


Woods Hardwick		Page 1
15-17 Goldington Road Bedford Bedfordshire MK40 3NH		
Date 03/05/2017 12:13	Designed by a.tew	
File SW East proposed 02.05....	Checked by	
XP Solutions		Network 2014.1.1

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for SW EAST PROPOSED 23.07.13.SWS

Pipe Sizes SW WEST DEVELOPMENT Manhole Sizes SW WEST DEVELOPMENT






FEH Rainfall Model

Return Period (years)	2
Site Location GB 450500 225250 SP 50500 25250	
C (1km)	-0.023
D1 (1km)	0.328
D2 (1km)	0.309
D3 (1km)	0.264
E (1km)	0.292
F (1km)	2.461
Maximum Rainfall (mm/hr)	0
Maximum Time of Concentration (mins)	30
Foul Sewage (l/s/ha)	0.000
Volumetric Runoff Coeff.	0.750
Add Flow / Climate Change (%)	0
Minimum Backdrop Height (m)	0.000
Maximum Backdrop Height (m)	0.000
Min Design Depth for Optimisation (m)	1.200
Min Vel for Auto Design only (m/s)	1.00
Min Slope for Optimisation (1:X)	500

Designed with Level Soffits


Network Design Table for SW EAST PROPOSED 23.07.13.SWS

# - Indicates pipe length does not match coordinates















PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.000	48.425	0.442	109.6	0.075	5.00	0.0	0.600	o	150	
1.001	22.970	0.291	78.9	0.086	0.00	0.0	0.600	o	225	
1.002	37.335	0.452	82.6	0.100	0.00	0.0	0.600	o	225	
1.003	22.125	0.316	70.0	0.063	0.00	0.0	0.600	o	225	
1.004	51.854	0.429	120.9	0.142	0.00	0.0	0.600	o	225	

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)
1.000	0.00	5.84	126.100	0.075	0.0	0.0	0.0	0.96	17.0	0.0
1.001	0.00	6.10	125.583	0.161	0.0	0.0	0.0	1.47	58.6	0.0
1.002	0.00	6.53	125.292	0.261	0.0	0.0	0.0	1.44	57.2	0.0
1.003	0.00	6.77	124.840	0.324	0.0	0.0	0.0	1.56	62.2	0.0
1.004	0.00	7.50	124.524	0.466	0.0	0.0	0.0	1.19	47.2	0.0


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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
2.000	41.092	0.280	146.8	0.048	5.00	0.0	0.600	o	150	
2.001	8.985	0.108	83.2	0.000	0.00	0.0	0.600	o	150	
3.000	13.687	0.339	40.4	0.063	5.00	0.0	0.600	o	150	
3.001	22.832	0.195	117.1	0.039	0.00	0.0	0.600	o	150	
4.000	22.194	0.312	71.1	0.049	5.00	0.0	0.600	o	150	
2.002	16.307	0.123	132.6	0.055	0.00	0.0	0.600	o	225	
2.003	4.596	0.099	46.4	0.014	0.00	0.0	0.600	o	225	
2.004	20.705	0.228	90.8	0.000	0.00	0.0	0.600	o	225	
2.005	6.475	0.009	719.4	0.010	0.00	0.0	0.600	o	225	
5.000	20.917	0.226	92.6	0.060	5.00	0.0	0.600	o	150	
2.006	10.070	0.028	359.6	0.000	0.00	0.0	0.600	o	225	
1.005	48.316	0.433	111.6	0.066	0.00	0.0	0.600	o	225	
1.006	70.328#	0.872	80.7	0.393	0.00	0.0	0.600	o	300	
6.000	13.630#	0.100	136.3	0.080	5.00	0.0	0.600	o	300	

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)
2.000	0.00	5.83	124.970	0.048	0.0	0.0	0.0	0.83	14.6	0.0
2.001	0.00	5.96	124.690	0.048	0.0	0.0	0.0	1.10	19.5	0.0
3.000	0.00	5.14	125.041	0.063	0.0	0.0	0.0	1.59	28.1	0.0
3.001	0.00	5.55	124.702	0.102	0.0	0.0	0.0	0.93	16.4	0.0
4.000	0.00	5.31	124.894	0.049	0.0	0.0	0.0	1.19	21.1	0.0
2.002	0.00	6.20	124.507	0.254	0.0	0.0	0.0	1.13	45.1	0.0
2.003	0.00	6.24	124.384	0.268	0.0	0.0	0.0	1.92	76.5	0.0
2.004	0.00	6.49	124.285	0.268	0.0	0.0	0.0	1.37	54.6	0.0
2.005	0.00	6.72	124.057	0.278	0.0	0.0	0.0	0.48	19.1	0.0
5.000	0.00	5.33	124.349	0.060	0.0	0.0	0.0	1.04	18.5	0.0
2.006	0.00	6.96	124.048	0.338	0.0	0.0	0.0	0.68	27.2	0.0
1.005	0.00	8.15	124.020	0.870	0.0	0.0	0.0	1.24	49.2	0.0
1.006	0.00	8.82	123.512	1.263	0.0	0.0	0.0	1.75	123.9	0.0
6.000	0.00	5.17	123.100	0.080	0.0	0.0	0.0	1.34	95.1	0.0


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Network Design Table for SW EAST PROPOSED 23.07.13.SWS
















PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
6.001	6.990#	0.360	19.4	0.000	0.00	0.0	0.600	o	300	
1.007	37.795#	0.840	45.0	0.000	0.00	0.0	0.600	o	450	
7.000	1.000	0.010	100.0	0.000	5.00	0.0	0.600	o	300	
7.001	9.685#	0.140	69.2	0.085	0.00	0.0	0.600	o	150	
1.008	15.594#	0.385	40.5	0.000	0.00	0.0	0.600	o	450	
8.000	66.397	0.579	114.7	0.112	5.00	0.0	0.600	o	150	
8.001	6.889	0.063	109.3	0.041	0.00	0.0	0.600	o	225	
8.002	48.289	0.423	114.2	0.064	0.00	0.0	0.600	o	225	
9.000	13.342	0.130	102.6	0.050	5.00	0.0	0.600	o	150	
9.001	5.771	0.295	19.6	0.030	0.00	0.0	0.600	o	150	
8.003	44.670#	0.550	81.2	0.120	0.00	0.0	0.600	o	225	
10.000	22.661#	0.151	150.1	0.050	5.00	0.0	0.600	o	150	
8.004	9.590#	0.055	174.4	0.000	0.00	0.0	0.600	o	225	
8.005	46.800#	0.430	108.8	0.147	0.00	0.0	0.600	o	300	

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	0.00	5.20	123.000	0.080	0.0	0.0	0.0	3.58	253.4	0.0
1.007	0.00	9.02	122.490	1.343	0.0	0.0	0.0	3.04	483.1	0.0
7.000	0.00	5.01	122.100	0.000	0.0	0.0	0.0	1.57	111.1	0.0
7.001	0.00	5.14	122.090	0.085	0.0	0.0	0.0	1.21	21.4	0.0
1.008	0.00	9.10	121.650	1.428	0.0	0.0	0.0	3.20	509.3	0.0
8.000	0.00	6.18	125.230	0.112	0.0	0.0	0.0	0.94	16.6	0.0
8.001	0.00	6.27	124.576	0.153	0.0	0.0	0.0	1.25	49.7	0.0
8.002	0.00	6.93	124.513	0.217	0.0	0.0	0.0	1.22	48.6	0.0
9.000	0.00	5.22	124.590	0.050	0.0	0.0	0.0	0.99	17.5	0.0
9.001	0.00	5.27	124.460	0.080	0.0	0.0	0.0	2.29	40.4	0.0
8.003	0.00	7.44	124.015	0.417	0.0	0.0	0.0	1.45	57.7	0.0
10.000	0.00	5.46	123.691	0.050	0.0	0.0	0.0	0.82	14.5	0.0
8.004	0.00	7.60	123.465	0.467	0.0	0.0	0.0	0.99	39.2	0.0
8.005	0.00	8.12	123.335	0.614	0.0	0.0	0.0	1.51	106.5	0.0


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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
8.006	3.585#	0.353	10.2	0.059	0.00	0.0	0.600	o	300	
11.000	10.000	0.100	100.0	0.291	5.00	0.0	0.600	o	300	
11.001	12.723	0.210	60.6	0.000	0.00	0.0	0.600	o	300	
11.002	89.250#	0.438	203.8	0.041	0.00	0.0	0.600	o	300	
8.007	22.990#	0.912	25.2	0.000	0.00	0.0	0.600	o	300	
12.000	12.568	0.171	73.5	0.041	5.00	0.0	0.600	o	150	
12.001	5.616	0.030	187.2	0.048	0.00	0.0	0.600	o	150	
12.002	12.180#	0.076	160.3	0.044	0.00	0.0	0.600	o	150	
12.003	17.830#	0.032	557.2	0.052	0.00	0.0	0.600	o	150	
12.004	15.688#	0.099	158.5	0.050	0.00	0.0	0.600	o	150	
12.005	6.480#	0.894	7.2	0.030	0.00	0.0	0.600	o	150	
13.000	17.960	0.502	35.8	0.020	5.00	0.0	0.600	o	150	
14.000	1.000	0.517	1.9	0.020	5.00	0.0	0.600	o	150	
13.001	40.380	0.250	161.5	0.000	0.00	0.0	0.600	o	300	
15.000	9.919	0.103	96.3	0.000	5.00	0.0	0.600	o	150	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
8.006	0.00	8.13	122.905	0.673	0.0	0.0	0.0	4.96	350.7	0.0
11.000	0.00	5.11	123.300	0.291	0.0	0.0	0.0	1.57	111.1	0.0
11.001	0.00	5.21	123.200	0.291	0.0	0.0	0.0	2.02	143.0	0.0
11.002	0.00	6.57	122.990	0.332	0.0	0.0	0.0	1.10	77.6	0.0
8.007	0.00	8.26	122.552	1.005	0.0	0.0	0.0	3.14	222.3	0.0
12.000	0.00	5.18	123.172	0.041	0.0	0.0	0.0	1.17	20.7	0.0
12.001	0.00	5.31	123.001	0.089	0.0	0.0	0.0	0.73	12.9	0.0
12.002	0.00	5.56	122.971	0.133	0.0	0.0	0.0	0.79	14.0	0.0
12.003	0.00	6.27	122.895	0.185	0.0	0.0	0.0	0.42	7.4	0.0
12.004	0.00	6.60	122.863	0.235	0.0	0.0	0.0	0.80	14.1	0.0
12.005	0.00	6.63	122.764	0.265	0.0	0.0	0.0	3.77	66.6	0.0
13.000	0.00	5.18	123.122	0.020	0.0	0.0	0.0	1.69	29.8	0.0
14.000	0.00	5.00	123.145	0.020	0.0	0.0	0.0	7.30	129.1	0.0
13.001	0.00	5.72	121.970	0.040	0.0	0.0	0.0	1.23	87.3	0.0
15.000	0.00	5.16	122.303	0.000	0.0	0.0	0.0	1.02	18.1	0.0


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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
15.001	73.181	0.225	325.2	0.000	0.00	0.0	0.600	o	375	
15.002	33.859	0.105	322.5	0.000	0.00	0.0	0.600	o	375	
12.006	26.051	0.080	325.6	0.057	0.00	0.0	0.600	o	450	
8.008	56.214#	0.185	303.9	0.036	0.00	0.0	0.600	o	450	
16.000	18.666#	0.100	186.7	0.060	5.00	0.0	0.600	o	300	
16.001	5.606#	0.030	186.9	0.060	0.00	0.0	0.600	o	300	
16.002	25.784#	0.110	234.4	0.050	0.00	0.0	0.600	o	300	
16.003	7.630#	0.040	190.8	0.050	0.00	0.0	0.600	o	300	
16.004	12.974#	0.030	432.5	0.060	0.00	0.0	0.600	o	600	
17.000	14.093#	0.060	234.9	0.020	5.00	0.0	0.600	o	300	
16.005	39.671#	0.090	440.8	0.050	0.00	0.0	0.600	o	600	
16.006	31.681#	0.070	452.6	0.050	0.00	0.0	0.600	o	600	
18.000	17.303#	0.220	78.7	0.030	5.00	0.0	0.600	o	300	
16.007	5.047#	0.020	252.4	0.028	0.00	0.0	0.600	o	600	
16.008	14.888#	0.055	270.7	0.060	0.00	0.0	0.600	o	450	

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)
15.001	0.00	6.38	121.975	0.000	0.0	0.0	0.0	1.00	110.4	0.0
15.002	0.00	6.94	121.750	0.000	0.0	0.0	0.0	1.00	110.8	0.0
12.006	0.00	7.33	121.570	0.362	0.0	0.0	0.0	1.12	178.3	0.0
8.008	0.00	9.06	121.490	1.403	0.0	0.0	0.0	1.16	184.6	0.0
16.000	0.00	5.27	122.150	0.060	0.0	0.0	0.0	1.15	81.1	0.0
16.001	0.00	5.35	122.050	0.120	0.0	0.0	0.0	1.15	81.1	0.0
16.002	0.00	5.77	122.020	0.170	0.0	0.0	0.0	1.02	72.3	0.0
16.003	0.00	5.88	121.910	0.220	0.0	0.0	0.0	1.13	80.2	0.0
16.004	0.00	6.07	121.570	0.280	0.0	0.0	0.0	1.16	329.3	0.0
17.000	0.00	5.23	121.900	0.020	0.0	0.0	0.0	1.02	72.2	0.0
16.005	0.00	6.64	121.540	0.350	0.0	0.0	0.0	1.15	326.1	0.0
16.006	0.00	7.11	121.450	0.400	0.0	0.0	0.0	1.14	321.8	0.0
18.000	0.00	5.16	121.900	0.030	0.0	0.0	0.0	1.77	125.4	0.0
16.007	0.00	7.16	121.380	0.458	0.0	0.0	0.0	1.53	432.1	0.0
16.008	0.00	7.36	121.360	0.518	0.0	0.0	0.0	1.23	195.8	0.0


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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.009	41.647#	0.150	277.6	0.000	0.00	0.0	0.600	o	525	
1.010	67.139	0.250	268.6	0.067	0.00	0.0	0.600	o	525	
19.000	3.770#	0.640	5.9	0.000	5.00	0.0	0.600	o	100	
19.001	23.689#	0.180	131.6	0.000	0.00	0.0	0.600	o	225	
20.000	5.520#	0.821	6.7	0.030	5.00	0.0	0.600	o	100	
19.002	23.205#	0.170	136.5	0.000	0.00	0.0	0.600	o	225	
21.000	3.269#	0.040	81.7	0.050	5.00	0.0	0.600	o	100	
21.001	7.073#	0.188	37.6	0.050	0.00	0.0	0.600	o	100	
21.002	8.244#	0.817	10.1	0.047	0.00	0.0	0.600	o	100	
19.003	12.105#	0.090	134.5	0.000	0.00	0.0	0.600	o	225	
19.004	35.751#	0.270	132.4	0.000	0.00	0.0	0.600	o	225	
19.005	34.159#	0.285	119.9	0.106	0.00	0.0	0.600	o	225	
19.006	70.423#	1.380	51.0	0.000	0.00	0.0	0.600	o	225	
22.000	10.000	0.070	142.9	0.200	5.00	0.0	0.600	o	450	
22.001	10.821	0.050	216.4	0.008	0.00	0.0	0.600	o	300	

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)
1.009	0.00	9.62	121.230	3.349	0.0	0.0	0.0	1.34	289.9	0.0
1.010	0.00	10.44	121.080	3.416	0.0	0.0	0.0	1.36	294.8	0.0
19.000	0.00	5.02	124.635	0.000	0.0	0.0	0.0	3.21	25.2	0.0
19.001	0.00	5.37	123.870	0.000	0.0	0.0	0.0	1.14	45.3	0.0
20.000	0.00	5.03	124.636	0.030	0.0	0.0	0.0	3.00	23.6	0.0
19.002	0.00	5.71	123.690	0.030	0.0	0.0	0.0	1.12	44.4	0.0
21.000	0.00	5.06	124.690	0.050	0.0	0.0	0.0	0.85	6.7	0.0
21.001	0.00	5.16	124.650	0.100	0.0	0.0	0.0	1.26	9.9	0.0
21.002	0.00	5.21	124.462	0.147	0.0	0.0	0.0	2.45	19.2	0.0
19.003	0.00	5.89	123.520	0.177	0.0	0.0	0.0	1.13	44.8	0.0
19.004	0.00	6.42	123.430	0.177	0.0	0.0	0.0	1.13	45.1	0.0
19.005	0.00	6.89	123.160	0.283	0.0	0.0	0.0	1.19	47.4	0.0
19.006	0.00	7.53	122.875	0.283	0.0	0.0	0.0	1.84	73.0	0.0
22.000	0.00	5.10	121.540	0.200	0.0	0.0	0.0	1.70	270.2	0.0
22.001	0.00	5.27	121.470	0.208	0.0	0.0	0.0	1.06	75.3	0.0


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Network Design Table for SW EAST PROPOSED 23.07.13.SWS















PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
19.007	80.000	0.365	219.2	0.118	0.00	0.0	0.600	o	300	
23.000	30.000	0.300	100.0	0.295	5.00	0.0	0.600	o	375	
23.001	21.575#	0.210	102.7	0.100	0.00	0.0	0.600	o	300	
24.000	100.000	1.865	53.6	0.000	5.00	0.0	0.600	o	225	
23.002	53.884	0.400	134.7	0.074	0.00	0.0	0.600	o	300	
25.000	10.000	0.080	125.0	0.079	5.00	0.0	0.600	o	375	
25.001	12.515	0.130	96.3	0.050	0.00	0.0	0.600	o	300	
23.003	50.998	0.435	117.2	0.071	0.00	0.0	0.600	o	300	
1.011	20.192#	0.300	67.3	0.237	0.00	0.0	0.600	o	525	
26.000	21.300#	0.125	170.4	0.302	5.00	0.0	0.600	o	300	
27.000	19.400#	0.335	57.9	0.050	5.00	0.0	0.600	o	225	
26.001	19.870#	0.260	76.4	0.000	0.00	0.0	0.600	o	150	

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)
19.007	0.00	8.79	121.420	0.609	0.0	0.0	0.0	1.06	74.8	0.0
23.000	0.00	5.28	122.400	0.295	0.0	0.0	0.0	1.81	200.1	0.0
23.001	0.00	5.51	122.100	0.395	0.0	0.0	0.0	1.55	109.6	0.0
24.000	0.00	5.93	123.830	0.000	0.0	0.0	0.0	1.79	71.2	0.0
23.002	0.00	6.59	121.890	0.469	0.0	0.0	0.0	1.35	95.6	0.0
25.000	0.00	5.10	121.700	0.079	0.0	0.0	0.0	1.62	178.8	0.0
25.001	0.00	5.23	121.620	0.129	0.0	0.0	0.0	1.60	113.3	0.0
23.003	0.00	7.18	121.490	0.669	0.0	0.0	0.0	1.45	102.6	0.0
1.011	0.00	10.57	120.830	4.931	0.0	0.0	0.0	2.73	591.7	0.0
26.000	0.00	5.30	121.290	0.302	0.0	0.0	0.0	1.20	84.9	0.0
27.000	0.00	5.19	121.500	0.050	0.0	0.0	0.0	1.72	68.5	0.0
26.001	0.00	5.58	121.165	0.352	0.0	0.0	0.0	1.15	20.3	0.0

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Network Design Table for SW EAST PROPOSED 23.07.13.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.012	34.280#	0.520	65.9	0.000	0.00	0.0	0.600	o	525	
28.000	17.445#	0.840	20.8	0.000	5.00	0.0	0.600	o	375	
28.001	14.193	0.186	76.3	0.044	0.00	0.0	0.600	o	375	
28.002	3.120#	0.119	26.2	0.000	0.00	0.0	0.600	o	375	
28.003	58.196#	1.055	55.2	0.058	0.00	0.0	0.600	o	375	
29.000	24.800#	0.125	198.4	0.158	5.00	0.0	0.600	o	300	
29.001	23.100#	0.190	121.6	0.000	0.00	0.0	0.600	o	150	
28.004	72.000#	0.480	150.0	0.037	0.00	0.0	0.600	o	375	
28.005	29.329#	0.465	63.1	0.000	0.00	0.0	0.600	o	375	
1.013	13.550	0.200	67.8	0.077	0.00	0.0	0.600	oo	45	
30.000	29.000	0.480	60.4	0.180	5.00	0.0	0.600	o	300	
30.001	5.000	0.050	100.0	0.000	0.00	0.0	0.600	o	300	
1.014	42.000	0.185	227.0	0.000	0.00	0.0	0.600	oo	45	
31.000	36.380	0.160	227.4	0.180	5.00	0.0	0.600	o	300	

















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)
1.012	0.00	10.77	120.530	5.283	0.0	0.0	0.0	2.76	597.9	0.0
28.000	0.00	5.07	123.380	0.000	0.0	0.0	0.0	3.99	440.8	0.0
28.001	0.00	5.19	122.540	0.044	0.0	0.0	0.0	2.08	229.3	0.0
28.002	0.00	5.20	122.354	0.044	0.0	0.0	0.0	3.55	392.2	0.0
28.003	0.00	5.60	122.235	0.102	0.0	0.0	0.0	2.44	269.9	0.0
29.000	0.00	5.37	121.720	0.158	0.0	0.0	0.0	1.11	78.6	0.0
29.001	0.00	5.79	121.595	0.158	0.0	0.0	0.0	0.91	16.1	0.0
28.004	0.00	6.61	121.180	0.297	0.0	0.0	0.0	1.48	163.1	0.0
28.005	0.00	6.82	120.700	0.297	0.0	0.0	0.0	2.28	252.3	0.0
1.013	0.00	10.85	120.010	5.657	0.0	0.0	0.0	2.96	1672.3	0.0
30.000	0.00	5.24	120.640	0.180	0.0	0.0	0.0	2.03	143.2	0.0
30.001	0.00	5.29	120.160	0.180	0.0	0.0	0.0	1.57	111.1	0.0
1.014	0.00	11.29	119.810	5.837	0.0	0.0	0.0	1.61	910.3	0.0
31.000	0.00	5.58	120.050	0.180	0.0	0.0	0.0	1.04	73.4	0.0




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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
31.001	2.210	0.040	55.3	0.000	0.00	0.0	0.600	o	300	
1.015	5.518	0.075	73.6	0.000	0.00	0.0	0.600	o	525	
1.016	67.455#	0.450	149.9	0.016	0.00	0.0	0.600	o	525	
1.017	11.110#	0.080	138.9	0.000	0.00	0.0	0.600	o	525	
1.018	35.286#	0.180	196.0	0.000	0.00	0.0	0.600	o	525	
32.000	29.177#	0.300	97.3	0.047	5.00	0.0	0.600	o	300	
32.001	10.806#	0.370	29.2	0.100	0.00	0.0	0.600	o	300	
32.002	7.249#	0.075	96.7	0.062	0.00	0.0	0.600	o	150	
1.019	24.253#	0.080	303.2	0.010	0.00	0.0	0.600	o	525	
1.020	14.210#	0.050	284.2	0.000	0.00	0.0	0.600	o	525	
33.000	58.534#	0.240	243.9	0.020	5.00	0.0	0.600	o	300	
34.000	1.000#	0.020	50.0	0.000	5.00	0.0	0.600	o	100	
34.001	6.852#	0.520	13.2	0.086	0.00	0.0	0.600	o	150	
33.001	26.144#	0.110	237.7	0.000	0.00	0.0	0.600	o	300	
33.002	31.425#	0.130	241.7	0.000	0.00	0.0	0.600	o	300	
33.003	30.418#	0.200	152.1	0.030	0.00	0.0	0.600	o	300	

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)
31.001	0.00	5.60	119.890	0.180	0.0	0.0	0.0	2.12	149.8	0.0
1.015	0.00	11.32	119.625	6.017	0.0	0.0	0.0	2.61	565.8	0.0
1.016	0.00	11.94	119.550	6.033	0.0	0.0	0.0	1.83	395.6	0.0
1.017	0.00	12.03	119.100	6.033	0.0	0.0	0.0	1.90	411.1	0.0
1.018	0.00	12.40	119.020	6.033	0.0	0.0	0.0	1.60	345.5	0.0
32.000	0.00	5.30	119.960	0.047	0.0	0.0	0.0	1.59	112.7	0.0
32.001	0.00	5.37	119.660	0.147	0.0	0.0	0.0	2.92	206.4	0.0
32.002	0.00	5.48	119.290	0.209	0.0	0.0	0.0	1.02	18.1	0.0
1.019	0.00	12.72	118.840	6.252	0.0	0.0	0.0	1.28	277.3	0.0
1.020	0.00	12.90	118.760	6.252	0.0	0.0	0.0	1.32	286.5	0.0
33.000	0.00	5.97	120.500	0.020	0.0	0.0	0.0	1.00	70.8	0.0
34.000	0.00	5.02	121.120	0.000	0.0	0.0	0.0	1.09	8.6	0.0
34.001	0.00	5.06	121.050	0.086	0.0	0.0	0.0	2.79	49.3	0.0
33.001	0.00	6.40	120.260	0.106	0.0	0.0	0.0	1.02	71.8	0.0
33.002	0.00	6.92	120.150	0.106	0.0	0.0	0.0	1.01	71.2	0.0
33.003	0.00	7.32	120.020	0.136	0.0	0.0	0.0	1.27	89.9	0.0


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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
35.000	1.000	0.010	100.0	0.000	5.00	0.0	0.600	o	300	
36.000	22.652#	0.100	226.5	0.084	5.00	0.0	0.600	o	300	
36.001	31.508#	0.180	175.0	0.000	0.00	0.0	0.600	o	300	
35.001	4.813#	0.050	96.3	0.093	0.00	0.0	0.600	o	150	
33.004	51.933#	0.255	203.7	0.068	0.00	0.0	0.600	o	300	
37.000	10.000	0.040	250.0	0.066	5.00	0.0	0.600	o	300	
37.001	3.130	0.029	107.9	0.000	0.00	0.0	0.600	o	225	
37.002	42.106	0.506	83.2	0.018	0.00	0.0	0.600	o	375	
37.003	27.683	0.835	33.2	0.000	0.00	0.0	0.600	oo	-3	
33.005	20.452#	0.630	32.5	0.020	0.00	0.0	0.600	o	375	
1.021	11.100#	0.250	44.4	0.070	0.00	0.0	0.600	o	525	
38.000	16.507#	0.829	19.9	0.050	5.00	0.0	0.600	o	225	
1.022	65.237#	1.440	45.3	0.000	0.00	0.0	0.600	o	525	

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)
35.000	0.00	5.01	120.030	0.000	0.0	0.0	0.0	1.57	111.1	0.0
36.000	0.00	5.36	120.300	0.084	0.0	0.0	0.0	1.04	73.5	0.0
36.001	0.00	5.81	120.200	0.084	0.0	0.0	0.0	1.19	83.8	0.0
35.001	0.00	5.88	120.020	0.177	0.0	0.0	0.0	1.02	18.1	0.0
33.004	0.00	8.11	119.820	0.381	0.0	0.0	0.0	1.10	77.6	0.0
37.000	0.00	5.17	121.200	0.066	0.0	0.0	0.0	0.99	70.0	0.0
37.001	0.00	5.21	121.160	0.066	0.0	0.0	0.0	1.26	50.0	0.0
37.002	0.00	5.56	120.981	0.084	0.0	0.0	0.0	1.99	219.5	0.0
37.003	0.00	5.77	120.475	0.084	0.0	0.0	0.0	2.28	182.4	0.0
33.005	0.00	8.22	119.490	0.485	0.0	0.0	0.0	3.19	352.3	0.0
1.021	0.00	12.95	118.710	6.807	0.0	0.0	0.0	3.37	729.1	0.0
38.000	0.00	5.09	119.589	0.050	0.0	0.0	0.0	2.95	117.1	0.0
1.022	0.00	13.28	118.460	6.857	0.0	0.0	0.0	3.33	721.8	0.0


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
PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.023	7.970#	0.030	265.7	0.033	0.00	0.0	0.600	o	525	
1.024	49.110#	0.190	258.5	0.000	0.00	0.0	0.600	o	600	
39.000	43.403#	0.550	78.9	0.030	5.00	0.0	0.600	o	100	
39.001	15.654#	0.110	142.3	0.012	0.00	0.0	0.600	o	150	
39.002	25.507#	0.170	150.0	0.066	0.00	0.0	0.600	o	150	
39.003	14.388#	0.100	143.9	0.043	0.00	0.0	0.600	o	150	
40.000	32.387#	0.217	149.2	0.017	5.00	0.0	0.600	o	150	
40.001	14.350#	0.096	149.5	0.036	0.00	0.0	0.600	o	150	
40.002	42.417#	1.167	36.3	0.000	0.00	0.0	0.600	o	150	
39.004	16.920#	0.120	141.0	0.088	0.00	0.0	0.600	o	150	
39.005	29.021#	0.200	145.1	0.180	0.00	0.0	0.600	o	150	
39.006	29.194#	0.200	146.0	0.037	0.00	0.0	0.600	o	150	
39.007	4.919#	0.038	129.4	0.047	0.00	0.0	0.600	o	150	
39.008	4.903#	0.038	129.0	0.002	0.00	0.0	0.600	o	150	
41.000	21.931#	0.327	67.1	0.019	5.00	0.0	0.600	o	100	
41.001	20.176#	0.324	62.3	0.012	0.00	0.0	0.600	o	150	
41.002	14.181#	0.226	62.7	0.012	0.00	0.0	0.600	o	150	
41.003	22.288#	0.800	27.9	0.000	0.00	0.0	0.600	o	150	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E 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	0.00	13.37	117.020	6.890	0.0	0.0	0.0	1.37	296.4	0.0
1.024	0.00	13.92	115.470	6.890	0.0	0.0	0.0	1.51	426.9	0.0
39.000	0.00	5.83	121.700	0.030	0.0	0.0	0.0	0.87	6.8	0.0
39.001	0.00	6.14	121.150	0.042	0.0	0.0	0.0	0.84	14.8	0.0
39.002	0.00	6.66	121.040	0.108	0.0	0.0	0.0	0.82	14.5	0.0
39.003	0.00	6.95	120.870	0.151	0.0	0.0	0.0	0.84	14.8	0.0
40.000	0.00	5.66	122.250	0.017	0.0	0.0	0.0	0.82	14.5	0.0
40.001	0.00	5.95	122.033	0.053	0.0	0.0	0.0	0.82	14.5	0.0
40.002	0.00	6.37	121.937	0.053	0.0	0.0	0.0	1.67	29.6	0.0
39.004	0.00	7.29	120.770	0.292	0.0	0.0	0.0	0.84	14.9	0.0
39.005	0.00	7.87	120.650	0.472	0.0	0.0	0.0	0.83	14.7	0.0
39.006	0.00	8.45	120.450	0.509	0.0	0.0	0.0	0.83	14.7	0.0
39.007	0.00	8.55	120.250	0.556	0.0	0.0	0.0	0.88	15.6	0.0
39.008	0.00	8.64	120.212	0.558	0.0	0.0	0.0	0.88	15.6	0.0
41.000	0.00	5.39	121.851	0.019	0.0	0.0	0.0	0.94	7.4	0.0
41.001	0.00	5.65	121.524	0.031	0.0	0.0	0.0	1.28	22.6	0.0
41.002	0.00	5.84	121.200	0.043	0.0	0.0	0.0	1.27	22.5	0.0
41.003	0.00	6.03	120.974	0.043	0.0	0.0	0.0	1.91	33.8	0.0

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PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
39.009	17.551#	0.119	147.5	0.020	0.00	0.0	0.600	o	150	
42.000	29.924#	0.395	75.8	0.108	5.00	0.0	0.600	o	150	
42.001	28.247#	0.250	113.0	0.037	0.00	0.0	0.600	o	150	
42.002	14.417#	0.195	73.9	0.017	0.00	0.0	0.600	o	150	
43.000	37.779#	0.329	114.8	0.023	5.00	0.0	0.600	o	100	
43.001	27.973#	0.669	41.8	0.018	0.00	0.0	0.600	o	150	
43.002	42.507#	0.133	319.6	0.266	0.00	0.0	0.600	o	225	
42.003	12.673#	0.555	22.8	0.048	0.00	0.0	0.600	o	225	
42.004	10.364#	0.110	94.2	0.062	0.00	0.0	0.600	o	225	
42.005	27.312#	0.029	941.8	0.069	0.00	0.0	0.600	o	300	
39.010	24.204#	0.169	143.2	0.066	0.00	0.0	0.600	o	300	
44.000	13.405#	0.060	223.4	0.060	5.00	0.0	0.600	o	300	
44.001	13.405#	0.050	268.1	0.000	0.00	0.0	0.600	o	300	
44.002	35.413#	0.140	253.0	0.000	0.00	0.0	0.600	o	300	
44.003	11.912#	0.050	238.2	0.000	0.00	0.0	0.600	o	300	
44.004	17.270#	0.064	269.8	0.000	0.00	0.0	0.600	o	300	

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)
39.009	0.00	8.99	120.174	0.621	0.0	0.0	0.0	0.83	14.6	0.0
42.000	0.00	5.43	121.665	0.108	0.0	0.0	0.0	1.16	20.4	0.0
42.001	0.00	5.93	121.270	0.145	0.0	0.0	0.0	0.94	16.7	0.0
42.002	0.00	6.13	121.020	0.162	0.0	0.0	0.0	1.17	20.7	0.0
43.000	0.00	5.88	121.880	0.023	0.0	0.0	0.0	0.72	5.6	0.0
43.001	0.00	6.18	121.551	0.041	0.0	0.0	0.0	1.56	27.6	0.0
43.002	0.00	7.15	120.882	0.307	0.0	0.0	0.0	0.73	28.9	0.0
42.003	0.00	7.23	120.749	0.517	0.0	0.0	0.0	2.75	109.3	0.0
42.004	0.00	7.36	120.194	0.579	0.0	0.0	0.0	1.35	53.6	0.0
42.005	0.00	8.26	120.084	0.648	0.0	0.0	0.0	0.50	35.6	0.0
39.010	0.00	9.30	120.055	1.335	0.0	0.0	0.0	1.31	92.7	0.0
44.000	0.00	5.21	120.250	0.060	0.0	0.0	0.0	1.05	74.1	0.0
44.001	0.00	5.45	120.190	0.060	0.0	0.0	0.0	0.96	67.5	0.0
44.002	0.00	6.05	120.140	0.060	0.0	0.0	0.0	0.98	69.6	0.0
44.003	0.00	6.24	120.000	0.060	0.0	0.0	0.0	1.01	71.7	0.0
44.004	0.00	6.54	119.950	0.060	0.0	0.0	0.0	0.95	67.3	0.0

Network Design Table for SW EAST PROPOSED 23.07.13.SWS















PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
39.011	115.388#	2.913	39.6	0.208	0.00	0.0	0.600	o	300	
39.012	3.690#	0.303	12.2	0.050	0.00	0.0	0.600	o	300	
45.000	77.000#	1.680	45.8	0.094	5.00	0.0	0.600	o	225	
39.013	25.956#	1.090	23.8	0.000	0.00	0.0	0.600	o	300	
1.025	34.847#	0.120	290.4	0.036	0.00	0.0	0.600	o	600	
46.000	24.960#	0.060	416.0	0.074	5.00	0.0	0.600	o	525	
46.001	18.620#	0.050	372.4	0.038	0.00	0.0	0.600	o	525	
46.002	8.190#	0.020	409.5	0.080	0.00	0.0	0.600	o	525	
47.000	13.685#	0.140	97.8	0.028	5.00	0.0	0.600	o	150	
47.001	13.515#	0.185	73.1	0.030	0.00	0.0	0.600	o	150	
47.002	32.988#	0.400	82.5	0.013	0.00	0.0	0.600	o	225	
47.003	7.171#	0.050	143.4	0.000	0.00	0.0	0.600	o	225	
47.004	15.504#	0.150	103.4	0.010	0.00	0.0	0.600	o	225	
47.005	12.485#	0.120	104.0	0.005	0.00	0.0	0.600	o	225	
47.006	18.239#	0.170	107.3	0.005	0.00	0.0	0.600	o	225	
47.007	31.070#	1.190	26.1	0.040	0.00	0.0	0.600	o	225	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
39.011	0.00	10.07	119.886	1.603	0.0	0.0	0.0	2.51	177.1	0.0
39.012	0.00	10.08	116.973	1.653	0.0	0.0	0.0	4.53	320.2	0.0
45.000	0.00	5.66	118.425	0.094	0.0	0.0	0.0	1.94	77.0	0.0
39.013	0.00	10.22	116.670	1.747	0.0	0.0	0.0	3.24	228.7	0.0
1.025	0.00	14.32	115.280	8.673	0.0	0.0	0.0	1.42	402.6	0.0
46.000	0.00	5.38	115.420	0.074	0.0	0.0	0.0	1.09	236.4	0.0
46.001	0.00	5.65	115.360	0.112	0.0	0.0	0.0	1.15	250.0	0.0
46.002	0.00	5.77	115.310	0.192	0.0	0.0	0.0	1.10	238.3	0.0
47.000	0.00	5.22	119.600	0.028	0.0	0.0	0.0	1.02	18.0	0.0
47.001	0.00	5.42	119.460	0.058	0.0	0.0	0.0	1.18	20.8	0.0
47.002	0.00	5.80	119.200	0.071	0.0	0.0	0.0	1.44	57.3	0.0
47.003	0.00	5.91	118.800	0.071	0.0	0.0	0.0	1.09	43.3	0.0
47.004	0.00	6.11	118.750	0.081	0.0	0.0	0.0	1.29	51.1	0.0
47.005	0.00	6.27	118.600	0.086	0.0	0.0	0.0	1.28	51.0	0.0
47.006	0.00	6.51	118.480	0.091	0.0	0.0	0.0	1.26	50.2	0.0
47.007	0.00	6.71	118.310	0.131	0.0	0.0	0.0	2.57	102.2	0.0


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Network Design Table for SW EAST PROPOSED 23.07.13.SWS













PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
47.008	4.394#	0.445	9.9	0.030	0.00	0.0	0.600	o	225	
48.000	12.990#	0.125	103.9	0.018	5.00	0.0	0.600	o	225	
49.000	14.165#	0.750	18.9	0.050	5.00	0.0	0.600	o	150	
47.009	20.164#	0.200	100.8	0.025	0.00	0.0	0.600	o	300	
47.010	17.357#	0.325	53.4	0.010	0.00	0.0	0.600	o	300	
47.011	8.051#	0.050	161.0	0.014	0.00	0.0	0.600	o	525	
47.012	22.785#	0.280	81.4	0.017	0.00	0.0	0.600	o	525	
47.013	19.464#	0.230	84.6	0.017	0.00	0.0	0.600	o	525	
46.003	17.590#	0.050	351.8	0.040	0.00	0.0	0.600	o	525	
46.004	2.690#	0.080	33.6	0.018	0.00	0.0	0.600	o	300	
50.000	10.459#	0.935	11.2	0.000	5.00	0.0	0.600	o	225	
51.000	89.850#	1.360	66.1	0.100	5.00	0.0	0.600	o	225	
51.001	78.149#	1.195	65.4	0.047	0.00	0.0	0.600	o	225	
50.001	21.683#	1.660	13.1	0.011	0.00	0.0	0.600	o	225	

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)
47.008	0.00	6.73	117.120	0.161	0.0	0.0	0.0	4.19	166.5	0.0
48.000	0.00	5.17	116.800	0.018	0.0	0.0	0.0	1.28	51.0	0.0
49.000	0.00	5.10	117.500	0.050	0.0	0.0	0.0	2.33	41.1	0.0
47.009	0.00	6.94	116.600	0.254	0.0	0.0	0.0	1.57	110.7	0.0
47.010	0.00	7.08	116.400	0.264	0.0	0.0	0.0	2.16	152.4	0.0
47.011	0.00	7.15	115.850	0.278	0.0	0.0	0.0	1.76	381.6	0.0
47.012	0.00	7.31	115.800	0.295	0.0	0.0	0.0	2.48	537.8	0.0
47.013	0.00	7.44	115.520	0.312	0.0	0.0	0.0	2.44	527.4	0.0
46.003	0.00	7.69	115.290	0.544	0.0	0.0	0.0	1.19	257.3	0.0
46.004	0.00	7.70	115.240	0.562	0.0	0.0	0.0	2.72	192.3	0.0
50.000	0.00	5.04	118.130	0.000	0.0	0.0	0.0	3.93	156.4	0.0
51.000	0.00	5.93	119.750	0.100	0.0	0.0	0.0	1.61	64.1	0.0
51.001	0.00	6.73	118.390	0.147	0.0	0.0	0.0	1.62	64.4	0.0
50.001	0.00	6.83	117.195	0.158	0.0	0.0	0.0	3.64	144.7	0.0

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Network Design Table for SW EAST PROPOSED 23.07.13.SWS


PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Auto Design
1.026	66.440#	0.130	511.1	0.036	0.00	0.0	0.600	o	600	
52.000	16.000#	0.970	16.5	0.009	5.00	0.0	0.600	o	150	
1.027	18.703#	0.030	623.4	0.021	0.00	0.0	0.600	o	750	
53.000	103.884#	0.570	182.3	0.083	5.00	0.0	0.600	o	225	
53.001	114.526#	0.520	220.2	0.155	0.00	0.0	0.600	o	300	
53.002	23.331#	0.111	210.2	0.046	0.00	0.0	0.600	o	300	
53.003	11.890#	2.624	4.5	0.005	0.00	0.0	0.600	o	300	
1.028	143.569#	0.270	532.0	0.030	0.00	0.0	0.600	o	750	
1.029	15.344#	0.040	383.6	0.000	0.00	0.0	0.600	oo	44	
1.030	2.088#	0.070	29.8	0.000	0.00	0.0	0.600	o	450	
1.031	3.000	0.030	100.0	0.000	0.00	0.0	0.600	o	450	
1.032	8.282	0.110	75.3	0.000	0.00	0.0	0.600	o	450	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.026	0.00	15.36	115.160	9.429	0.0	0.0	0.0	1.07	302.6	0.0
52.000	0.00	5.11	118.000	0.009	0.0	0.0	0.0	2.49	44.0	0.0
1.027	0.00	15.64	115.030	9.459	0.0	0.0	0.0	1.11	491.9	0.0
53.000	0.00	6.79	119.350	0.083	0.0	0.0	0.0	0.97	38.4	0.0
53.001	0.00	8.60	118.705	0.238	0.0	0.0	0.0	1.06	74.6	0.0
53.002	0.00	8.96	118.185	0.284	0.0	0.0	0.0	1.08	76.4	0.0
53.003	0.00	8.99	118.074	0.289	0.0	0.0	0.0	7.43	525.5	0.0
1.028	0.00	17.62	115.000	9.778	0.0	0.0	0.0	1.21	532.9	0.0
1.029	0.00	17.85	114.730	9.778	0.0	0.0	0.0	1.14	492.6	0.0
1.030	0.00	17.86	114.590	9.778	0.0	0.0	0.0	3.73	593.8	0.0
1.031	0.00	17.88	114.520	9.778	0.0	0.0	0.0	2.03	323.4	0.0
1.032	0.00	17.94	114.290	9.778	0.0	0.0	0.0	2.35	373.0	0.0

Free Flowing Outfall Details for SW EAST PROPOSED 23.07.13.SWS

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.032	27	115.000	114.180	0.000	0	0

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Simulation Criteria for SW EAST PROPOSED 23.07.13.SWS

Volumetric Runoff Coeff	0.840	Additional Flow - % of Total Flow	0.000	
Areal Reduction Factor	1.000	MADD Factor * 10m <sup>3</sup> /ha Storage	1.000	
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 Storage Structures	28
Number of Online Controls		17	Number of Time/Area Diagrams	0
Number of Offline Controls		1	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
Site Location	GB 450500 225250 SP 50500 25250
C (1km)	-0.023
D1 (1km)	0.328
D2 (1km)	0.309
D3 (1km)	0.264
E (1km)	0.292
F (1km)	2.461
Summer Storms	No
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Storm Duration (mins)	15



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Online Controls for SW EAST PROPOSED 23.07.13.SWS

Orifice Manhole: 314 (D2b), DS/PN: 6.001, Volume (m<sup>3</sup>): 5.7

Diameter (m) 0.059 Discharge Coefficient 0.600 Invert Level (m) 123.000

Orifice Manhole: 318 (D2b), DS/PN: 7.001, Volume (m<sup>3</sup>): 4.8

Diameter (m) 0.020 Discharge Coefficient 0.600 Invert Level (m) 122.090

Orifice Manhole: 47 (B4b), DS/PN: 11.001, Volume (m<sup>3</sup>): 6.2

Diameter (m) 0.100 Discharge Coefficient 0.600 Invert Level (m) 123.200

Hydro-Brake® Manhole: 311 (D3b), DS/PN: 16.008, Volume (m<sup>3</sup>): 6.4

Design Head (m) 1.700 Hydro-Brake® Type Md6 SW Only Invert Level (m) 121.360  
Design Flow (l/s) 80.7 Diameter (mm) 318

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	10.3	1.200	79.9	3.000	100.2	7.000	152.6
0.200	29.8	1.400	79.0	3.500	108.0	7.500	158.0
0.300	51.2	1.600	79.7	4.000	115.4	8.000	163.2
0.400	69.5	1.800	81.6	4.500	122.4	8.500	168.2
0.500	81.0	2.000	84.2	5.000	129.0	9.000	173.1
0.600	85.0	2.200	87.2	5.500	135.3	9.500	177.8
0.800	85.5	2.400	90.4	6.000	141.3		
1.000	82.6	2.600	93.6	6.500	147.1		

Pre-initialised control selected, excessive flows may result.

Orifice Manhole: 74 (B4a), DS/PN: 22.001, Volume (m<sup>3</sup>): 7.3

Diameter (m) 0.108 Discharge Coefficient 0.600 Invert Level (m) 121.470

Orifice Manhole: 76 (B4a), DS/PN: 23.001, Volume (m<sup>3</sup>): 8.6


Diameter (m) 0.150 Discharge Coefficient 0.600 Invert Level (m) 122.100

Orifice Manhole: 319 (D2b), DS/PN: 25.001, Volume (m<sup>3</sup>): 4.7

Diameter (m) 0.130 Discharge Coefficient 0.600 Invert Level (m) 121.620

Orifice Manhole: 137 (VCN), DS/PN: 26.001, Volume (m<sup>3</sup>): 6.8

Diameter (m) 0.079 Discharge Coefficient 0.600 Invert Level (m) 121.165

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Orifice Manhole: 131 (VCN), DS/PN: 29.001, Volume (m<sup>3</sup>): 5.7

Diameter (m) 0.069 Discharge Coefficient 0.600 Invert Level (m) 121.595

Orifice Manhole: 116 (VCS), DS/PN: 30.001, Volume (m<sup>3</sup>): 7.4

Diameter (m) 0.020 Discharge Coefficient 0.600 Invert Level (m) 120.160

Orifice Manhole: 119 (VCS), DS/PN: 31.001, Volume (m<sup>3</sup>): 8.3

Diameter (m) 0.020 Discharge Coefficient 0.600 Invert Level (m) 119.890

Hydro-Brake® Manhole: 12a, DS/PN: 1.015, Volume (m<sup>3</sup>): 34.3

Design Head (m) 1.450 Hydro-Brake® Type Md10 Invert Level (m) 119.625  
Design Flow (l/s) 440.0 Diameter (mm) 511

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	19.4	1.200	394.8	3.000	630.9	7.000	963.8
0.200	49.9	1.400	431.0	3.500	681.5	7.500	997.6
0.300	85.4	1.600	460.8	4.000	728.5	8.000	1030.3
0.400	123.5	1.800	488.7	4.500	772.7	8.500	1062.0
0.500	162.6	2.000	515.2	5.000	814.5	9.000	1092.8
0.600	201.7	2.200	540.3	5.500	854.3	9.500	1122.8
0.800	276.5	2.400	564.3	6.000	892.3		
1.000	342.3	2.600	587.4	6.500	928.7		

Orifice Manhole: 115 (D1a), DS/PN: 32.002, Volume (m<sup>3</sup>): 6.0

Diameter (m) 0.055 Discharge Coefficient 0.600 Invert Level (m) 119.290

Orifice Manhole: Private (D3b), DS/PN: 34.001, Volume (m<sup>3</sup>): 0.3

Diameter (m) 0.020 Discharge Coefficient 0.600 Invert Level (m) 121.050

Orifice Manhole: Bld 52 TC, DS/PN: 35.001, Volume (m<sup>3</sup>): 3.7


Diameter (m) 0.045 Discharge Coefficient 0.600 Invert Level (m) 120.020

Orifice Manhole: 99b (D1c), DS/PN: 37.001, Volume (m<sup>3</sup>): 3.0

Diameter (m) 0.050 Discharge Coefficient 0.600 Invert Level (m) 121.160

Hydro-Brake® Manhole: 16 (D1b), DS/PN: 46.004, Volume (m<sup>3</sup>): 14.1


Design Head (m) 1.200 Hydro-Brake® Type Md6 SW Only Invert Level (m) 115.240  
Design Flow (l/s) 69.0 Diameter (mm) 300

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Hydro-Brake® Manhole: 16 (D1b), DS/PN: 46.004, Volume (m³): 14.1

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	9.8	1.200	68.6	3.000	89.1	7.000	135.9
0.200	28.0	1.400	68.4	3.500	96.1	7.500	140.6
0.300	47.4	1.600	69.6	4.000	102.7	8.000	145.2
0.400	63.1	1.800	71.7	4.500	108.9	8.500	149.7
0.500	71.6	2.000	74.3	5.000	114.8	9.000	154.0
0.600	74.0	2.200	77.2	5.500	120.4	9.500	158.3
0.800	73.5	2.400	80.1	6.000	125.8		
1.000	70.5	2.600	83.2	6.500	130.9		


Pre-initialised control selected, excessive flows may result.

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Offline Controls for SW EAST PROPOSED 23.07.13.SWS

Pipe Manhole: Ex MH, DS/PN: 38.000, Loop to PN: None

Diameter (m)	0.225	Roughness k (mm)	0.600
Section Type	Pipe/Conduit	Entry Loss Coefficient	0.500
Slope (1:X)	50.0	Coefficient of Contraction	0.600
Length (m)	77.412	Upstream Invert Level (m)	119.589

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Storage Structures for SW EAST PROPOSED 23.07.13.SWS

Tank or Pond Manhole: 314 (D2b), DS/PN: 6.001

Invert Level (m) 123.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	39.0	1.000	39.0	1.001	0.0

Tank or Pond Manhole: 318 (D2b), DS/PN: 7.001

Invert Level (m) 122.090

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	40.0	1.000	40.0	1.001	0.0

Tank or Pond Manhole: 47 (B4b), DS/PN: 11.001

Invert Level (m) 123.800

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	121.0	0.600	121.0	0.601	0.0

Tank or Pond Manhole: 58, DS/PN: 15.002

Invert Level (m) 121.750

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	88.0	0.800	88.0	0.801	0.0

Tank or Pond Manhole: 308 (D3b), DS/PN: 16.006


Invert Level (m) 121.450

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	162.0	1.000	162.0	1.001	0.0

Tank or Pond Manhole: 311 (D3b), DS/PN: 16.008

Invert Level (m) 121.360

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	175.5	1.000	175.5	1.001	0.0

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Porous Car Park Manhole: 73 (B4a), DS/PN: 22.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	15.5
Membrane Percolation (mm/hr)	1000	Length (m)	18.0
Max Percolation (l/s)	77.5	Slope (1:X)	0.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	122.950	Cap Volume Depth (m)	0.000

Tank or Pond Manhole: 74 (B4a), DS/PN: 22.001

Invert Level (m) 121.780

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	65.0	1.200	65.0	1.201	0.0

Porous Car Park Manhole: 75 (B4a), DS/PN: 23.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	30.0
Membrane Percolation (mm/hr)	1000	Length (m)	15.7
Max Percolation (l/s)	130.8	Slope (1:X)	200.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	5
Invert Level (m)	123.550	Cap Volume Depth (m)	0.000

Tank or Pond Manhole: 76 (B4a), DS/PN: 23.001

Invert Level (m) 122.200

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	30.0	1.200	30.0	1.201	0.0

Tank or Pond Manhole: 319 (D2b), DS/PN: 25.001


Invert Level (m) 121.620

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	238.0	0.400	238.0	0.401	0.0

Tank or Pond Manhole: 137 (VCN), DS/PN: 26.001

Invert Level (m) 121.165

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	214.0	0.800	214.0	0.801	0.0

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Tank or Pond Manhole: 131 (VCN), DS/PN: 29.001

Invert Level (m) 121.595

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	114.0	0.500	114.0	0.501	0.0

Tank or Pond Manhole: 116 (VCS), DS/PN: 30.001

Invert Level (m) 120.160

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	108.5	1.200	108.5	1.201	0.0

Tank or Pond Manhole: 119 (VCS), DS/PN: 31.001

Invert Level (m) 119.890

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	104.0	1.200	104.0	1.201	0.0

Tank or Pond Manhole: 12a, DS/PN: 1.015

Invert Level (m) 119.690

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	420.5	1.200	420.5	1.201	0.0

Tank or Pond Manhole: 121 (VCS), DS/PN: 32.001

Invert Level (m) 119.660

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	60.0	0.500	60.0	0.501	0.0


Tank or Pond Manhole: 115 (D1a), DS/PN: 32.002

Invert Level (m) 119.290

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	57.5	0.800	57.5	0.801	0.0

Porous Car Park Manhole: Private (D3b), DS/PN: 34.001

Infiltration Coefficient Base (m/hr)	0.00000	Safety Factor	2.0
Membrane Percolation (mm/hr)	1000	Porosity	0.30
Max Percolation (l/s)	105.8	Invert Level (m)	121.050

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Porous Car Park Manhole: Private (D3b), DS/PN: 34.001

Width (m) 12.7 Depression Storage (mm) 5  
Length (m) 30.0 Evaporation (mm/day) 5  
Slope (1:X) 100.0 Cap Volume Depth (m) 0.000

Tank or Pond Manhole: Bld 52 TC, DS/PN: 35.001

Invert Level (m) 120.050

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	128.0	0.600	128.0	0.601	0.0

Tank or Pond Manhole: 99b (D1c), DS/PN: 37.001

Invert Level (m) 121.160

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	25.0	0.500	25.0	0.501	0.0

Complex Manhole: 18 (D1b), DS/PN: 46.000

Tank or Pond

Invert Level (m) 115.420

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	192.0	0.801	0.0	1.350	0.0
0.800	192.0	1.349	0.0	1.470	75.0

Porous Car Park


Infiltration Coefficient Base (m/hr) 0.00000 Width (m) 8.5  
Membrane Percolation (mm/hr) 1000 Length (m) 55.0  
Max Percolation (l/s) 129.9 Slope (1:X) 350.0  
Safety Factor 2.0 Depression Storage (mm) 5  
Porosity 0.33 Evaporation (mm/day) 5  
Invert Level (m) 116.420 Cap Volume Depth (m) 0.000

Tank or Pond Manhole: 19 (D1b), DS/PN: 46.001

Invert Level (m) 115.360

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	0.0	1.440	0.0	1.560	38.0



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Tank or Pond Manhole: 20 (D1b), DS/PN: 46.002

Invert Level (m) 115.310

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	70.0	0.800	70.0	0.801	0.0

Tank or Pond Manhole: 12 (D1b), DS/PN: 47.011

Invert Level (m) 115.850

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	23.0	0.800	23.0	0.801	0.0

Tank or Pond Manhole: 15 (D1b), DS/PN: 46.003

Invert Level (m) 115.290

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	25.0	0.800	25.0	0.801	0.0

Tank or Pond Manhole: 21, DS/PN: 1.027


Invert Level (m) 115.030

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	52.0	2.000	52.0	2.001	0.0

Tank or Pond Manhole: Pond, DS/PN: 1.030

Invert Level (m) 114.590

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	547.7	0.940	813.2

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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
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Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m <sup>3</sup> /ha Storage	1.000
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 Storage Structures	28
Number of Online Controls	17	Number of Time/Area Diagrams	0
Number of Offline Controls	1	Number of Real Time Controls	0

Synthetic Rainfall Details

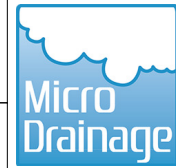
Rainfall Model	FEH
Site Location	GB 450500 225250 SP 50500 25250
C (1km)	-0.023
D1 (1km)	0.328
D2 (1km)	0.309
D3 (1km)	0.264
E (1km)	0.292
F (1km)	2.461
Cv (Summer)	0.750
Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	100
Climate Change (%)	30

PN	Storm	Return Period	Climate Change	First X Surcharge	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
1.000	15 Winter	100	+30%	100/15 Summer	100/15 Summer			8
1.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			4
1.002	15 Winter	100	+30%	100/15 Summer	100/15 Summer			7
1.003	30 Winter	100	+30%	100/15 Summer	100/15 Summer			8
1.004	15 Winter	100	+30%	100/15 Summer				
2.000	30 Winter	100	+30%	100/15 Summer	100/15 Summer			9
2.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			7
3.000	30 Winter	100	+30%	100/15 Summer	100/15 Summer			10
3.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
4.000	15 Winter	100	+30%	100/15 Summer	100/15 Summer			3
2.002	15 Winter	100	+30%	100/15 Summer	100/15 Summer			3
2.003	15 Summer	100	+30%	100/15 Summer				
2.004	15 Winter	100	+30%	100/15 Summer				
2.005	15 Summer	100	+30%	100/15 Summer				

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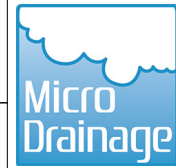
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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
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PN	Storm	Return Period	Climate Change	First X Surchage	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
5.000	30 Winter	100	+30%	100/15 Summer	100/15 Summer			9
2.006	15 Winter	100	+30%	100/15 Summer	100/15 Summer			4
1.005	30 Winter	100	+30%	100/15 Summer	100/15 Summer			11
1.006	15 Winter	100	+30%	100/15 Summer	100/15 Summer			5
6.000	60 Winter	100	+30%	100/15 Summer				
6.001	60 Winter	100	+30%	100/15 Summer				
1.007	60 Winter	100	+30%	100/15 Winter				
7.000	360 Winter	100	+30%	100/15 Summer				
7.001	360 Winter	100	+30%	100/15 Summer				
1.008	60 Winter	100	+30%	100/15 Summer				
8.000	30 Winter	100	+30%	100/15 Summer	100/15 Summer			8
8.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
8.002	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
9.000	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
9.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
8.003	15 Winter	100	+30%	100/15 Summer	100/15 Summer			5
10.000	15 Winter	100	+30%	100/15 Summer	100/15 Summer			4
8.004	15 Winter	100	+30%	100/15 Summer	100/15 Winter			1
8.005	120 Winter	100	+30%					
8.006	15 Winter	100	+30%	100/15 Summer				
11.000	30 Winter	100	+30%	100/15 Summer				
11.001	30 Winter	100	+30%	100/15 Summer				
11.002	15 Winter	100	+30%	100/15 Summer				
8.007	15 Winter	100	+30%	100/15 Summer				
12.000	15 Winter	100	+30%	100/15 Summer	100/15 Summer			4
12.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			8
12.002	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
12.003	15 Winter	100	+30%	100/15 Summer	100/15 Summer			8
12.004	15 Winter	100	+30%	100/15 Summer	100/15 Summer			3
12.005	15 Winter	100	+30%	100/15 Summer				
13.000	15 Winter	100	+30%					
14.000	15 Winter	100	+30%					
13.001	60 Winter	100	+30%	100/15 Summer				
15.000	60 Winter	100	+30%	100/15 Winter				
15.001	60 Winter	100	+30%	100/15 Summer				
15.002	60 Winter	100	+30%	100/15 Summer				
12.006	60 Winter	100	+30%	100/15 Summer				
8.008	60 Winter	100	+30%	100/15 Summer				
16.000	15 Winter	100	+30%	100/15 Summer				
16.001	15 Winter	100	+30%	100/15 Summer				
16.002	15 Winter	100	+30%	100/15 Summer				
16.003	15 Winter	100	+30%	100/15 Summer				
16.004	120 Winter	100	+30%	100/30 Winter				
17.000	120 Winter	100	+30%	100/60 Summer				
16.005	120 Winter	100	+30%	100/30 Winter				
16.006	120 Winter	100	+30%	100/30 Summer				
18.000	120 Winter	100	+30%	100/60 Summer				
16.007	120 Winter	100	+30%	100/15 Winter				
16.008	120 Winter	100	+30%	100/15 Summer				
1.009	60 Winter	100	+30%	100/15 Summer				

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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
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PN	Storm	Return Period	Climate Change	First X Surchage	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
1.010	60 Winter	100	+30%	100/15 Summer				
19.000	15 Winter	100	+30%	100/15 Summer				
19.001	15 Winter	100	+30%	100/15 Summer				
20.000	15 Winter	100	+30%	100/15 Summer				
19.002	15 Winter	100	+30%	100/15 Summer				
21.000	30 Winter	100	+30%	100/15 Summer	100/15 Summer			9
21.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			4
21.002	15 Winter	100	+30%	100/15 Summer	100/15 Summer			6
19.003	15 Winter	100	+30%	100/15 Summer				
19.004	15 Winter	100	+30%	100/15 Summer				
19.005	15 Winter	100	+30%	100/15 Summer	100/15 Summer			2
19.006	15 Winter	100	+30%	100/15 Summer				
22.000	30 Winter	100	+30%	100/15 Summer				
22.001	30 Winter	100	+30%	100/15 Summer				
19.007	15 Winter	100	+30%	100/15 Summer				
23.000	15 Winter	100	+30%	100/15 Summer				
23.001	15 Winter	100	+30%	100/15 Summer				
24.000	60 Winter	100	+30%					
23.002	15 Winter	100	+30%	100/15 Summer				
25.000	120 Winter	100	+30%	100/60 Winter				
25.001	120 Winter	100	+30%	100/30 Winter				
23.003	15 Winter	100	+30%	100/15 Summer				
1.011	120 Winter	100	+30%	100/15 Summer				
26.000	15 Winter	100	+30%	100/15 Summer				
27.000	120 Winter	100	+30%	100/30 Winter				
26.001	120 Winter	100	+30%	100/15 Summer				
1.012	120 Winter	100	+30%	100/15 Summer				
28.000	60 Winter	100	+30%					
28.001	15 Winter	100	+30%					
28.002	15 Summer	100	+30%					
28.003	15 Summer	100	+30%					
29.000	120 Winter	100	+30%	100/15 Summer				
29.001	120 Winter	100	+30%	100/15 Summer				
28.004	120 Winter	100	+30%	100/30 Winter				
28.005	120 Winter	100	+30%	100/15 Summer				
1.013	120 Winter	100	+30%	100/15 Summer				
30.000	960 Winter	100	+30%	100/15 Summer				
30.001	960 Winter	100	+30%	100/15 Summer				
1.014	120 Winter	100	+30%	100/15 Summer				
31.000	960 Winter	100	+30%	100/15 Summer				
31.001	960 Winter	100	+30%	100/15 Summer				
1.015	120 Winter	100	+30%	100/15 Summer				
1.016	120 Winter	100	+30%	100/15 Winter				
1.017	120 Winter	100	+30%	100/15 Summer				
1.018	120 Winter	100	+30%	100/15 Summer				
32.000	120 Winter	100	+30%	100/60 Winter				
32.001	120 Winter	100	+30%	100/15 Summer				
32.002	120 Winter	100	+30%	100/15 Summer				
1.019	120 Winter	100	+30%	100/15 Summer				
1.020	120 Winter	100	+30%	100/15 Summer				

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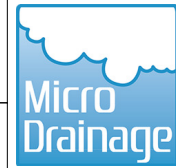
PN	Storm	Return Period	Climate Change	First X Surchage	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
33.000	15 Winter	100	+30%					
34.000	480 Winter	100	+30%	100/15	Summer			
34.001	480 Winter	100	+30%	100/15	Summer			
33.001	15 Winter	100	+30%					
33.002	15 Winter	100	+30%					
33.003	15 Winter	100	+30%					
35.000	240 Winter	100	+30%	100/15	Summer			
36.000	240 Winter	100	+30%	100/30	Winter			
36.001	240 Winter	100	+30%	100/15	Winter			
35.001	240 Winter	100	+30%	100/15	Summer			
33.004	15 Winter	100	+30%	100/15	Summer			
37.000	30 Winter	100	+30%	100/15	Summer	100/15	Winter	7
37.001	15 Winter	100	+30%	100/15	Summer	100/15	Winter	3
37.002	15 Winter	100	+30%					
37.003	15 Winter	100	+30%					
33.005	15 Winter	100	+30%					
1.021	120 Winter	100	+30%					
38.000	15 Winter	100	+30%			100/15	Summer	18
1.022	120 Winter	100	+30%					
1.023	120 Winter	100	+30%	100/15	Summer			
1.024	120 Winter	100	+30%	100/15	Summer			
39.000	240 Winter	100	+30%	100/15	Summer	100/15	Summer	15
39.001	120 Winter	100	+30%	100/15	Summer	100/15	Summer	14
39.002	30 Winter	100	+30%	100/15	Summer	100/15	Summer	12
39.003	15 Winter	100	+30%	100/15	Summer	100/15	Summer	6
40.000	15 Winter	100	+30%	100/15	Summer	100/15	Summer	2
40.001	30 Winter	100	+30%	100/15	Summer	100/15	Summer	9
40.002	30 Winter	100	+30%	100/15	Summer			
39.004	30 Winter	100	+30%	100/15	Summer	100/15	Summer	9
39.005	120 Winter	100	+30%	100/15	Summer	100/15	Summer	14
39.006	60 Winter	100	+30%	100/15	Summer	100/15	Summer	11
39.007	15 Winter	100	+30%	100/15	Summer	100/15	Summer	7
39.008	30 Winter	100	+30%	100/15	Summer	100/15	Summer	9
41.000	15 Winter	100	+30%	100/15	Summer	100/15	Summer	4
41.001	15 Winter	100	+30%	100/15	Summer			
41.002	15 Winter	100	+30%	100/15	Summer			
41.003	15 Winter	100	+30%	100/15	Summer			
39.009	15 Winter	100	+30%	100/15	Summer	100/15	Summer	5
42.000	15 Winter	100	+30%	100/15	Summer	100/15	Summer	7
42.001	60 Winter	100	+30%	100/15	Summer	100/15	Summer	8
42.002	30 Winter	100	+30%	100/15	Summer	100/15	Summer	6
43.000	15 Winter	100	+30%	100/15	Summer	100/15	Summer	6
43.001	15 Winter	100	+30%	100/15	Summer			
43.002	15 Winter	100	+30%	100/15	Summer	100/15	Summer	8
42.003	15 Winter	100	+30%	100/15	Summer	100/15	Summer	4
42.004	30 Winter	100	+30%	100/15	Summer	100/15	Summer	8
42.005	15 Winter	100	+30%	100/15	Summer	100/15	Summer	8
39.010	15 Summer	100	+30%	100/15	Summer			
44.000	15 Winter	100	+30%	100/15	Summer	100/15	Summer	4
44.001	15 Summer	100	+30%	100/15	Summer	100/15	Summer	1

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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
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PN	Storm	Return Period	Climate Change	First X Surchage	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
44.002	15 Summer	100	+30%	100/15 Summer				
44.003	15 Summer	100	+30%	100/15 Summer				
44.004	15 Winter	100	+30%	100/15 Summer				
39.011	15 Winter	100	+30%	100/15 Summer	100/15 Summer			2
39.012	15 Winter	100	+30%	100/15 Summer				
45.000	15 Winter	100	+30%	100/15 Summer				
39.013	15 Winter	100	+30%	100/15 Summer				
1.025	120 Winter	100	+30%	100/15 Summer				
46.000	120 Winter	100	+30%	100/15 Summer				
46.001	120 Winter	100	+30%	100/15 Summer				
46.002	120 Winter	100	+30%	100/15 Summer				
47.000	15 Winter	100	+30%	100/15 Summer				
47.001	15 Winter	100	+30%	100/15 Summer				
47.002	15 Winter	100	+30%	100/15 Summer				
47.003	15 Winter	100	+30%	100/15 Summer				
47.004	15 Winter	100	+30%	100/15 Summer				
47.005	15 Winter	100	+30%	100/15 Summer				
47.006	15 Winter	100	+30%	100/15 Summer				
47.007	15 Winter	100	+30%	100/15 Winter				
47.008	15 Winter	100	+30%	100/15 Summer				
48.000	15 Winter	100	+30%	100/15 Summer				
49.000	15 Winter	100	+30%	100/15 Summer				
47.009	15 Winter	100	+30%	100/15 Summer				
47.010	15 Winter	100	+30%	100/15 Summer				
47.011	120 Winter	100	+30%	100/15 Summer				
47.012	120 Winter	100	+30%	100/15 Summer				
47.013	120 Winter	100	+30%	100/15 Summer				
46.003	120 Winter	100	+30%	100/15 Summer				
46.004	120 Winter	100	+30%	100/15 Summer				
50.000	60 Winter	100	+30%					
51.000	15 Winter	100	+30%	100/15 Summer				
51.001	15 Winter	100	+30%	100/15 Summer				
50.001	15 Winter	100	+30%					
1.026	120 Winter	100	+30%	100/15 Summer				
52.000	15 Winter	100	+30%					
1.027	120 Winter	100	+30%	100/15 Summer				
53.000	15 Winter	100	+30%	100/15 Summer	100/15 Summer			4
53.001	15 Winter	100	+30%	100/15 Summer	100/15 Summer			2
53.002	15 Winter	100	+30%	100/15 Summer				
53.003	15 Winter	100	+30%					
1.028	120 Winter	100	+30%	100/15 Summer				
1.029	120 Winter	100	+30%	100/15 Summer				
1.030	120 Winter	100	+30%	100/15 Summer	100/30 Summer			13
1.031	240 Winter	100	+30%	100/15 Summer	100/120 Winter			3
1.032	240 Winter	100	+30%	100/15 Summer				

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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
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PN	US/MH Name	Water Level (m)	Surch'd Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap.	O'flow (l/s)	Pipe Flow (l/s)	Status
1.000	Ex MH	127.115	0.865	14.754	1.16	0.0	19.2	FLOOD
1.001	0883	126.930	1.122	6.882	0.92	0.0	49.2	FLOOD
1.002	0810	126.700	1.183	26.246	0.93	0.0	50.4	FLOOD
1.003	0923	126.319	1.254	45.431	1.04	0.0	59.0	FLOOD
1.004	0822	126.459	1.710	0.000	1.71	0.0	77.8	FLOOD RISK
2.000	0961	125.684	0.564	13.698	0.69	0.0	9.8	FLOOD
2.001	0859	125.672	0.832	9.926	0.86	0.0	14.7	FLOOD
3.000	0799	125.736	0.545	25.358	0.50	0.0	12.9	FLOOD
3.001	0797	125.768	0.916	9.392	1.02	0.0	15.9	FLOOD
4.000	0860	126.364	1.320	1.839	1.39	0.0	27.6	FLOOD
2.002	0805	125.814	1.082	2.160	1.01	0.0	40.2	FLOOD
2.003	0825	125.741	1.132	0.000	1.02	0.0	45.4	FLOOD RISK
2.004	0824	125.637	1.127	0.000	0.89	0.0	44.1	FLOOD RISK
2.005	0804	125.456	1.174	0.000	2.44	0.0	52.0	FLOOD RISK
5.000	0863	125.334	0.835	15.456	0.59	0.0	10.2	FLOOD
2.006	0865	125.315	1.042	1.685	2.44	0.0	50.6	FLOOD
1.005	0816	125.253	1.008	97.064	1.83	0.0	86.2	FLOOD
1.006	0908	125.116	1.304	36.313	1.58	0.0	187.5	FLOOD
6.000	Private (D2b)	123.635	0.235	0.000	0.33	0.0	26.2	SURCHARGED
6.001	314 (D2b)	123.631	0.331	0.000	0.04	0.0	5.6	SURCHARGED
1.007	8	123.076	0.136	0.000	0.42	0.0	179.4	SURCHARGED
7.000	Private (D2b)	123.958	1.558	0.000	0.00	0.0	0.1	FLOOD RISK
7.001	318 (D2b)	123.958	1.718	0.000	0.06	0.0	1.1	FLOOD RISK
1.008	8a	122.818	0.718	0.000	0.51	0.0	179.7	SURCHARGED
8.000	Ex MH	125.744	0.364	34.150	1.27	0.0	20.7	FLOOD
8.001	0991	125.744	0.943	2.891	0.74	0.0	26.2	FLOOD
8.002	0992	125.705	0.967	11.723	0.99	0.0	46.2	FLOOD
9.000	0827	125.597	0.857	7.467	0.95	0.0	15.2	FLOOD
9.001	0826	125.537	0.927	17.159	1.53	0.0	51.4	FLOOD
8.003	0662	125.543	1.303	17.329	1.47	0.0	81.0	FLOOD
10.000	0801	124.980	1.139	10.671	2.12	0.0	29.0	FLOOD
8.004	27	125.250	1.560	0.235	3.38	0.0	109.9	FLOOD
8.005	Ex blind	123.635	0.000	0.000	1.02	0.0	108.6	SURCHARGED*
8.006	0823	124.478	1.273	0.000	1.33	0.0	197.9	SURCHARGED
11.000	46 (B4b)	125.500	1.900	0.000	1.93	0.0	153.3	FLOOD RISK
11.001	47 (B4b)	125.393	1.893	0.000	0.26	0.0	30.2	FLOOD RISK
11.002	48	124.000	0.710	0.000	0.56	0.0	41.7	SURCHARGED
8.007	41	123.873	1.021	0.000	1.12	0.0	221.1	SURCHARGED
12.000	0666	124.570	1.248	3.433	0.92	0.0	17.3	FLOOD
12.001	0668	124.435	1.284	15.280	2.01	0.0	21.4	FLOOD
12.002	0667	124.381	1.260	6.363	1.98	0.0	25.1	FLOOD
12.003	0930	124.097	1.052	21.995	4.45	0.0	30.8	FLOOD
12.004	0931	124.033	1.020	2.832	3.16	0.0	41.1	FLOOD
12.005	0963	123.452	0.538	0.000	1.01	0.0	56.8	SURCHARGED
13.000	KO	123.202	-0.070	0.000	0.55	0.0	15.4	FLOOD RISK
14.000	KO	123.206	-0.089	0.000	0.34	0.0	15.4	FLOOD RISK
13.001	56	122.843	0.573	0.000	0.16	0.0	13.1	SURCHARGED
15.000	1224	122.838	0.385	0.000	0.03	0.0	0.5	FLOOD RISK
15.001	57	122.839	0.489	0.000	0.02	0.0	1.6	FLOOD RISK

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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
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PN	US/MH Name	Water Level (m)	Surch'd Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap.	O'flow (l/s)	Pipe Flow (l/s)	Status
15.002	58	122.839	0.714	0.000	0.32	0.0	31.9	SURCHARGED
12.006	59	122.840	0.820	0.000	0.36	0.0	53.8	SURCHARGED
8.008	42	122.784	0.844	0.000	1.11	0.0	187.6	SURCHARGED
16.000	301 (D3b)	123.141	0.691	0.000	0.64	0.0	44.6	FLOOD RISK
16.001	302 (D3b)	123.059	0.709	0.000	1.52	0.0	84.4	SURCHARGED
16.002	303 (D3b)	122.946	0.626	0.000	1.84	0.0	118.9	SURCHARGED
16.003	304 (D3b)	122.563	0.353	0.000	2.61	0.0	154.5	SURCHARGED
16.004	305 (D3b)	122.530	0.360	0.000	0.29	0.0	54.5	SURCHARGED
17.000	306 (D3b)	122.530	0.330	0.000	0.07	0.0	4.0	SURCHARGED
16.005	307 (D3b)	122.529	0.389	0.000	0.23	0.0	64.8	SURCHARGED
16.006	308 (D3b)	122.526	0.476	0.000	0.16	0.0	42.8	SURCHARGED
18.000	309 (D3b)	122.525	0.325	0.000	0.06	0.0	6.0	SURCHARGED
16.007	310 (D3b)	122.524	0.544	0.000	0.21	0.0	44.7	SURCHARGED
16.008	311 (D3b)	122.523	0.713	0.000	0.48	0.0	71.3	SURCHARGED
1.009	9	122.607	0.852	0.000	1.14	0.0	288.5	SURCHARGED
1.010	10	122.491	0.886	0.000	1.12	0.0	302.5	SURCHARGED
19.000	0892	124.895	0.160	0.000	0.19	0.0	4.0	SURCHARGED
19.001	66	124.895	0.800	0.000	0.17	0.0	7.0	SURCHARGED
20.000	0874	125.336	0.600	0.000	0.83	0.0	17.2	FLOOD RISK
19.002	67	124.895	0.980	0.000	0.55	0.0	22.2	FLOOD RISK
21.000	0786	125.282	0.492	21.779	2.54	0.0	14.0	FLOOD
21.001	0785	125.361	0.611	5.773	1.58	0.0	14.2	FLOOD
21.002	0875	125.094	0.532	11.783	1.29	0.0	22.7	FLOOD
19.003	68	124.864	1.119	0.000	1.11	0.0	42.5	FLOOD RISK
19.004	69	124.786	1.131	0.000	1.05	0.0	44.9	FLOOD RISK
19.005	70	124.703	1.318	2.869	1.73	0.0	77.3	FLOOD
19.006	71	124.204	1.104	0.000	1.00	0.0	71.0	FLOOD RISK
22.000	73 (B4a)	122.883	0.893	0.000	0.60	0.0	101.5	SURCHARGED
22.001	74 (B4a)	122.824	1.054	0.000	0.36	0.0	21.3	SURCHARGED
19.007	72	123.197	1.477	0.000	1.62	0.0	116.9	FLOOD RISK
23.000	75 (B4a)	123.955	1.180	0.000	0.96	0.0	169.7	FLOOD RISK
23.001	76 (B4a)	123.909	1.509	0.000	0.60	0.0	57.8	SURCHARGED
24.000	78	123.830	-0.225	0.000	0.00	0.0	0.0	OK
23.002	79	123.001	0.811	0.000	0.99	0.0	89.7	SURCHARGED
25.000	Private (D2b)	122.414	0.339	0.000	0.14	0.0	15.6	SURCHARGED
25.001	319 (D2b)	122.413	0.493	0.000	0.21	0.0	19.0	SURCHARGED
23.003	80	122.613	0.823	0.000	1.02	0.0	98.6	SURCHARGED
1.011	11	122.313	0.958	0.000	1.05	0.0	443.2	FLOOD RISK
26.000	135 (VCN)	122.630	1.040	0.000	3.03	0.0	225.5	FLOOD RISK
27.000	136 (VCN)	122.467	0.742	0.000	0.16	0.0	9.6	FLOOD RISK
26.001	137 (VCN)	122.464	1.149	0.000	0.56	0.0	10.7	SURCHARGED
1.012	11a	122.124	1.069	0.000	0.88	0.0	447.4	FLOOD RISK
28.000	83	123.380	-0.375	0.000	0.00	0.0	0.0	OK
28.001	Ex MH	122.657	-0.258	0.000	0.22	0.0	36.3	OK
28.002	Ex MH	122.487	-0.242	0.000	0.27	0.0	36.4	OK
28.003	86	122.384	-0.226	0.000	0.33	0.0	83.2	OK
29.000	130 (VCN)	122.489	0.469	0.000	0.43	0.0	30.5	SURCHARGED
29.001	131 (VCN)	122.480	0.735	0.000	0.51	0.0	7.8	SURCHARGED
28.004	87	121.926	0.371	0.000	0.21	0.0	32.8	SURCHARGED



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PN	US/MH Name	Water Level (m)	Surch'd Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap.	O'flow (l/s)	Pipe Flow (l/s)	Status
28.005	88	121.909	0.834	0.000	0.13	0.0	28.5	SURCHARGED
1.013	12	121.898	1.288	0.000	0.54	0.0	484.7	SURCHARGED
30.000	122 (VCS)	121.330	0.390	0.000	0.05	0.0	7.0	SURCHARGED
30.001	116 (VCS)	121.329	0.869	0.000	0.01	0.0	0.9	SURCHARGED
1.014	12b	121.745	1.335	0.000	0.62	0.0	483.9	SURCHARGED
31.000	118 (VCS)	121.477	1.127	0.000	0.10	0.0	7.0	SURCHARGED
31.001	119 (VCS)	121.476	1.286	0.000	0.02	0.0	1.0	SURCHARGED
1.015	12a	121.612	1.462	0.000	1.43	0.0	355.6	FLOOD RISK
1.016	13	120.555	0.480	0.000	0.97	0.0	351.4	SURCHARGED
1.017	13a	120.133	0.508	0.000	1.41	0.0	351.2	SURCHARGED
1.018	13b	119.923	0.378	0.000	1.19	0.0	351.2	SURCHARGED
32.000	120 (VCS)	120.901	0.641	0.000	0.09	0.0	9.4	FLOOD RISK
32.001	121 (VCS)	120.900	0.940	0.000	0.13	0.0	19.7	SURCHARGED
32.002	115 (D1a)	120.896	1.456	0.000	0.46	0.0	7.2	SURCHARGED
1.019	13c	119.670	0.305	0.000	1.60	0.0	357.7	SURCHARGED
1.020	14	119.452	0.167	0.000	1.72	0.0	357.7	SURCHARGED
33.000	91 (D3b)	120.597	-0.203	0.000	0.22	0.0	14.7	OK
34.000	Dummy (D3b)	121.651	0.431	0.000	0.00	0.0	0.0	SURCHARGED
34.001	Private (D3b)	121.652	0.452	0.000	0.02	0.0	0.6	SURCHARGED
33.001	93	120.358	-0.202	0.000	0.23	0.0	14.9	OK
33.002	94	120.257	-0.193	0.000	0.23	0.0	14.9	OK
33.003	95	120.213	-0.107	0.000	0.43	0.0	35.3	OK
35.000	Bld 52 TC	120.889	0.559	0.000	0.00	0.0	0.0	FLOOD RISK
36.000	Bld 52 CP	120.893	0.293	0.000	0.15	0.0	9.6	SURCHARGED
36.001	Bld 52 CP	120.891	0.391	0.000	0.12	0.0	8.8	SURCHARGED
35.001	Bld 52 TC	120.889	0.719	0.000	0.28	0.0	3.9	FLOOD RISK
33.004	96	120.171	0.051	0.000	1.09	0.0	79.7	SURCHARGED
37.000	99a (D1c)	122.104	0.604	3.730	0.60	0.0	33.0	FLOOD
37.001	99b (D1c)	122.104	0.719	0.103	0.17	0.0	5.0	FLOOD
37.002	99 (ex MH)	121.056	-0.300	0.000	0.09	0.0	17.5	OK
37.003	Ex MH	120.520	-0.180	0.000	0.10	0.0	17.3	OK
33.005	98	119.649	-0.216	0.000	0.37	0.0	110.1	OK
1.021	15	119.235	0.000	0.000	1.02	0.0	391.3	OK
38.000	Ex MH	119.662	-0.152	0.000	0.23	14.5	24.2	OK
1.022	16	118.753	-0.232	0.000	0.60	0.0	394.6	OK
1.023	17	117.759	0.214	0.000	2.18	0.0	398.8	SURCHARGED
1.024	18	117.330	1.260	0.000	1.06	0.0	395.3	SURCHARGED
39.000	EX MH	122.331	0.531	30.603	1.40	0.0	9.3	FLOOD
39.001	0704	122.421	1.121	21.277	0.71	0.0	9.8	FLOOD
39.002	EX MH	122.471	1.281	21.465	0.50	0.0	6.9	FLOOD
39.003	1222	122.526	1.506	5.906	0.68	0.0	9.2	FLOOD
40.000	EX MH	122.700	0.300	0.196	0.81	0.0	11.3	FLOOD
40.001	EX MH	122.562	0.379	11.750	0.70	0.0	9.3	FLOOD
40.002	0947	122.541	0.454	0.000	0.31	0.0	8.9	FLOOD RISK
39.004	0703	122.501	1.581	21.339	1.45	0.0	20.1	FLOOD
39.005	1223	122.300	1.500	80.405	1.82	0.0	25.6	FLOOD
39.006	0702	121.966	1.366	15.820	2.03	0.0	28.5	FLOOD
39.007	0701	121.697	1.297	7.338	2.42	0.0	29.5	FLOOD
39.008	0700	121.517	1.155	17.263	2.57	0.0	31.4	FLOOD

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PN	US/MH Name	Water Level (m)	Surch'd Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap.	O'flow (l/s)	Pipe Flow (l/s)	Status
41.000	0946	122.283	0.332	1.745	1.28	0.0	9.1	FLOOD
41.001	0943	122.158	0.484	0.000	0.61	0.0	12.9	FLOOD RISK
41.002	0940	122.043	0.693	0.000	1.00	0.0	20.7	FLOOD RISK
41.003	0706	121.814	0.690	0.000	0.64	0.0	20.5	FLOOD RISK
39.009	EX MH	121.485	1.161	4.611	2.62	0.0	35.7	FLOOD
42.000	0698	122.645	0.830	19.137	1.07	0.0	21.0	FLOOD
42.001	1202	122.195	0.775	16.310	1.51	0.0	24.2	FLOOD
42.002	1201	121.871	0.701	5.736	1.63	0.0	31.0	FLOOD
43.000	0937	122.633	0.653	3.475	1.14	0.0	6.3	FLOOD
43.001	0999	122.491	0.790	0.000	0.68	0.0	18.0	FLOOD RISK
43.002	1195	122.184	1.077	55.611	2.02	0.0	55.6	FLOOD
42.003	0998	121.707	0.733	5.174	0.90	0.0	84.9	FLOOD
42.004	0939	121.272	0.853	27.088	1.80	0.0	80.7	FLOOD
42.005	0994	120.959	0.575	68.786	4.30	0.0	105.3	FLOOD
39.010	0995	121.111	0.756	0.000	1.66	0.0	137.0	FLOOD RISK
44.000	S116a	121.156	0.606	5.643	0.66	0.0	40.6	FLOOD
44.001	S11b	121.150	0.660	0.021	0.70	0.0	39.0	FLOOD
44.002	S116c	121.142	0.702	0.000	0.58	0.0	36.9	SURCHARGED
44.003	S116d	121.128	0.828	0.000	0.68	0.0	39.2	SURCHARGED
44.004	S116e	121.118	0.868	0.000	0.77	0.0	44.5	SURCHARGED
39.011	S116	121.108	0.922	0.543	1.03	0.0	177.9	FLOOD
39.012	EX MH	118.654	1.381	0.000	1.38	0.0	190.4	FLOOD RISK
45.000	100	119.265	0.615	0.000	0.84	0.0	62.9	SURCHARGED
39.013	101	118.135	1.165	0.000	1.19	0.0	243.5	SURCHARGED
1.025	19	117.146	1.266	0.000	1.69	0.0	567.2	SURCHARGED
46.000	18 (D1b)	116.835	0.890	0.000	0.12	0.0	23.3	FLOOD RISK
46.001	19 (D1b)	116.834	0.949	0.000	0.12	0.0	23.7	FLOOD RISK
46.002	20 (D1b)	116.835	1.000	0.000	0.21	0.0	27.3	SURCHARGED
47.000	1 (D1b)	120.479	0.729	0.000	1.21	0.0	19.9	SURCHARGED
47.001	2 (D1b)	120.282	0.672	0.000	2.09	0.0	39.7	SURCHARGED
47.002	3 (D1b)	119.493	0.068	0.000	0.86	0.0	46.4	SURCHARGED
47.003	4 (D1b)	119.226	0.201	0.000	1.43	0.0	45.0	SURCHARGED
47.004	5 (D1b)	119.128	0.153	0.000	1.09	0.0	49.0	SURCHARGED
47.005	6 (D1b)	118.950	0.125	0.000	1.17	0.0	51.3	SURCHARGED
47.006	7 (D1b)	118.790	0.085	0.000	1.20	0.0	54.0	SURCHARGED
47.007	8 (D1b)	118.579	0.044	0.000	0.79	0.0	75.4	SURCHARGED
47.008	9 (D1b)	117.862	0.517	0.000	1.00	0.0	93.6	SURCHARGED
48.000	17 (D1b)	117.439	0.414	0.000	0.30	0.0	13.0	SURCHARGED
49.000	21 (D1b)	118.080	0.430	0.000	0.92	0.0	34.7	SURCHARGED
47.009	10 (D1b)	117.418	0.518	0.000	1.62	0.0	156.6	SURCHARGED
47.010	11 (D1b)	116.897	0.197	0.000	1.25	0.0	163.0	SURCHARGED
47.011	12 (D1b)	116.843	0.468	0.000	0.19	0.0	45.2	SURCHARGED
47.012	13 (D1b)	116.841	0.516	0.000	0.11	0.0	46.4	SURCHARGED
47.013	14 (D1b)	116.838	0.793	0.000	0.13	0.0	47.4	SURCHARGED
46.003	15 (D1b)	116.836	1.021	0.000	0.17	0.0	33.2	SURCHARGED
46.004	16 (D1b)	116.833	1.293	0.000	0.48	0.0	34.0	SURCHARGED
50.000	Dummy	118.130	-0.225	0.000	0.00	0.0	0.0	OK
51.000	HWD 1	121.047	1.072	0.000	1.02	0.0	63.5	FLOOD RISK
51.001	HWD 2	119.619	1.004	0.000	1.34	0.0	84.2	SURCHARGED

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Summary of Critical Results by Maximum Level (Rank 1) for SW EAST PROPOSED  
23.07.13.SWS

PN	US/MH Name	Water Level (m)	Surch'd Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap. (l/s)	O'flow (l/s)	Pipe Flow (l/s)	Status
50.001	99	117.331	-0.089	0.000	0.67	0.0	88.2	OK
1.026	20	116.861	1.101	0.000	2.09	0.0	570.3	SURCHARGED
52.000	Private	118.042	-0.108	0.000	0.17	0.0	7.0	OK
1.027	21	116.400	0.620	0.000	2.09	0.0	554.0	SURCHARGED
53.000	Ex MH	120.258	0.683	8.037	1.26	0.0	47.5	FLOOD
53.001	Ex MH	120.024	1.019	4.043	1.53	0.0	111.3	FLOOD
53.002	Ex MH	118.758	0.273	0.000	1.89	0.0	127.7	FLOOD RISK
53.003	Ex MH	118.190	-0.184	0.000	0.32	0.0	129.5	OK
1.028	22	116.335	0.585	0.000	1.17	0.0	584.7	SURCHARGED
1.029	23	116.092	0.837	0.000	1.79	0.0	582.8	SURCHARGED
1.030	Pond	116.040	1.000	414.546	2.40	0.0	405.7	FLOOD
1.031	26	115.546	0.576	46.066	2.55	0.0	386.1	FLOOD
1.032	PI	115.077	0.337	0.000	2.07	0.0	386.1	FLOOD RISK*