

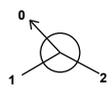
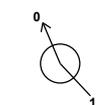
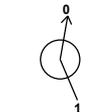
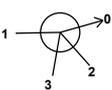
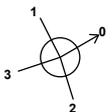
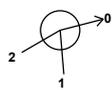
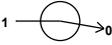
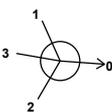
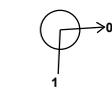
Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	10	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.300	Preferred Cover Depth (m)	1.200
CV	1.000	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
S1	0.013	5.00	129.524	1200	1.758
S2	0.018	5.00	128.966	1200	2.316
S3	0.016	5.00	128.123	1200	2.084
S4	0.013	5.00	126.797	1200	2.370
S5	0.022	5.00	124.805	1200	2.079
S8	0.031	5.00	121.287	1800	4.287
S9			119.032	2100	5.032
S10	0.032	5.00	116.319	2100	3.010
S12	0.034	5.00	114.988	1800	4.238
S13			113.939	2100	3.314
S14	0.021	5.00	113.310	1800	2.731
S16			113.200	2400	4.250
S18	0.053	5.00	111.201	1200	1.425
S19	0.022	5.00	110.147	1200	1.947
TANK 2			112.000		3.700
S17			111.900	2400	3.620
S7	0.018	5.00	122.817	1800	4.917
S2.1	0.050	5.00	129.043	450	1.350
S11.1			116.015	1800	3.040
S11			116.000	2400	5.100
TANK 1		5.00	115.830		2.830
S15	0.019	5.00	113.200	2400	4.200
S1.1	0.136	5.00	129.033	450	1.133
S5.2	0.073	5.00	125.400	450	1.350
S6	0.012	5.00	124.516	1200	2.516
S6.1	0.080	5.00	124.475	450	1.350
S8.2	0.062	5.00	121.500	450	1.700
S8.1	0.046	5.00	121.400	450	1.600
S11.2	0.085	5.00	116.243	450	1.543
S13.1	0.127	5.00	114.258	1200	1.428
S13.2	0.062	5.00	114.100	450	1.425
S5.1	0.045	5.00	125.250	450	2.000
S9.1	0.027	5.00	119.346	450	1.646
S20			109.463	1200	1.811
S19.1	0.063	5.00	110.500	1200	1.350
S20.1	0.047	5.00	119.161	450	1.350
S21.2	0.055	5.00	118.558	450	1.350
F15			118.560	1200	2.246
SDUMMY			118.560	1200	2.259

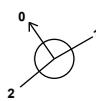
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	413276.840	417649.461	129.524	1.758	1200		1 1.000	127.766	225
							0 1.001	127.766	225
S2	413259.660	417658.730	128.966	2.316	1200		1 2.000	127.616	150
							2 1.001	127.542	225
							0 1.002	126.650	225
S3	413252.360	417666.590	128.123	2.084	1200		1 1.002	126.114	225
							0 1.003	126.039	300
S4	413246.040	417681.601	126.797	2.370	1200		1 1.003	125.225	300
							0 1.004	124.427	300
S5	413250.290	417706.195	124.805	2.079	1200		1 4.000	123.454	150
							2 3.000	122.951	150
							3 1.004	123.179	300
							0 1.005	122.726	375
S8	413294.220	417719.590	121.287	4.287	1800		1 7.000	119.640	150
							2 6.000	119.641	150
							3 1.007	117.000	900
							0 1.008	117.000	900
S9	413317.578	417733.210	119.032	5.032	2100		1 8.000	117.288	100
							2 1.008	116.508	900
							0 1.009	114.000	900
S10	413352.829	417742.340	116.319	3.010	2100		1 1.009	113.309	900
							0 1.010	113.309	900
S12	413385.200	417742.579	114.988	4.238	1800		1 1.011_1	110.750	900
							0 1.012	110.750	900
S13	413410.882	417738.110	113.939	3.314	2100		1 12.000	112.461	225
							2 11.000	112.461	225
							3 1.012	110.625	900
							0 1.013	110.625	900
S14	413424.730	417737.097	113.310	2.731	1800		1 1.013	110.579	900
							0 1.014	110.579	900
S16	413432.990	417753.930	113.200	4.250	2400		1 1.015	108.950	1500
							0 1.011	108.950	1500
S18	413473.930	417722.900	111.201	1.425	1200		0 13.000	109.776	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S19	413498.580	417716.260	110.147	1.947	1200		1	14.000	108.350	150
							2	13.000	108.275	225
						0	13.001	108.200	300	
TANK 2	413440.550	417754.410	112.000	3.700		1	1.011	108.925	1500	
						0	1.017	108.300	1500	
S17	413452.780	417757.160	111.900	3.620	2400		1	1.017	108.280	1500
S7	413276.780	417713.760	122.817	4.917	1800		1	1.006	120.919	375
							0	1.007	117.900	900
S2.1	413255.889	417656.500	129.043	1.350	450		0	2.000	127.693	150
S11.1	413361.160	417738.250	116.015	3.040	1800		1	9.000	112.975	900
							0	9.001	112.975	900
S11	413361.410	417742.572	116.000	5.100	2400		1	10.000	114.450	150
							2	9.001	112.921	900
							3	1.010	113.266	900
							0	1.011_1	110.900	900
TANK 1	413356.270	417731.867	115.830	2.830		0	9.000	113.000	900	
						1	1.014	110.545	900	
S15	413432.530	417743.700	113.200	4.200	2400		0	1.015	109.000	1500
S1.1	413289.860	417646.350	129.033	1.133	450		0	1.000	127.900	225
S5.2	413239.330	417705.989	125.400	1.350	450		0	4.000	124.050	150
							1	5.000	123.033	150
S6	413255.990	417707.813	124.516	2.516	1200		2	1.005	122.652	375
							0	1.006	122.000	375
S6.1	413254.210	417713.040	124.475	1.350	450		0	5.000	123.125	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S8.2	413292.660	417722.685	121.500	1.700	450		0	7.000	119.800	150
S8.1	413296.090	417713.519	121.400	1.600	450		0	6.000	119.800	150
S11.2	413360.940	417747.550	116.243	1.543	450		0	10.000	114.700	150
S13.1	413406.855	417731.180	114.258	1.428	1200		0	11.000	112.830	225
S13.2	413409.162	417741.980	114.100	1.425	450		0	12.000	112.675	225
S5.1	413258.210	417697.233	125.250	2.000	450		0	3.000	123.250	150
S9.1	413318.070	417727.262	119.346	1.646	450		0	8.000	117.700	100
S20	413520.090	417712.130	109.463	1.811	1200		1	13.001	107.652	300
S19.1	413494.980	417723.280	110.500	1.350	1200		0	14.000	109.150	150
S20.1	413333.040	417695.070	119.161	1.350	450		0	15.000	117.811	150
S21.2	413343.880	417703.200	118.558	1.350	450		0	16.000	117.208	150
F15	413340.290	417701.130	118.560	2.246	1200		1 2	16.000 15.000	116.389 116.389	150 150
SDUMMY	413339.115	417702.842	118.560	2.259	1200		0 1	15.001 15.001	116.314 116.301	225 225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	19.000	Additional Storage (m ³ /ha)	0.0
Ratio-R	0.300	Starting Level (m)	
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	0	0	0
100	40	0	0

Node S17 Online ACO Q-Brake Control

Flap Valve	x	Design Depth (m)	3.000	Min Node Diameter (mm)	1050
Replaces Downstream Link	✓	Design Flow (l/s)	10.5	Orifice Diameter (m)	0.121
Invert Level (m)	108.280	Min Outlet Diameter (m)	0.145		

Node S15 Online ACO Q-Brake Control

Flap Valve	x	Design Depth (m)	2.700	Min Node Diameter (mm)	1500
Replaces Downstream Link	✓	Design Flow (l/s)	48.5	Orifice Diameter (m)	0.242
Invert Level (m)	109.000	Min Outlet Diameter (m)	0.295		

Node S12 Online Head/Flow Control

Flap Valve	x	Invert Level (m)	110.750	Design Flow (l/s)	20.0
Replaces Downstream Link	✓	Design Depth (m)	4.500		

Head (m)	Flow (l/s)										
0.165	3.770	0.990	9.234	1.815	12.503	2.640	15.079	3.465	17.276	4.290	19.223
0.330	5.331	1.155	9.974	1.980	13.059	2.805	15.544	3.630	17.682	4.455	19.589
0.495	6.530	1.320	10.663	2.145	13.592	2.970	15.994	3.795	18.080	4.620	19.948
0.660	7.540	1.485	11.310	2.310	14.106	3.135	16.432	3.960	18.469	4.785	20.301
0.825	8.430	1.650	11.921	2.475	14.601	3.300	16.859	4.125	18.849	4.950	20.648

Node S9 Online Head/Flow Control

Flap Valve	x	Invert Level (m)	114.000	Design Flow (l/s)	250.0
Replaces Downstream Link	x	Design Depth (m)	4.000		

Head (m)	Flow (l/s)										
0.147	47.123	0.880	115.428	1.613	156.291	2.347	188.493	3.080	215.946	3.813	240.283
0.293	66.643	1.027	124.677	1.760	163.240	2.493	194.295	3.227	221.028	3.960	244.860
0.440	81.620	1.173	133.285	1.907	169.906	2.640	199.928	3.373	225.996	4.107	249.353
0.587	94.247	1.320	141.370	2.053	176.319	2.787	205.406	3.520	230.856	4.253	253.767
0.733	105.371	1.467	149.017	2.200	182.508	2.933	210.742	3.667	235.617	4.400	258.105

Node TANK 2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	108.300
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	116.0	0.0	3.000	116.0	0.0	3.001	0.0	0.0

Node TANK 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	113.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	252

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	191.0	0.0	1.350	191.0	0.0	1.351	0.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	10	127.857	0.091	18.0	0.1031	0.0000	OK
15 minute winter	S2	10	126.727	0.077	25.9	0.0875	0.0000	OK
15 minute winter	S3	10	126.109	0.070	27.6	0.0794	0.0000	OK
15 minute winter	S4	11	124.498	0.071	29.0	0.0805	0.0000	OK
15 minute winter	S5	10	122.859	0.133	45.6	0.1501	0.0000	OK
15 minute winter	S8	11	117.106	0.106	74.8	0.2704	0.0000	OK
15 minute winter	S9	11	114.494	0.494	78.6	1.7123	0.0000	OK
15 minute winter	S10	12	113.468	0.159	80.1	0.5503	0.0000	OK
30 minute winter	S12	22	113.149	2.398	69.5	6.1042	0.0000	SURCHARGED
15 minute winter	S13	11	110.731	0.106	29.8	0.3666	0.0000	OK
15 minute winter	S14	11	110.688	0.109	32.1	0.2767	0.0000	OK
15 minute winter	S16	12	109.023	0.073	32.8	0.3310	0.0000	OK
15 minute winter	S18	10	109.811	0.035	6.4	0.0392	0.0000	OK
15 minute winter	S19	10	108.264	0.064	16.7	0.0723	0.0000	OK
360 minute winter	TANK 2	280	108.828	0.528	21.6	61.2099	0.0000	OK
360 minute winter	S17	288	108.828	0.548	24.0	2.4805	0.0000	OK
15 minute winter	S7	11	117.971	0.071	58.6	0.1812	0.0000	OK
15 minute winter	S2.1	10	127.750	0.057	6.1	0.0091	0.0000	OK
30 minute winter	S11.1	22	113.107	0.132	49.1	0.3350	0.0000	OK
60 minute summer	S11	36	113.138	2.238	65.1	10.1258	0.0000	SURCHARGED
120 minute winter	TANK 1	88	113.101	0.101	23.4	19.3178	0.0000	OK
15 minute winter	S15	12	109.285	0.285	34.5	1.2903	0.0000	OK
15 minute winter	S1.1	10	127.992	0.092	16.5	0.0147	0.0000	OK
15 minute winter	S5.2	10	124.099	0.049	8.9	0.0078	0.0000	OK
15 minute winter	S6	11	122.094	0.094	56.4	0.1061	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S1	1.001	S2	17.6	1.217	0.316	0.2839	
S2	1.002	S3	25.7	2.248	0.220	0.1228	
S3	1.003	S4	27.5	2.275	0.110	0.1967	
S4	1.004	S5	29.2	2.342	0.117	0.3111	
S5	1.005	S6	45.6	1.452	0.203	0.1861	
S8	1.008	S9	75.4	1.868	0.028	1.0920	
S9	1.009	S10	76.4	1.372	0.028	2.0699	
S10	1.010	S11	80.2	1.155	0.057	0.5958	
S12	Head/Flow	S13	14.4				
S13	1.013	S14	29.7	0.700	0.026	0.5897	
S14	1.014	S15	32.3	0.793	0.028	0.4163	
S16	1.011	TANK 2	32.8	1.136	0.004	0.0578	
S18	13.000	S19	6.3	1.658	0.050	0.0974	
S19	13.001	S20	16.6	1.551	0.094	0.2338	7.7
TANK 2	1.017	S17	24.0	0.568	0.003	1.1317	
S17	ACO Q-Brake		10.5				208.8
S7	1.007	S8	58.8	1.831	0.013	0.5981	
S2.1	2.000	S2	6.0	1.046	0.256	0.0253	
S11.1	9.001	S11	-49.1	0.806	-0.022	0.3762	
S11	1.011_1	S12	44.9	0.391	0.028	15.0775	
TANK 1	9.000	S11.1	-23.4	-1.450	-0.010	0.0927	
S15	ACO Q-Brake	S16	32.8				
S1.1	1.000	S1	16.4	1.077	0.315	0.2035	
S5.2	4.000	S5	8.8	1.817	0.212	0.0533	
S6	1.006	S7	56.5	2.730	0.126	0.4480	

Results for 1 year Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S6.1	10	123.201	0.076	9.7	0.0120	0.0000	OK
15 minute winter	S8.2	10	119.851	0.051	7.5	0.0081	0.0000	OK
15 minute winter	S8.1	10	119.848	0.048	5.6	0.0077	0.0000	OK
15 minute winter	S11.2	10	114.758	0.058	10.3	0.0092	0.0000	OK
15 minute winter	S13.1	10	112.891	0.061	15.4	0.0684	0.0000	OK
15 minute winter	S13.2	10	112.717	0.042	7.5	0.0067	0.0000	OK
15 minute winter	S5.1	10	123.296	0.046	5.5	0.0074	0.0000	OK
15 minute winter	S9.1	10	117.732	0.032	3.3	0.0051	0.0000	OK
15 minute winter	S20	10	107.714	0.062	16.6	0.0000	0.0000	OK
15 minute winter	S19.1	10	109.189	0.039	7.7	0.0442	0.0000	OK
15 minute winter	S20.1	10	117.841	0.030	5.7	0.0048	0.0000	OK
15 minute winter	S21.2	10	117.240	0.032	6.7	0.0050	0.0000	OK
15 minute winter	F15	10	116.410	0.096	12.3	0.1083	0.0000	OK
15 minute winter	SDUMMY	10	116.385	0.084	12.3	0.0000	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S6.1	5.000	S6	9.6	1.161	0.419	0.0458	
S8.2	7.000	S8	7.5	1.547	0.194	0.0167	
S8.1	6.000	S8	5.6	1.187	0.197	0.0298	
S11.2	10.000	S11	10.2	1.764	0.256	0.0290	
S13.1	11.000	S13	15.3	1.883	0.137	0.0652	
S13.2	12.000	S13	7.5	1.562	0.064	0.0203	
S5.1	3.000	S5	5.4	1.203	0.192	0.0539	
S9.1	8.000	S9	3.3	1.547	0.204	0.0126	
S19.1	14.000	S19	7.7	2.176	0.134	0.0277	
S20.1	15.000	F15	5.7	2.326	0.082	0.0230	
S21.2	16.000	F15	6.7	2.617	0.084	0.0106	
F15	15.001	SDUMMY	12.3	0.833	0.299	0.0306	5.7

Results for 30 year Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	10	127.928	0.162	44.0	0.1832	0.0000	OK
15 minute winter	S2	10	126.785	0.135	63.2	0.1522	0.0000	OK
15 minute winter	S3	10	126.154	0.115	67.7	0.1304	0.0000	OK
15 minute winter	S4	11	124.542	0.115	71.1	0.1305	0.0000	OK
15 minute winter	S5	10	122.953	0.227	111.8	0.2572	0.0000	OK
15 minute winter	S8	11	117.169	0.169	182.9	0.4289	0.0000	OK
15 minute winter	S9	12	116.305	2.305	192.1	7.9831	0.0000	SURCHARGED
180 minute winter	S10	144	113.641	0.332	56.7	1.1492	0.0000	OK
180 minute winter	S12	144	113.641	2.891	29.9	7.3568	0.0000	SURCHARGED
30 minute winter	S13	23	110.853	0.228	59.9	0.7892	0.0000	OK
30 minute winter	S14	24	110.852	0.273	64.9	0.6956	0.0000	OK
600 minute winter	S16	615	110.274	1.324	22.5	5.9897	0.0000	OK
15 minute winter	S18	10	109.831	0.055	15.8	0.0617	0.0000	OK
15 minute winter	S19	10	108.303	0.103	40.7	0.1165	0.0000	OK
600 minute winter	TANK 2	615	110.274	1.974	23.1	228.9585	0.0000	SURCHARGED
600 minute winter	S17	615	110.275	1.995	21.1	9.0257	0.0000	OK
15 minute winter	S7	11	118.008	0.108	143.1	0.2760	0.0000	OK
15 minute winter	S2.1	10	127.794	0.101	14.9	0.0160	0.0000	OK
180 minute winter	S11.1	144	113.641	0.666	49.4	1.6943	0.0000	OK
180 minute winter	S11	144	113.641	2.741	63.7	12.3990	0.0000	SURCHARGED
180 minute winter	TANK 1	144	113.641	0.641	48.1	122.3787	0.0000	OK
30 minute winter	S15	23	110.853	1.853	69.5	8.3809	0.0000	SURCHARGED
15 minute winter	S1.1	10	128.067	0.167	40.4	0.0266	0.0000	OK
15 minute winter	S5.2	10	124.133	0.083	21.7	0.0132	0.0000	OK
15 minute winter	S6	10	122.155	0.155	138.2	0.1750	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S1	1.001	S2	43.2	1.490	0.774	0.5672	
S2	1.002	S3	62.9	2.761	0.539	0.2445	
S3	1.003	S4	67.3	2.868	0.270	0.3831	
S4	1.004	S5	71.3	2.970	0.285	0.5989	
S5	1.005	S6	111.3	1.804	0.497	0.3663	
S8	1.008	S9	184.4	2.387	0.069	2.0908	
S9	1.009	S10	180.8	1.721	0.066	3.8844	
S10	1.010	S11	56.7	1.049	0.040	1.9818	
S12	Head/Flow	S13	15.8				
S13	1.013	S14	59.9	0.829	0.052	1.9998	
S14	1.014	S15	64.9	0.954	0.057	1.8056	
S16	1.011	TANK 2	22.4	1.037	0.003	3.3141	
S18	13.000	S19	15.6	2.146	0.123	0.1858	
S19	13.001	S20	40.5	1.973	0.230	0.4498	18.9
TANK 2	1.017	S17	21.1	0.540	0.003	3.5210	
S17	ACO Q-Brake		10.5				354.4
S7	1.007	S8	143.5	2.330	0.032	1.1502	
S2.1	2.000	S2	14.8	1.285	0.626	0.0504	
S11.1	9.001	S11	-49.4	0.789	-0.022	2.2651	
S11	1.011_1	S12	28.8	0.361	0.018	15.0775	
TANK 1	9.000	S11.1	-48.1	-1.413	-0.022	0.9857	
S15	ACO Q-Brake	S16	48.2				
S1.1	1.000	S1	40.1	1.288	0.771	0.4168	
S5.2	4.000	S5	21.6	2.261	0.517	0.1045	
S6	1.006	S7	138.1	3.428	0.307	0.8713	

Results for 30 year Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S6.1	10	123.316	0.191	23.8	0.0303	0.0000	SURCHARGED
15 minute winter	S8.2	10	119.889	0.089	18.4	0.0142	0.0000	OK
15 minute winter	S8.1	10	119.883	0.082	13.7	0.0131	0.0000	OK
15 minute winter	S11.2	10	114.804	0.104	25.3	0.0165	0.0000	OK
15 minute winter	S13.1	10	112.932	0.102	37.8	0.1152	0.0000	OK
15 minute winter	S13.2	10	112.744	0.069	18.4	0.0110	0.0000	OK
15 minute winter	S5.1	10	123.328	0.078	13.4	0.0123	0.0000	OK
15 minute winter	S9.1	10	117.755	0.055	8.0	0.0087	0.0000	OK
15 minute winter	S20	10	107.749	0.097	40.5	0.0000	0.0000	OK
15 minute winter	S19.1	10	109.214	0.064	18.7	0.0727	0.0000	OK
15 minute winter	S20.1	10	117.857	0.046	14.0	0.0072	0.0000	OK
15 minute winter	S21.2	10	117.254	0.046	16.4	0.0073	0.0000	OK
15 minute winter	F15	10	116.482	0.168	30.3	0.1902	0.0000	OK
15 minute winter	SDUMMY	10	116.443	0.142	30.1	0.0000	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S6.1	5.000	S6	23.3	1.352	1.012	0.0950	
S8.2	7.000	S8	18.3	1.887	0.477	0.0336	
S8.1	6.000	S8	13.6	1.472	0.482	0.0587	
S11.2	10.000	S11	25.2	2.135	0.629	0.0588	
S13.1	11.000	S13	37.6	2.343	0.336	0.1287	
S13.2	12.000	S13	18.3	1.952	0.156	0.0398	
S5.1	3.000	S5	13.3	1.509	0.470	0.1052	
S9.1	8.000	S9	8.0	1.923	0.496	0.0247	
S19.1	14.000	S19	18.6	2.732	0.326	0.0538	
S20.1	15.000	F15	14.0	2.377	0.201	0.0756	
S21.2	16.000	F15	16.4	2.682	0.205	0.0333	
F15	15.001	SDUMMY	30.1	1.034	0.734	0.0603	14.0

Results for 100 year Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	11	127.980	0.214	56.3	0.2416	0.0000	OK
15 minute winter	S2	10	126.811	0.161	80.3	0.1824	0.0000	OK
15 minute winter	S3	10	126.172	0.133	86.3	0.1507	0.0000	OK
15 minute winter	S4	11	124.560	0.133	90.7	0.1503	0.0000	OK
15 minute winter	S5	10	122.994	0.268	143.4	0.3034	0.0000	OK
15 minute winter	S8	10	117.192	0.192	235.9	0.4895	0.0000	OK
15 minute winter	S9	12	117.058	3.058	255.4	10.5922	0.0000	SURCHARGED
180 minute winter	S10	152	113.960	0.651	74.3	2.2548	0.0000	OK
180 minute winter	S12	152	113.960	3.210	31.4	8.1692	0.0000	SURCHARGED
30 minute winter	S13	24	111.124	0.499	73.6	1.7270	0.0000	OK
30 minute winter	S14	24	111.132	0.552	79.5	1.4060	0.0000	OK
960 minute winter	S16	885	110.874	1.924	21.5	8.7058	0.0000	SURCHARGED
15 minute winter	S18	10	109.838	0.062	20.3	0.0703	0.0000	OK
15 minute winter	S19	10	108.319	0.119	52.6	0.1346	0.0000	OK
960 minute winter	TANK 2	885	110.874	2.574	20.9	298.6263	0.0000	SURCHARGED
960 minute winter	S17	885	110.874	2.594	27.8	11.7369	0.0000	OK
15 minute winter	S7	11	118.025	0.125	183.4	0.3170	0.0000	OK
15 minute winter	S2.1	10	127.816	0.123	19.2	0.0195	0.0000	OK
180 minute winter	S11.1	152	113.960	0.985	64.2	2.5066	0.0000	SURCHARGED
180 minute winter	S11	152	113.960	3.060	79.8	13.8431	0.0000	SURCHARGED
180 minute winter	TANK 1	152	113.960	0.960	62.4	183.3454	0.0000	SURCHARGED
30 minute winter	S15	24	111.118	2.118	83.9	9.5813	0.0000	SURCHARGED
15 minute winter	S1.1	11	128.140	0.240	52.2	0.0381	0.0000	SURCHARGED
15 minute winter	S5.2	10	124.149	0.099	28.0	0.0158	0.0000	OK
15 minute winter	S6	10	122.180	0.180	177.6	0.2041	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S1	1.001	S2	55.0	1.539	0.987	0.7354	
S2	1.002	S3	80.2	2.885	0.686	0.2979	
S3	1.003	S4	85.8	3.039	0.344	0.4610	
S4	1.004	S5	90.7	3.150	0.363	0.7187	
S5	1.005	S6	142.8	1.910	0.638	0.4422	
S8	1.008	S9	245.6	2.415	0.091	6.5733	
S9	1.009	S10	209.1	1.787	0.076	4.3400	
S10	1.010	S11	70.7	1.109	0.050	4.3598	
S12	Head/Flow	S13	16.6				
S13	1.013	S14	72.9	0.868	0.064	5.3354	
S14	1.014	S15	78.0	0.985	0.068	4.2609	
S16	1.011	TANK 2	20.9	1.016	0.002	3.5210	
S18	13.000	S19	20.1	2.301	0.159	0.2230	
S19	13.001	S20	52.3	2.106	0.297	0.5441	24.4
TANK 2	1.017	S17	27.8	0.547	0.004	3.5210	
S17	ACO Q-Brake		10.5				548.3
S7	1.007	S8	182.8	2.597	0.041	1.3921	
S2.1	2.000	S2	19.0	1.346	0.807	0.0617	
S11.1	9.001	S11	-64.2	0.814	-0.029	2.7436	
S11	1.011_1	S12	30.4	0.331	0.019	15.0775	
TANK 1	9.000	S11.1	-62.4	-1.418	-0.028	1.2675	
S15	ACO Q-Brake	S16	48.4				
S1.1	1.000	S1	51.3	1.319	0.987	0.5272	
S5.2	4.000	S5	27.8	2.380	0.667	0.1281	
S6	1.006	S7	176.5	3.626	0.393	1.0557	

Results for 100 year Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S6.1	10	123.419	0.294	30.7	0.0468	0.0000	SURCHARGED
15 minute winter	S8.2	10	119.908	0.108	23.8	0.0171	0.0000	OK
15 minute winter	S8.1	10	119.898	0.098	17.7	0.0156	0.0000	OK
15 minute winter	S11.2	10	114.832	0.132	32.6	0.0209	0.0000	OK
15 minute winter	S13.1	10	112.950	0.120	48.7	0.1355	0.0000	OK
15 minute winter	S13.2	10	112.756	0.081	23.8	0.0128	0.0000	OK
15 minute winter	S5.1	10	123.342	0.092	17.3	0.0146	0.0000	OK
15 minute winter	S9.1	10	117.765	0.065	10.4	0.0104	0.0000	OK
15 minute winter	S20	10	107.763	0.111	52.3	0.0000	0.0000	OK
15 minute winter	S19.1	10	109.225	0.075	24.2	0.0852	0.0000	OK
15 minute winter	S20.1	10	117.863	0.052	18.0	0.0083	0.0000	OK
15 minute winter	S21.2	10	117.261	0.053	21.1	0.0083	0.0000	OK
15 minute winter	F15	10	116.517	0.203	39.0	0.2295	0.0000	OK
15 minute winter	SDUMMY	10	116.466	0.165	38.8	0.0000	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S6.1	5.000	S6	30.2	1.717	1.315	0.0962	
S8.2	7.000	S8	23.7	1.977	0.617	0.0414	
S8.1	6.000	S8	17.6	1.552	0.623	0.0718	
S11.2	10.000	S11	32.4	2.198	0.810	0.0729	
S13.1	11.000	S13	48.5	2.476	0.432	0.1569	
S13.2	12.000	S13	23.7	2.070	0.202	0.0486	
S5.1	3.000	S5	17.1	1.596	0.608	0.1284	
S9.1	8.000	S9	10.3	2.028	0.645	0.0304	
S19.1	14.000	S19	24.1	2.900	0.423	0.0656	
S20.1	15.000	F15	18.0	2.462	0.258	0.1012	
S21.2	16.000	F15	21.1	2.761	0.264	0.0445	
F15	15.001	SDUMMY	38.8	1.115	0.945	0.0716	18.1

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	11	128.284	0.518	77.9	0.5864	0.0000	SURCHARGED
15 minute winter	S2	11	127.057	0.407	112.4	0.4599	0.0000	SURCHARGED
15 minute winter	S3	11	126.205	0.165	120.9	0.1872	0.0000	OK
15 minute winter	S4	11	124.592	0.165	127.6	0.1863	0.0000	OK
15 minute winter	S5	11	123.075	0.349	199.2	0.3944	0.0000	OK
15 minute winter	S8	13	117.830	0.830	328.1	2.1127	0.0000	OK
15 minute winter	S9	13	117.804	3.804	305.7	13.1774	0.0000	SURCHARGED
240 minute winter	S10	168	114.989	1.680	84.7	5.8187	0.0000	SURCHARGED
240 minute winter	S12	168	114.988	4.238	56.0	10.7857	22.1600	FLOOD
30 minute winter	S13	24	111.946	1.321	96.6	4.5767	0.0000	SURCHARGED
30 minute winter	S14	24	111.967	1.388	108.1	3.5315	0.0000	SURCHARGED
1440 minute winter	S16	1110	111.304	2.354	22.3	10.6482	0.0000	SURCHARGED
15 minute winter	S18	10	109.851	0.075	28.5	0.0844	0.0000	OK
15 minute winter	S19	10	108.346	0.146	73.7	0.1646	0.0000	OK
960 minute winter	TANK 2	870	111.302	3.002	24.5	348.0580	0.0000	SURCHARGED
720 minute winter	S17	735	111.301	3.021	21.9	13.6687	0.0000	OK
15 minute winter	S7	10	118.048	0.148	256.8	0.3776	0.0000	OK
15 minute winter	S2.1	10	127.921	0.228	26.9	0.0362	0.0000	SURCHARGED
240 minute winter	S11.1	172	114.988	2.013	70.6	5.1236	0.0000	SURCHARGED
240 minute winter	S11	168	114.988	4.088	86.9	18.4957	0.0000	SURCHARGED
240 minute winter	TANK 1	168	114.989	1.989	69.3	257.9455	0.0000	SURCHARGED
30 minute winter	S15	24	111.948	2.948	93.9	13.3352	0.0000	SURCHARGED
15 minute winter	S1.1	10	128.623	0.723	73.1	0.1149	0.0000	SURCHARGED
15 minute winter	S5.2	10	124.189	0.139	39.2	0.0221	0.0000	OK
15 minute winter	S6	11	122.225	0.225	247.1	0.2543	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S1	1.001	S2	77.4	1.947	1.389	0.7683	
S2	1.002	S3	112.8	2.922	0.966	0.3921	
S3	1.003	S4	121.1	3.279	0.485	0.6015	
S4	1.004	S5	127.8	3.407	0.512	0.9362	
S5	1.005	S6	199.7	2.053	0.892	0.5682	
S8	1.008	S9	296.4	2.454	0.110	16.8338	
S9	1.009	S10	234.7	1.834	0.085	5.8533	
S10	1.010	S11	76.5	1.090	0.054	5.4403	
S12	Head/Flow	S13	19.1				
S13	1.013	S14	98.9	0.894	0.086	8.7999	
S14	1.014	S15	86.9	1.029	0.076	6.4765	
S16	1.011	TANK 2	21.6	1.003	0.003	3.5210	
S18	13.000	S19	28.2	2.523	0.223	0.2858	
S19	13.001	S20	73.3	2.284	0.416	0.7030	34.2
TANK 2	1.017	S17	22.9	0.577	0.003	3.5210	
S17	ACO Q-Brake		10.5				497.0
S7	1.007	S8	257.0	2.778	0.058	6.1081	
S2.1	2.000	S2	26.6	1.509	1.125	0.0761	
S11.1	9.001	S11	-70.6	-0.368	-0.032	2.7436	
S11	1.011_1	S12	54.3	0.348	0.034	15.0775	
TANK 1	9.000	S11.1	-69.3	-1.149	-0.031	1.2675	
S15	ACO Q-Brake	S16	50.3				
S1.1	1.000	S1	70.9	1.783	1.365	0.5324	
S5.2	4.000	S5	38.6	2.468	0.926	0.1722	
S6	1.006	S7	247.7	3.895	0.552	1.3750	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 94.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S6.1	10	123.647	0.522	43.0	0.0830	0.0000	SURCHARGED
15 minute winter	S8.2	10	119.981	0.181	33.3	0.0288	0.0000	SURCHARGED
15 minute winter	S8.1	10	119.931	0.131	24.7	0.0208	0.0000	OK
15 minute winter	S11.2	10	115.091	0.391	45.7	0.0622	0.0000	SURCHARGED
15 minute winter	S13.1	10	112.982	0.152	68.2	0.1719	0.0000	OK
15 minute winter	S13.2	10	112.774	0.099	33.3	0.0158	0.0000	OK
15 minute winter	S5.1	10	123.369	0.119	24.2	0.0190	0.0000	OK
15 minute winter	S9.1	13	117.961	0.261	14.5	0.0415	0.0000	SURCHARGED
15 minute winter	S20	10	107.786	0.134	73.3	0.0000	0.0000	OK
15 minute winter	S19.1	10	109.244	0.094	33.8	0.1068	0.0000	OK
15 minute winter	S20.1	10	117.874	0.062	25.3	0.0099	0.0000	OK
15 minute winter	S21.2	10	117.272	0.064	29.6	0.0102	0.0000	OK
15 minute winter	F15	10	116.580	0.266	54.8	0.3006	0.0000	SURCHARGED
15 minute winter	SDUMMY	10	116.494	0.193	54.4	0.0000	0.0000	OK

US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
S6.1	5.000	S6	42.0	2.387	1.829	0.0962	
S8.2	7.000	S8	32.6	2.025	0.850	0.0536	
S8.1	6.000	S8	24.5	1.630	0.867	0.0947	
S11.2	10.000	S11	44.6	2.536	1.117	0.0880	
S13.1	11.000	S13	67.9	2.643	0.606	0.2056	
S13.2	12.000	S13	33.2	2.229	0.282	0.0631	
S5.1	3.000	S5	24.0	1.666	0.852	0.1779	
S9.1	8.000	S9	14.3	2.098	0.894	0.0467	
S19.1	14.000	S19	33.7	3.106	0.590	0.0854	
S20.1	15.000	F15	25.2	2.420	0.363	0.1160	
S21.2	16.000	F15	29.5	2.725	0.370	0.0514	
F15	15.001	SDUMMY	54.4	1.377	1.327	0.0789	25.3