0	0.0	0.0	1.31	578.3	200.9
32.005	47.12	8.01	127.480	1.547	0.0	0.0	0.0	1.39	741.1	236.9
32.006	44.84	8.61	127.430	1.547	0.0	0.0	0.0	1.83	975.6	236.9
28.007	40.96	9.83	127.104	3.049	0.0	0.0	0.0	1.38	880.4	405.9
33.000	50.00	6.88	127.500	0.306	0.0	0.0	0.0	1.51	666.9	49.7
33.001	50.00	7.26	127.266	0.612	0.0	0.0	0.0	1.56	688.2	99.4
33.002	49.53	7.44	127.155	0.918	0.0	0.0	0.0	1.25	552.8	147.8
28.008	39.84	10.24	126.678	4.022	0.0	0.0	0.0	1.86	2105.3	520.7
28.009	38.65	10.70	126.564	4.099	0.0	0.0	0.0	1.99	2253.7	520.7
34.000	50.00	5.14	127.140	0.457	0.0	0.0	0.0	1.41	623.1	74.3
34.001	50.00	5.21	127.109	0.892	0.0	0.0	0.0	3.63	1602.5	144.9
28.010	38.31	10.84	126.406	4.991	0.0	0.0	0.0	1.89	2143.0	621.4
25.007	37.84	11.04	126.365	5.025	0.0	0.0	0.0	1.42	1608.1	621.4
25.008	31.29	14.59	126.340	6.325	0.0	0.0	0.0	0.63	717.0	643.1

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Network Design Table for STORM NETWORK 4

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k	n	HYD SECT	DIA (mm)	Section Type	Auto Design
1.023	29.561	0.070	422.3	0.000	0.00	0.0	0.600		o	450	Pipe/Conduit	
1.024	10.612	0.080	132.7	0.000	0.00	0.0	0.600		o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.023	23.43	22.30	126.300	20.961	0.0	0.0	0.0	0.98	156.3	1596.0
1.024	23.34	22.43	126.230	20.961	0.0	0.0	0.0	1.36	96.4	1596.0

Free Flowing Outfall Details for STORM NETWORK 4


Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.024	HW12	126.916	126.150	126.150	0	0

Simulation Criteria for STORM NETWORK 4

Volumetric Runoff Coeff	0.900	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Offline Controls	0
Number of Online Controls	1	Number of Storage Structures	1
		Number of Time/Area Diagrams	0
		Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH	E (1km)	0.298
Return Period (years)	1	F (1km)	2.479
FEH Rainfall Version	1999	Summer Storms	Yes
Site Location	GB 445250 237800 SP 45250 37800	Winter Storms	No
C (1km)	-0.023	Cv (Summer)	0.900
D1 (1km)	0.318	Cv (Winter)	0.840
D2 (1km)	0.317	Storm Duration (mins)	30
D3 (1km)	0.243		

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Online Controls for STORM NETWORK 4

Hydro-Brake® Optimum Manhole: 47, DS/PN: 1.024, Volume (m³): 44.8

Unit Reference	MD-SHE-0255-3970-1900-3970
Design Head (m)	1.900
Design Flow (l/s)	39.7
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	255
Invert Level (m)	126.230
Minimum Outlet Pipe Diameter (mm)	300
Suggested Manhole Diameter (mm)	2100

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.900	39.7	Kick-Flo®	1.250	32.5
Flush-Flo™	0.572	39.6	Mean Flow over Head Range	-	34.2

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	8.2	0.800	39.0	2.000	40.7	4.000	56.8	7.000	74.6
0.200	26.2	1.000	37.5	2.200	42.6	4.500	60.2	7.500	77.1
0.300	37.0	1.200	34.0	2.400	44.4	5.000	63.3	8.000	79.6
0.400	38.8	1.400	34.3	2.600	46.2	5.500	66.3	8.500	82.0
0.500	39.5	1.600	36.6	3.000	49.5	6.000	69.2	9.000	84.3
0.600	39.6	1.800	38.7	3.500	53.3	6.500	71.9	9.500	86.5

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Storage Structures for STORM NETWORK 4

Tank or Pond Manhole: HW11, DS/PN: 1.023

Invert Level (m) 126.300

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	9200.0	0.600	10248.3	1.200	11353.2	1.800	12514.6	2.400	13732.6
0.100	9370.8	0.700	10428.5	1.300	11542.8	1.900	12713.7	2.500	13941.1
0.200	9543.2	0.800	10610.3	1.400	11734.0	2.000	12914.3		
0.300	9717.1	0.900	10793.7	1.500	11926.8	2.100	13116.5		
0.400	9892.6	1.000	10978.6	1.600	12121.2	2.200	13320.3		
0.500	10069.7	1.100	11165.1	1.700	12317.1	2.300	13525.7		

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 1 Number of Storage Structures 1 Number of Real Time Controls 0


Synthetic Rainfall Details

Rainfall Model FEH D3 (1km) 0.243
 FEH Rainfall Version 1999 E (1km) 0.298
 Site Location GB 445250 237800 SP 45250 37800 F (1km) 2.479
 C (1km) -0.023 Cv (Summer) 0.900
 D1 (1km) 0.318 Cv (Winter) 0.900
 D2 (1km) 0.317

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status OFF
 DVD Status ON
 Inertia Status OFF

Profile(s) Summer and Winter
 Duration(s) (mins) 30, 60, 120, 180, 240, 360, 480, 600, 720, 960
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)
1.000	L 180	Winter	1	+0%	100/30	Summer		130.406	-0.600	0.000
1.001	L 30	Summer	1	+0%	100/30	Summer		130.324	-0.458	0.000
1.002	S 30	Summer	1	+0%				130.246	-0.868	0.000
2.000	L 30	Summer	1	+0%	100/30	Summer		130.486	-0.457	0.000
2.001	L 30	Summer	1	+0%	100/30	Summer		130.379	-0.421	0.000
2.002	L 30	Summer	1	+0%	100/30	Summer		130.266	-0.357	0.000
1.003	S 30	Summer	1	+0%				130.188	-0.732	0.000
1.004	HW1 30	Summer	1	+0%	1/30	Summer		130.172	0.049	0.000
3.000	L 180	Winter	1	+0%	100/30	Summer		130.258	-0.600	0.000
3.001	L 30	Summer	1	+0%	100/30	Summer		130.162	-0.512	0.000
3.002	L 30	Summer	1	+0%	100/30	Summer		130.064	-0.464	0.000
3.003	L 30	Summer	1	+0%	100/30	Summer		130.017	-0.356	0.000
1.005	5 30	Summer	1	+0%	30/30	Summer		130.007	-0.084	0.000
4.000	1 30	Summer	1	+0%	100/30	Summer		131.092	-0.153	0.000
4.001	2 30	Summer	1	+0%	100/30	Summer		130.870	-0.197	0.000
4.002	3 30	Summer	1	+0%	100/30	Summer		130.670	-0.180	0.000
5.000	L 30	Summer	1	+0%	100/30	Summer		131.071	-0.204	0.000
5.001	L 30	Summer	1	+0%	30/30	Summer		130.938	-0.168	0.000
5.002	L 30	Summer	1	+0%	30/30	Summer		130.657	-0.169	0.000
4.003	4 30	Summer	1	+0%	100/30	Summer		130.361	-0.355	0.000
1.006	6 30	Summer	1	+0%	30/30	Summer		129.920	-0.111	0.000
1.007	HW2 30	Summer	1	+0%				129.296	-1.333	0.000
6.000	L 30	Summer	1	+0%	100/30	Summer		129.791	-0.519	0.000
6.001	L 30	Summer	1	+0%	100/30	Summer		129.791	-0.389	0.000
1.008	S 30	Summer	1	+0%				129.185	-1.344	0.000
7.000	L 30	Summer	1	+0%	30/30	Summer		129.758	-0.215	0.000
8.000	7 30	Summer	1	+0%	100/30	Summer 100/30 Summer		130.180	-0.220	0.000
8.001	8 30	Summer	1	+0%	100/30	Summer		130.020	-0.191	0.000
8.002	9 30	Summer	1	+0%	30/30	Summer		129.719	-0.180	0.000

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	L	0.00		0.0	OK	
1.001	L	0.11		28.8	OK	
1.002	S	0.01		56.1	OK	
2.000	L	0.11		33.5	OK	
2.001	L	0.18		60.1	OK	
2.002	L	0.31		82.3	OK	
1.003	S	0.04		101.5	OK	
1.004	HW1	1.73		53.2	SURCHARGED*	
3.000	L	0.00		0.0	OK	
3.001	L	0.04		12.3	OK	
3.002	L	0.08		21.6	OK	
3.003	L	0.12		24.5	OK	
1.005	5	0.87		66.8	OK	
4.000	1	0.22		8.4	OK	
4.001	2	0.25		16.9	OK	
4.002	3	0.34		22.0	OK	
5.000	L	0.22		14.4	OK	
5.001	L	0.38		25.7	OK	
5.002	L	0.40		25.4	OK	
4.003	4	0.10		46.9	OK	
1.006	6	0.92		103.0	OK	
1.007	HW2	0.01		102.1	OK	
6.000	L	0.00		0.5	OK	
6.001	L	0.27		85.6	OK	
1.008	S	0.01		182.5	OK	
7.000	L	0.73		142.1	OK	
8.000	7	0.16		10.6	OK	3
8.001	8	0.27		18.7	OK	
8.002	9	0.33		21.4	OK	

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C-04841-C
Wykham Park Farm
Catchment 1
Designed by SM
Checked by Sean Mitchinson



Innovyze Network 2018.1.1


1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m ³)	
8.003	10	30	Summer	1	+0%	30/30	Summer	100/30	Summer	129.617	-0.173	0.000
8.004	11	30	Summer	1	+0%	30/30	Summer			129.513	-0.166	0.000
8.005	12	30	Summer	1	+0%	30/30	Summer			129.402	-0.155	0.000
9.000	13	30	Summer	1	+0%					130.224	-0.201	0.000
8.006	14	30	Summer	1	+0%	30/30	Summer			128.985	-0.300	0.000
7.001	15	30	Summer	1	+0%	30/30	Summer			128.925	-0.183	0.000
1.009	HW3	30	Summer	1	+0%					128.742	-1.222	0.000
1.010	S	30	Summer	1	+0%					128.720	-1.215	0.000
10.000	L	180	Winter	1	+0%					129.351	-0.600	0.000
10.001	L	180	Winter	1	+0%					129.209	-0.600	0.000
1.011	S	30	Summer	1	+0%					128.659	-1.222	0.000
11.000	L	30	Summer	1	+0%	100/30	Summer			129.280	-0.530	0.000
11.001	L	30	Summer	1	+0%	100/30	Summer			129.280	-0.420	0.000
11.002	L	30	Summer	1	+0%	30/30	Summer			129.281	-0.339	0.000
1.012	S	30	Summer	1	+0%					128.578	-1.202	0.000
12.000	L	30	Summer	1	+0%	30/30	Summer			129.130	-0.358	0.000
12.001	L	30	Summer	1	+0%	30/30	Summer			129.051	-0.323	0.000
12.002	L	30	Summer	1	+0%	30/30	Summer			129.007	-0.330	0.000
1.013	S	30	Summer	1	+0%					128.285	-1.212	0.000
13.000	L	30	Summer	1	+0%					130.020	-0.513	0.000
13.001	L	30	Summer	1	+0%					129.935	-0.444	0.000
14.000	L	30	Summer	1	+0%					129.943	-0.282	0.000
14.001	L	30	Summer	1	+0%	30/30	Summer			128.911	-0.189	0.000
13.002	S	30	Summer	1	+0%					128.858	-1.262	0.000
13.003	S	30	Summer	1	+0%					128.857	-1.186	0.000
15.000	L	30	Summer	1	+0%	100/30	Summer			129.860	-0.572	0.000
15.001	L	30	Summer	1	+0%	100/30	Summer			129.860	-0.392	0.000
16.000	L	180	Winter	1	+0%					129.962	-0.600	0.000
16.001	L	30	Summer	1	+0%	30/30	Summer			128.853	-0.363	0.000
13.004	S	30	Summer	1	+0%					128.853	-1.112	0.000
13.005	HW4	30	Summer	1	+0%	1/30	Summer			128.844	0.151	0.000
17.000	L	30	Summer	1	+0%					129.948	-0.468	0.000
17.001	L	30	Summer	1	+0%					129.840	-0.443	0.000
17.002	L	30	Summer	1	+0%	100/30	Summer			129.571	-0.396	0.000
13.006	16	30	Summer	1	+0%	1/30	Summer			128.731	0.111	0.000
18.000	17	30	Summer	1	+0%	100/30	Summer			129.366	-0.354	0.000
19.000	L	30	Summer	1	+0%	100/30	Summer			130.840	-0.210	0.000
19.001	L	30	Summer	1	+0%	100/30	Summer			130.423	-0.237	0.000
18.001	18	30	Summer	1	+0%	30/30	Summer			128.912	-0.258	0.000
20.000	L	30	Summer	1	+0%	100/30	Summer			130.123	-0.257	0.000
20.001	L	30	Summer	1	+0%	100/30	Summer			129.448	-0.372	0.000
18.002	19	30	Summer	1	+0%	30/30	Summer			128.673	-0.242	0.000
18.003	20	30	Summer	1	+0%	100/30	Summer			128.596	-0.264	0.000
13.007	21	30	Summer	1	+0%					128.421	-1.309	0.000
13.008	HW5	30	Summer	1	+0%					128.376	-1.304	0.000
21.000	L	30	Summer	1	+0%					128.826	-0.513	0.000
21.001	L	30	Summer	1	+0%	100/30	Summer			128.826	-0.419	0.000
13.009	S	30	Summer	1	+0%					128.176	-1.337	0.000
1.014	S	120	Summer	1	+0%					128.117	-1.082	0.000
1.015	S	120	Summer	1	+0%					128.108	-1.007	0.000
22.000	L	120	Summer	1	+0%	30/30	Summer			128.098	-0.302	0.000
22.001	L	120	Summer	1	+0%	30/30	Summer			128.098	-0.159	0.000
1.016	S	120	Summer	1	+0%					128.092	-0.920	0.000
23.000	22	30	Summer	1	+0%	100/30	Summer			129.006	-0.319	0.000
23.001	23	120	Summer	1	+0%	30/30	Summer			128.075	-0.092	0.000
23.002	24	120	Summer	1	+0%	1/60	Summer			128.073	0.053	0.000
23.003	25	120	Summer	1	+0%	1/30	Summer			128.072	0.162	0.000
1.017	HW6	120	Summer	1	+0%					128.070	-0.810	0.000
1.018	S	120	Summer	1	+0%					128.058	-0.762	0.000
24.000	L	120	Summer	1	+0%	30/30	Summer			128.042	-0.129	0.000

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
8.003	10	0.37		24.0	OK	2
8.004	11	0.41		26.6	OK	
8.005	12	0.47		32.3	OK	
9.000	13	0.03		3.1	OK	
8.006	14	0.19		35.9	OK	
7.001	15	0.82		169.8	OK	
1.009	HW3	0.02		319.7	OK	
1.010	S	0.02		317.2	OK	
10.000	L	0.00		0.0	OK	
10.001	L	0.00		0.0	OK	
1.011	S	0.02		310.9	OK	
11.000	L	0.00		0.4	OK	
11.001	L	0.03		7.3	OK	
11.002	L	0.39		107.7	OK	
1.012	S	0.02		377.1	OK	
12.000	L	0.25		48.4	OK	
12.001	L	0.37		74.3	OK	
12.002	L	0.41		114.8	OK	
1.013	S	0.02		419.8	OK	
13.000	L	0.04		9.4	OK	
13.001	L	0.15		53.3	OK	
14.000	L	0.01		1.3	OK	
14.001	L	0.29		21.7	OK	
13.002	S	0.01		111.3	OK	
13.003	S	0.01		97.7	OK	
15.000	L	0.00		0.1	OK	
15.001	L	0.26		76.0	OK	
16.000	L	0.00		0.0	OK	
16.001	L	0.00		0.2	OK	
13.004	S	0.01		114.6	OK	
13.005	HW4	1.69		53.5	SURCHARGED*	
17.000	L	0.09		26.2	OK	
17.001	L	0.14		43.9	OK	
17.002	L	0.25		62.4	OK	
13.006	16	1.54		89.3	SURCHARGED	
18.000	17	0.10		22.7	OK	
19.000	L	0.19		14.2	OK	
19.001	L	0.10		26.9	OK	
18.001	18	0.36		57.4	OK	
20.000	L	0.05		4.8	OK	
20.001	L	0.07		37.4	OK	
18.002	19	0.46		94.3	OK	
18.003	20	0.60		99.5	OK	
13.007	21	0.01		185.4	OK	
13.008	HW5	0.01		181.6	OK	
21.000	L	0.00		0.4	OK	
21.001	L	0.20		59.7	OK	
13.009	S	0.01		229.7	OK	
1.014	S	0.03		426.0	OK	
1.015	S	0.03		408.7	OK	
22.000	L	0.00		0.2	OK	
22.001	L	0.18		52.1	OK	
1.016	S	0.02		378.8	OK	
23.000	22	0.19		3.3	OK	
23.001	23	0.08		21.6	OK	
23.002	24	0.10		28.8	SURCHARGED	
23.003	25	0.23		46.0	SURCHARGED	
1.017	HW6	0.01		317.6	OK	
1.018	S	0.01		283.2	OK	

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4


PN	US/MH Name	Flow / Cap.	Overflow (1/s)	Pipe Flow (1/s)	Status	Level Exceeded
24.000	L	0.14		40.6	OK	

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m ³)
24.001	L 120	Summer	1	+0%	1/60	Summer			128.038	0.048	0.000
1.019	HW4 120	Summer	1	+0%					128.034	-0.689	0.000
1.020	HW9 120	Summer	1	+0%	1/30	Summer			128.019	0.558	0.000
1.021	27 120	Summer	1	+0%	100/240	Summer			127.325	-0.375	0.000
1.022	HW10 60	Summer	1	+0%	100/480	Summer			126.857	-0.793	0.000
25.000	L 180	Winter	1	+0%					127.813	-0.600	0.000
25.001	L 180	Winter	1	+0%					127.670	-0.600	0.000
25.002	S 180	Winter	1	+0%					127.520	-1.500	0.000
26.000	L 180	Winter	1	+0%					127.365	-0.600	0.000
26.001	L 180	Winter	1	+0%	100/600	Summer			127.205	-0.600	0.000
25.003	S 180	Winter	1	+0%					127.049	-1.500	0.000
25.004	HW7 180	Winter	1	+0%	100/480	Summer			126.988	-0.600	0.000
27.000	L 180	Winter	1	+0%	100/30	Summer			127.283	-0.600	0.000
27.001	L 180	Winter	1	+0%	100/30	Summer			127.116	-0.600	0.000
27.002	L 30	Summer	1	+0%	100/30	Summer			126.977	-0.742	0.000
25.005	28 30	Summer	1	+0%	100/30	Summer			126.983	-0.694	0.000
25.006	29 30	Summer	1	+0%	100/30	Summer			126.983	-0.535	0.000
28.000	30 30	Summer	1	+0%	100/30	Summer			128.436	-0.331	0.000
28.001	31 30	Summer	1	+0%	100/30	Summer			128.314	-0.326	0.000
28.002	32 30	Summer	1	+0%	100/30	Summer			128.004	-0.560	0.000
29.000	L 30	Summer	1	+0%	100/30	Summer			128.372	-0.299	0.000
28.003	33 30	Summer	1	+0%	100/30	Summer			127.940	-0.506	0.000
30.000	34 30	Summer	1	+0%	100/30	Summer			129.191	-0.238	0.000
30.001	35 30	Summer	1	+0%	100/30	Summer			128.372	-0.390	0.000
31.000	36 30	Summer	1	+0%	100/30	Summer			129.151	-0.202	0.000
30.002	37 30	Summer	1	+0%	100/30	Summer			128.218	-0.413	0.000
28.004	38 30	Summer	1	+0%	100/30	Summer			127.831	-0.464	0.000
28.005	39 30	Summer	1	+0%	100/30	Summer			127.749	-0.495	0.000
28.006	40 30	Summer	1	+0%	100/30	Summer			127.534	-0.550	0.000
32.000	L 30	Summer	1	+0%	100/30	Summer			128.146	-0.558	0.000
32.001	L 30	Summer	1	+0%	100/30	Summer			128.086	-0.533	0.000
32.002	L 30	Summer	1	+0%	100/30	Summer			128.053	-0.485	0.000
32.003	L 30	Summer	1	+0%	100/30	Summer			128.012	-0.478	0.000
32.004	L 30	Summer	1	+0%	100/30	Summer			127.899	-0.462	0.000
32.005	L 30	Summer	1	+0%	100/30	Summer			127.782	-0.523	0.000
32.006	L 30	Summer	1	+0%	100/30	Summer			127.665	-0.590	0.000
28.007	41 30	Summer	1	+0%	100/30	Summer			127.489	-0.515	0.000
33.000	L 30	Summer	1	+0%	100/30	Summer			127.634	-0.616	0.000
33.001	L 30	Summer	1	+0%	100/30	Summer			127.502	-0.514	0.000
33.002	L 30	Summer	1	+0%	100/30	Summer			127.465	-0.440	0.000
28.008	42 30	Summer	1	+0%	100/30	Summer			127.138	-0.740	0.000
28.009	43 30	Summer	1	+0%	100/30	Summer			127.063	-0.701	0.000
34.000	S 30	Summer	1	+0%	100/30	Summer			127.358	-0.532	0.000
34.001	S28 30	Summer	1	+0%	100/30	Summer			127.298	-0.561	0.000
28.010	44 30	Summer	1	+0%	100/30	Summer			127.008	-0.598	0.000
25.007	45 30	Summer	1	+0%	100/30	Summer			126.983	-0.582	0.000
25.008	HW8 30	Summer	1	+0%					126.817	-0.723	0.000
1.023	HW11 960	Summer	1	+0%	30/120	Summer			126.723	-0.027	0.000
1.024	47 960	Summer	1	+0%	1/120	Summer			126.683	0.153	0.000

PN	US/MH Name	Flow Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
24.001	L	0.21		62.2	SURCHARGED	
1.019	HW4	0.01		227.5	OK	
1.020	HW9	3.22		199.4	SURCHARGED	
1.021	27	0.30		199.4	OK	
1.022	HW10	0.14		221.6	OK	

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
25.000	L	0.00		0.0	OK	
25.001	L	0.00		0.0	OK	
25.002	S	0.00		0.0	OK	
26.000	L	0.00		0.0	OK	
26.001	L	0.00		0.0	OK	
25.003	S	0.00		0.0	OK	
25.004	HW7	0.00		0.0	OK*	
27.000	L	0.00		0.0	OK	
27.001	L	0.00		0.0	OK	
27.002	L	0.00		0.2	OK	
25.005	28	0.01		4.0	OK	
25.006	29	0.01		5.5	OK	
28.000	30	0.16		27.8	OK	
28.001	31	0.17		27.6	OK	
28.002	32	0.09		41.6	OK	
29.000	L	0.25		46.5	OK	
28.003	33	0.18		88.8	OK	
30.000	34	0.10		8.7	OK	
30.001	35	0.04		8.7	OK	
31.000	36	0.24		20.7	OK	
30.002	37	0.10		40.3	OK	
28.004	38	0.31		125.7	OK	
28.005	39	0.25		131.6	OK	
28.006	40	0.19		129.9	OK	
32.000	L	0.10		48.7	OK	
32.001	L	0.10		45.0	OK	
32.002	L	0.20		82.9	OK	
32.003	L	0.24		118.0	OK	
32.004	L	0.26		130.7	OK	
32.005	L	0.29		151.1	OK	
32.006	L	0.18		149.3	OK	
28.007	41	0.38		282.9	OK	
33.000	L	0.06		37.7	OK	
33.001	L	0.12		67.0	OK	
33.002	L	0.36		96.9	OK	
28.008	42	0.22		351.8	OK	
28.009	43	0.20		350.0	OK	
34.000	S	0.19		62.4	OK	
34.001	S28	0.14		114.0	OK	
28.010	44	0.35		376.7	OK	
25.007	45	0.58		376.1	OK	
25.008	HW8	0.33		438.6	OK*	
1.023	HW11	0.29		39.5	OK	
1.024	47	0.55		39.3	SURCHARGED	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 1 Number of Storage Structures 1 Number of Real Time Controls 0


Synthetic Rainfall Details

Rainfall Model FEH D3 (1km) 0.243
 FEH Rainfall Version 1999 E (1km) 0.298
 Site Location GB 445250 237800 SP 45250 37800 F (1km) 2.479
 C (1km) -0.023 Cv (Summer) 0.900
 D1 (1km) 0.318 Cv (Winter) 0.900
 D2 (1km) 0.317

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status OFF
 DVD Status ON
 Inertia Status OFF

Profile(s) Summer and Winter
 Duration(s) (mins) 30, 60, 120, 180, 240, 360, 480, 600, 720, 960
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)
1.000	L 30	Summer	30	+0%	100/30	Summer			130.516	-0.490	0.000
1.001	L 30	Summer	30	+0%	100/30	Summer			130.516	-0.266	0.000
1.002	S 30	Summer	30	+0%					130.509	-0.605	0.000
2.000	L 30	Summer	30	+0%	100/30	Summer			130.644	-0.299	0.000
2.001	L 30	Summer	30	+0%	100/30	Summer			130.615	-0.185	0.000
2.002	L 30	Summer	30	+0%	100/30	Summer			130.576	-0.047	0.000
1.003	S 30	Summer	30	+0%					130.488	-0.432	0.000
1.004	HW1 30	Summer	30	+0%	1/30	Summer			130.465	0.342	0.000
3.000	L 30	Winter	30	+0%	100/30	Summer			130.420	-0.438	0.000
3.001	L 30	Winter	30	+0%	100/30	Summer			130.420	-0.254	0.000
3.002	L 30	Winter	30	+0%	100/30	Summer			130.415	-0.113	0.000
3.003	L 30	Winter	30	+0%	100/30	Summer			130.373	0.000	0.000
1.005	5 30	Summer	30	+0%	30/30	Summer			130.311	0.220	0.000
4.000	1 30	Summer	30	+0%	100/30	Summer			131.153	-0.092	0.000
4.001	2 30	Summer	30	+0%	100/30	Summer			130.974	-0.093	0.000
4.002	3 30	Summer	30	+0%	100/30	Summer			130.823	-0.027	0.000
5.000	L 30	Summer	30	+0%	100/30	Summer			131.261	-0.014	0.000
5.001	L 30	Summer	30	+0%	30/30	Summer			131.193	0.087	0.000
5.002	L 30	Summer	30	+0%	30/30	Summer			130.831	0.005	0.000
4.003	4 30	Summer	30	+0%	100/30	Summer			130.427	-0.289	0.000
1.006	6 30	Summer	30	+0%	30/30	Summer			130.145	0.114	0.000
1.007	HW2 30	Summer	30	+0%					129.372	-1.257	0.000
6.000	L 30	Summer	30	+0%	100/30	Summer			129.996	-0.314	0.000
6.001	L 30	Summer	30	+0%	100/30	Summer			129.996	-0.184	0.000
1.008	S 30	Summer	30	+0%					129.268	-1.261	0.000
7.000	L 30	Summer	30	+0%	30/30	Summer			130.198	0.225	0.000
8.000	7 30	Summer	30	+0%	100/30	Summer	100/30	Summer	130.244	-0.156	0.000
8.001	8 30	Summer	30	+0%	100/30	Summer			130.134	-0.077	0.000
8.002	9 30	Summer	30	+0%	30/30	Summer			129.995	0.096	0.000

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	L	0.00		0.2	OK	
1.001	L	0.36		93.4	OK	
1.002	S	0.04		183.0	OK	
2.000	L	0.32		96.5	OK	
2.001	L	0.54		182.8	OK	
2.002	L	0.96		257.7	OK	
1.003	S	0.10		290.2	OK	
1.004	HW1	2.54		78.1	SURCHARGED*	
3.000	L	0.00		0.5	OK	
3.001	L	0.11		32.3	OK	
3.002	L	0.16		43.8	OK	
3.003	L	0.22		43.8	OK	
1.005	5	1.35		104.1	SURCHARGED	
4.000	1	0.65		24.2	OK	
4.001	2	0.78		52.6	OK	
4.002	3	1.00		65.7	OK	
5.000	L	0.61		39.5	OK	
5.001	L	1.11		74.1	SURCHARGED	
5.002	L	1.08		69.3	SURCHARGED	
4.003	4	0.29		133.2	OK	
1.006	6	1.95		218.9	SURCHARGED	
1.007	HW2	0.01		218.0	OK	
6.000	L	0.00		1.0	OK	
6.001	L	0.81		258.1	OK	
1.008	S	0.02		456.4	OK	
7.000	L	2.13		413.2	SURCHARGED	
8.000	7	0.46		30.7	OK	3
8.001	8	0.82		56.8	OK	
8.002	9	0.84		53.9	SURCHARGED	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m ³)	
8.003	10	30	Summer	30	+0%	30/30	Summer	100/30	Summer	129.921	0.131	0.000
8.004	11	30	Summer	30	+0%	30/30	Summer			129.833	0.154	0.000
8.005	12	30	Summer	30	+0%	30/30	Summer			129.735	0.178	0.000
9.000	13	30	Summer	30	+0%					130.240	-0.185	0.000
8.006	14	30	Summer	30	+0%	30/30	Summer			129.387	0.102	0.000
7.001	15	30	Summer	30	+0%	30/30	Summer			129.279	0.171	0.000
1.009	HW3	30	Summer	30	+0%					128.955	-1.009	0.000
1.010	S	30	Summer	30	+0%					128.933	-1.002	0.000
10.000	L	180	Winter	30	+0%					129.351	-0.600	0.000
10.001	L	180	Winter	30	+0%					129.209	-0.600	0.000
1.011	S	30	Summer	30	+0%					128.872	-1.009	0.000
11.000	L	30	Summer	30	+0%	100/30	Summer			129.620	-0.190	0.000
11.001	L	30	Summer	30	+0%	100/30	Summer			129.620	-0.080	0.000
11.002	L	30	Summer	30	+0%	30/30	Summer			129.632	0.012	0.000
1.012	S	30	Summer	30	+0%					128.799	-0.981	0.000
12.000	L	30	Summer	30	+0%	30/30	Summer			129.491	0.003	0.000
12.001	L	30	Summer	30	+0%	30/30	Summer			129.449	0.075	0.000
12.002	L	30	Summer	30	+0%	30/30	Summer			129.408	0.071	0.000
1.013	S	180	Winter	30	+0%					128.669	-0.828	0.000
13.000	L	30	Summer	30	+0%					130.124	-0.409	0.000
13.001	L	30	Summer	30	+0%					130.086	-0.293	0.000
14.000	L	30	Summer	30	+0%					129.962	-0.263	0.000
14.001	L	30	Summer	30	+0%	30/30	Summer			129.321	0.221	0.000
13.002	S	30	Summer	30	+0%					129.315	-0.805	0.000
13.003	S	30	Summer	30	+0%					129.301	-0.742	0.000
15.000	L	30	Summer	30	+0%	100/30	Summer			130.051	-0.381	0.000
15.001	L	30	Summer	30	+0%	100/30	Summer			130.051	-0.201	0.000
16.000	L	180	Winter	30	+0%					129.962	-0.600	0.000
16.001	L	30	Winter	30	+0%	30/30	Summer			129.287	0.071	0.000
13.004	S	30	Winter	30	+0%					129.287	-0.678	0.000
13.005	HW4	30	Winter	30	+0%	1/30	Summer			129.268	0.575	0.000
17.000	L	30	Summer	30	+0%					130.065	-0.351	0.000
17.001	L	30	Summer	30	+0%					129.980	-0.303	0.000
17.002	L	30	Summer	30	+0%	100/30	Summer			129.751	-0.216	0.000
13.006	16	30	Summer	30	+0%	1/30	Summer			129.210	0.590	0.000
18.000	17	30	Summer	30	+0%	100/30	Summer			129.443	-0.277	0.000
19.000	L	30	Summer	30	+0%	100/30	Summer			130.913	-0.137	0.000
19.001	L	30	Summer	30	+0%	100/30	Summer			130.473	-0.187	0.000
18.001	18	30	Summer	30	+0%	30/30	Summer			129.344	0.174	0.000
20.000	L	30	Summer	30	+0%	100/30	Summer			130.155	-0.225	0.000
20.001	L	30	Summer	30	+0%	100/30	Summer			129.520	-0.300	0.000
18.002	19	30	Summer	30	+0%	30/30	Summer			129.100	0.185	0.000
18.003	20	60	Summer	30	+0%	100/30	Summer			128.860	0.000	0.000
13.007	21	180	Winter	30	+0%					128.701	-1.029	0.000
13.008	HW5	180	Winter	30	+0%					128.696	-0.984	0.000
21.000	L	30	Summer	30	+0%					128.985	-0.354	0.000
21.001	L	30	Summer	30	+0%	100/30	Summer			128.985	-0.260	0.000
13.009	S	180	Winter	30	+0%					128.675	-0.838	0.000
1.014	S	180	Winter	30	+0%					128.641	-0.558	0.000
1.015	S	120	Winter	30	+0%					128.622	-0.493	0.000
22.000	L	180	Winter	30	+0%	30/30	Summer			128.593	0.193	0.000
22.001	L	180	Winter	30	+0%	30/30	Summer			128.593	0.336	0.000
1.016	S	120	Winter	30	+0%					128.591	-0.421	0.000
23.000	22	30	Summer	30	+0%	100/30	Summer			129.112	-0.213	0.000
23.001	23	180	Winter	30	+0%	30/30	Summer			128.552	0.385	0.000
23.002	24	180	Winter	30	+0%	1/60	Summer			128.551	0.531	0.000
23.003	25	180	Winter	30	+0%	1/30	Summer			128.549	0.639	0.000
1.017	HW6	120	Winter	30	+0%					128.547	-0.333	0.000
1.018	S	120	Winter	30	+0%					128.520	-0.300	0.000
24.000	L	120	Winter	30	+0%	30/30	Summer			128.476	0.305	0.000

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for STORM NETWORK 4

PN	US/MH Name	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
8.003	10	0.92		59.2	SURCHARGED	2
8.004	11	1.00		65.0	SURCHARGED	
8.005	12	1.10		75.6	SURCHARGED	
9.000	13	0.07		9.1	OK	
8.006	14	0.53		98.5	SURCHARGED	
7.001	15	2.36		488.3	SURCHARGED	
1.009	HW3	0.05		852.9	OK	
1.010	S	0.05		848.1	OK	
10.000	L	0.00		0.0	OK	
10.001	L	0.00		0.0	OK	
1.011	S	0.04		827.5	OK	
11.000	L	0.01		1.8	OK	
11.001	L	0.13		34.3	OK	
11.002	L	1.09		302.1	SURCHARGED	
1.012	S	0.06		1008.2	OK	
12.000	L	0.72		138.2	SURCHARGED	
12.001	L	1.11		221.4	SURCHARGED	
12.002	L	1.26		348.9	SURCHARGED	
1.013	S	0.02		423.0	OK	
13.000	L	0.10		27.4	OK	
13.001	L	0.52		180.1	OK	
14.000	L	0.03		3.7	OK	
14.001	L	0.93		69.4	SURCHARGED	
13.002	S	0.02		369.3	OK	
13.003	S	0.02		276.1	OK	
15.000	L	0.00		0.9	OK	
15.001	L	0.77		225.1	OK	
16.000	L	0.00		0.0	OK	
16.001	L	0.00		0.2	SURCHARGED	
13.004	S	0.02		233.0	OK	
13.005	HW4	2.61		82.5	SURCHARGED*	
17.000	L	0.27		75.8	OK	
17.001	L	0.43		134.5	OK	
17.002	L	0.74		182.0	OK	
13.006	16	2.74		159.3	SURCHARGED	
18.000	17	0.28		65.5	OK	
19.000	L	0.54		41.2	OK	
19.001	L	0.30		84.6	OK	
18.001	18	0.96		154.2	SURCHARGED	
20.000	L	0.14		13.8	OK	
20.001	L	0.24		128.2	OK	
18.002	19	1.28		260.1	SURCHARGED	
18.003	20	1.32		218.3	OK	
13.007	21	0.01		192.1	OK	
13.008	HW5	0.01		188.5	OK	
21.000	L	0.00		0.8	OK	
21.001	L	0.60		181.5	OK	
13.009	S	0.01		198.1	OK	
1.014	S	0.03		462.9	OK	
1.015	S	0.03		508.2	OK	
22.000	L	0.00		0.4	SURCHARGED	
22.001	L	0.26		76.7	SURCHARGED	
1.016	S	0.03		493.3	OK	
23.000	22	0.54		9.8	OK	
23.001	23	0.11		29.6	SURCHARGED	
23.002	24	0.21		57.1	SURCHARGED	
23.003	25	0.46		93.5	SURCHARGED	
1.017	HW6	0.02		432.7	OK	
1.018	S	0.02		356.5	OK	