Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.340	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Links (Results)

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1.002	39.8	11.2	1.375	2.620	0.083	0.0
1.001	1.360	150.3	26.0	2.620	3.664	0.192	0.0
1.002	1.463	161.6	37.4	3.664	2.984	0.276	0.0
1.003	1.482	163.7	43.6	2.984	2.099	0.322	0.0
2.000	1.093	43.5	13.1	1.425	1.249	0.097	0.0
1.004	2.379	262.8	60.2	2.099	2.175	0.444	0.0
1.005	1.048	115.7	81.7	2.175	1.830	0.603	0.0
3.000	3.350	133.2	13.7	1.200	1.270	0.101	0.0
3.001	3.531	140.4	23.6	1.270	1.221	0.174	0.0
3.002	3.817	151.8	35.4	1.221	1.767	0.261	0.0
3.003	1.003	110.7	63.8	1.767	1.752	0.471	0.0
4.000	1.966	78.2	10.0	1.450	1.752	0.074	0.0
3.004	1.007	160.1	82.4	1.752	1.884	0.608	0.0
3.005	1.020	162.2	90.4	1.884	1.208	0.667	0.0
3.006	3.932	625.4	90.4	1.208	1.830	0.667	0.0
1.006	3.747	596.0	180.8	1.830	2.334	1.334	0.0
5.000	1.002	70.8	27.1	3.009	2.447	0.200	0.0
5.001	1.000	70.7	37.3	2.447	2.268	0.275	0.0
5.002	1.007	160.2	44.0	2.268	2.169	0.325	0.0
5.003	1.007	218.0	50.6	2.169	1.901	0.373	0.0
5.004	1.007	218.1	74.3	1.901	1.675	0.548	0.0
5.005	1.004	217.3	87.5	1.675	2.177	0.646	0.0
5.006	1.010	218.5	86.3	2.177	2.439	0.646	0.0
5.007	1.007	218.0	83.9	2.439	2.223	0.646	0.0
5.008	1.252	354.1	91.2	2.223	2.334	0.711	0.0
1.007	1.301	465.6	257.5	2.334	2.823	2.081	0.0
1.008	1.303	466.3	256.8	2.823	3.037	2.094	0.0
1.009	1.299	464.8	262.2	3.037	2.943	2.193	0.0
6.000	1.002	17.7	10.3	1.200	1.452	0.076	0.0
1.010	1.165	417.0	268.1	2.943	3.628	2.287	0.0
1.011	1.180	422.3	273.8	3.628	3.668	2.351	0.0
1.012	2.123	5402.8	273.5	3.668	3.674	2.351	0.0
7.000	2.078	82.6	14.6	1.200	1.640	0.108	0.0
7.001	1.184	47.1	27.9	1.640	1.910	0.206	0.0
7.002	1.365	96.5	33.3	1.910	2.800	0.246	0.0
7.003	1.596	112.8	45.7	2.800	3.240	0.337	0.0
7.004	1.272	140.5	54.6	3.240	3.180	0.403	0.0
7.005	1.659	183.3	64.9	3.180	3.046	0.479	0.0
7.006	5.328	588.4	67.8	3.046	3.625	0.500	0.0
7.007	2.120	5394.1	67.8	3.625	3.674	0.500	0.0
1.013	1.165	416.9	330.9	4.799	4.805	2.851	0.0

Links (Results)

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.014	1.037	224.4	329.4	5.005	4.868	2.851	0.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	44.867	169.3	225	1 Circular	62.550	60.950	1.375	63.530	60.685	2.620
1.001	39.535	176.5	375	1 Circular	63.530	60.535	2.620	64.350	60.311	3.664
1.002	18.342	152.9	375	1 Circular	64.350	60.311	3.664	63.550	60.191	2.984
1.003	26.068	149.0	375	1 Circular	63.550	60.191	2.984	62.490	60.016	2.099
2.000	26.200	142.4	225	1 Circular	62.850	61.200	1.425	62.490	61.016	1.249
1.004	30.018	58.2	375	1 Circular	62.490	60.016	2.099	62.050	59.500	2.175
1.005	31.076	296.0	375	1 Circular	62.050	59.500	2.175	61.600	59.395	1.830
3.000	22.035	15.4	225	1 Circular	66.500	65.075	1.200	65.140	63.645	1.270
3.001	14.441	13.9	225	1 Circular	65.140	63.645	1.270	64.050	62.604	1.221
3.002	25.734	11.9	225	1 Circular	64.050	62.604	1.221	62.430	60.438	1.767
3.003	20.988	322.9	375	1 Circular	62.430	60.288	1.767	62.350	60.223	1.752
4.000	42.369	44.5	225	1 Circular	63.000	61.325	1.450	62.350	60.373	1.752
3.004	33.011	402.6	450	1 Circular	62.350	60.148	1.752	62.400	60.066	1.884
3.005	9.420	392.5	450	1 Circular	62.400	60.066	1.884	61.700	60.042	1.208
3.006	19.415	26.9	450	1 Circular	61.700	60.042	1.208	61.600	59.320	1.830
1.006	28.233	29.6	450	1 Circular	61.600	59.320	1.830	61.150	58.366	2.334
5.000	48.297	243.9	300	1 Circular	62.530	59.221	3.009	61.770	59.023	2.447
5.001	32.055	244.7	300	1 Circular	61.770	59.023	2.447	61.460	58.892	2.268
5.002	8.451	402.4	450	1 Circular	61.460	58.742	2.268	61.340	58.721	2.169
5.003	35.122	487.8	525	1 Circular	61.340	58.646	2.169	61.000	58.574	1.901
5.004	25.842	487.6	525	1 Circular	61.000	58.574	1.901	60.721	58.521	1.675

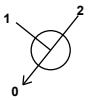
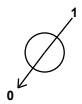
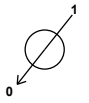
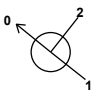
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1200	Manhole	1 Adoptable	2	1800	Manhole	1 Adoptable
1.001	2	1800	Manhole	1 Adoptable	3	1800	Manhole	1 Adoptable
1.002	3	1800	Manhole	1 Adoptable	4	1500	Manhole	1 Adoptable
1.003	4	1500	Manhole	1 Adoptable	6	1800	Manhole	1 Adoptable
2.000	5	1500	Manhole	1 Adoptable	6	1800	Manhole	1 Adoptable
1.004	6	1800	Manhole	1 Adoptable	7	1800	Manhole	1 Adoptable
1.005	7	1800	Manhole	1 Adoptable	16	1800	Manhole	1 Adoptable
3.000	8	1200	Manhole	1 Adoptable	9	1200	Manhole	1 Adoptable
3.001	9	1200	Manhole	1 Adoptable	10	1500	Manhole	1 Adoptable
3.002	10	1500	Manhole	1 Adoptable	11	1800	Manhole	1 Adoptable
3.003	11	1800	Manhole	1 Adoptable	13	1800	Manhole	1 Adoptable
4.000	12	1200	Manhole	1 Adoptable	13	1800	Manhole	1 Adoptable
3.004	13	1800	Manhole	1 Adoptable	14	1500	Manhole	1 Adoptable
3.005	14	1500	Manhole	1 Adoptable	15	1500	Manhole	1 Adoptable
3.006	15	1500	Manhole	1 Adoptable	16	1800	Manhole	1 Adoptable
1.006	16	1800	Manhole	1 Adoptable	26	1500	Manhole	1 Adoptable
5.000	17	1800	Manhole	1 Adoptable	18	1800	Manhole	1 Adoptable
5.001	18	1800	Manhole	1 Adoptable	19	1800	Manhole	1 Adoptable
5.002	19	1800	Manhole	1 Adoptable	20	1800	Manhole	1 Adoptable
5.003	20	1800	Manhole	1 Adoptable	21	2100	Manhole	1 Adoptable
5.004	21	2100	Manhole	1 Adoptable	22	1500	Manhole	1 Adoptable

Pipeline Schedule

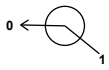
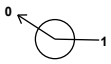
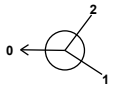
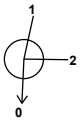
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
5.005	28.473	490.9	525	1 Circular	60.721	58.521	1.675	61.165	58.463	2.177
5.006	26.706	485.6	525	1 Circular	61.165	58.463	2.177	61.372	58.408	2.439
5.007	32.192	487.8	525	1 Circular	61.372	58.408	2.439	61.090	58.342	2.223
5.008	19.088	374.3	600	1 Circular	61.090	58.267	2.223	61.150	58.216	2.334
1.007	31.731	401.7	675	1 Circular	61.150	58.141	2.334	61.560	58.062	2.823
1.008	13.621	400.6	675	1 Circular	61.560	58.062	2.823	61.740	58.028	3.037
1.009	38.699	403.1	675	1 Circular	61.740	58.028	3.037	61.550	57.932	2.943
6.000	11.248	100.4	150	1 Circular	61.410	60.060	1.200	61.550	59.948	1.452
1.010	27.480	499.6	675	1 Circular	61.550	57.932	2.943	62.180	57.877	3.628
1.011	9.748	487.4	675	1 Circular	62.180	57.877	3.628	62.200	57.857	3.668
1.012	3.038	506.4	1800	1 Circular	62.200	56.732	3.668	62.200	56.726	3.674
7.000	40.244	39.8	225	1 Circular	62.910	61.485	1.200	62.340	60.475	1.640
7.001	29.210	121.7	225	1 Circular	62.340	60.475	1.640	62.370	60.235	1.910
7.002	43.650	132.3	300	1 Circular	62.370	60.160	1.910	62.930	59.830	2.800
7.003	40.764	97.1	300	1 Circular	62.930	59.830	2.800	62.950	59.410	3.240
7.004	8.063	201.6	375	1 Circular	62.950	59.335	3.240	62.850	59.295	3.180
7.005	31.659	119.0	375	1 Circular	62.850	59.295	3.180	62.450	59.029	3.046
7.006	9.675	11.7	375	1 Circular	62.450	59.029	3.046	62.200	58.200	3.625
7.007	24.892	508.0	1800	1 Circular	62.200	56.775	3.625	62.200	56.726	3.674
1.013	2.999	499.9	675	1 Circular	62.200	56.726	4.799	62.200	56.720	4.805
1.014	5.990	460.7	525	1 Circular	62.200	56.670	5.005	62.050	56.657	4.868

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.005	22	1500	Manhole	1 Adoptable	23	1500	Manhole	1 Adoptable
5.006	23	1500	Manhole	1 Adoptable	24	1500	Manhole	1 Adoptable
5.007	24	1500	Manhole	1 Adoptable	25	1500	Manhole	1 Adoptable
5.008	25	1500	Manhole	1 Adoptable	26	1500	Manhole	1 Adoptable
1.007	26	1500	Manhole	1 Adoptable	27	1500	Manhole	1 Adoptable
1.008	27	1500	Manhole	1 Adoptable	28	1800	Manhole	1 Adoptable
1.009	28	1800	Manhole	1 Adoptable	30	1500	Manhole	1 Adoptable
6.000	29	1200	Manhole	1 Adoptable	30	1500	Manhole	1 Adoptable
1.010	30	1500	Manhole	1 Adoptable	31	1500	Manhole	1 Adoptable
1.011	31	1500	Manhole	1 Adoptable	32	1200	Manhole	1 Adoptable
1.012	32	1200	Manhole	1 Adoptable	41	1200	Manhole	1 Adoptable
7.000	33	1200	Manhole	1 Adoptable	34	1200	Manhole	1 Adoptable
7.001	34	1200	Manhole	1 Adoptable	35	1200	Manhole	1 Adoptable
7.002	35	1200	Manhole	1 Adoptable	36	1500	Manhole	1 Adoptable
7.003	36	1500	Manhole	1 Adoptable	37	1500	Manhole	1 Adoptable
7.004	37	1500	Manhole	1 Adoptable	38	1500	Manhole	1 Adoptable
7.005	38	1500	Manhole	1 Adoptable	39	1500	Manhole	1 Adoptable
7.006	39	1500	Manhole	1 Adoptable	40	1200	Manhole	1 Adoptable
7.007	40	1200	Manhole	1 Adoptable	41	1200	Manhole	1 Adoptable
1.013	41	1200	Manhole	1 Adoptable	42	2100	Manhole	1 Adoptable
1.014	42	2100	Manhole	1 Adoptable	43	1500	Manhole	1 Adoptable

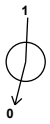
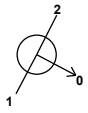
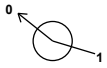
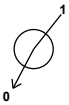
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	957.403	3376.802	62.550	1.600	1200				
						0	1.000	60.950	225
2	990.021	3345.994	63.530	2.995	1800		1.000	60.685	225
						0	1.001	60.535	375
3	1015.577	3315.829	64.350	4.039	1800		1.001	60.311	375
						0	1.002	60.311	375
4	1001.556	3304.003	63.550	3.359	1500		1.002	60.191	375
						0	1.003	60.191	375
5	964.817	3299.980	62.850	1.650	1500				
						0	2.000	61.200	225
6	985.291	3283.632	62.490	2.474	1800		1.000	61.016	225
							2	1.003	60.016	375
						0	1.004	60.016	375
7	966.512	3260.214	62.050	2.550	1800		1.004	59.500	375
						0	1.005	59.500	375
8	1055.574	3259.141	66.500	1.425	1200				
						0	3.000	65.075	225
9	1041.825	3241.922	65.140	1.495	1200		1.000	63.645	225
						0	3.001	63.645	225
10	1027.580	3239.548	64.050	1.446	1500		1.001	62.604	225
						0	3.002	62.604	225
11	1011.523	3219.438	62.430	2.142	1800		1.002	60.438	225
						0	3.003	60.288	375
12	1031.760	3176.704	63.000	1.675	1200				
						0	4.000	61.325	225
13	998.514	3202.968	62.350	2.202	1800		1.000	60.373	225
							2	3.003	60.223	375
						0	3.004	60.148	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
14	972.870	3223.755	62.400	2.334	1500	1	3.004	60.066	450
									
						0	3.005	60.066	450
15	963.452	3223.951	61.700	1.658	1500	1	3.005	60.042	450
									
						0	3.006	60.042	450
16	947.159	3234.510	61.600	2.280	1800	1	3.006	59.320	450
						2	1.005	59.395	375
									
						0	1.006	59.320	450
17	904.903	3423.510	62.530	3.309	1800				
						0	5.000	59.221	300
18	866.004	3394.883	61.770	2.747	1800	1	5.000	59.023	300
									
						0	5.001	59.023	300
19	885.455	3369.404	61.460	2.718	1800	1	5.001	58.892	300
									
						0	5.002	58.742	450
20	886.858	3361.070	61.340	2.694	1800	1	5.002	58.721	450
									
						0	5.003	58.646	525
21	912.962	3337.573	61.000	2.426	2100	1	5.003	58.574	525
									
						0	5.004	58.574	525
22	895.350	3318.662	60.721	2.200	1500	1	5.004	58.521	525
									
						0	5.005	58.521	525
23	884.558	3292.314	61.165	2.702	1500	1	5.005	58.463	525
									
						0	5.006	58.463	525
24	909.505	3282.783	61.372	2.964	1500	1	5.006	58.408	525
									
						0	5.007	58.408	525
25	923.005	3253.558	61.090	2.823	1500	1	5.007	58.342	525
									
						0	5.008	58.267	600
26	918.929	3234.910	61.150	3.009	1500	1	5.008	58.216	600
						2	1.006	58.366	450
									
						0	1.007	58.141	675

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
27	917.463	3203.213	61.560	3.498	1500	 1	1.007	58.062	675
						0	1.008	58.062	675
28	914.160	3189.999	61.740	3.712	1800	 1	1.008	58.028	675
						0	1.009	58.028	675
29	891.377	3145.552	61.410	1.350	1200				
						0	6.000	60.060	150
30	896.630	3155.498	61.550	3.618	1500	 1	6.000	59.948	150
						2	1.009	57.932	675
						0	1.010	57.932	675
31	920.928	3142.663	62.180	4.303	1500	 1	1.010	57.877	675
						0	1.011	57.877	675
32	916.375	3134.044	62.200	5.468	1200	 1	1.011	57.857	675
						0	1.012	56.732	1800
33	1087.197	3128.342	62.910	1.425	1200				
						0	7.000	61.485	225
34	1062.087	3096.893	62.340	1.865	1200	 1	7.000	60.475	225
						0	7.001	60.475	225
35	1034.120	3105.323	62.370	2.210	1200	 1	7.001	60.235	225
						0	7.002	60.160	300
36	1000.009	3132.558	62.930	3.100	1500	 1	7.002	59.830	300
						0	7.003	59.830	300
37	968.154	3157.993	62.950	3.615	1500	 1	7.003	59.410	300
						0	7.004	59.335	375
38	960.141	3157.095	62.850	3.555	1500	 1	7.004	59.295	375
						0	7.005	59.295	375
39	940.446	3132.308	62.450	3.421	1500	 1	7.005	59.029	375
						0	7.006	59.029	375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
40	935.938	3123.747	62.200	5.425	1200	1	7.006	58.200	375
						0	7.007	56.775	1800
41	913.340	3134.184	62.200	5.474	1200	1	7.007	56.726	1800
						2	1.012	56.726	1800
						0	1.013	56.726	675
42	910.688	3135.585	62.200	5.530	2100	1	1.013	56.720	675
						0	1.014	56.670	525
43	905.392	3138.383	62.050	5.393	1500	1	1.014	56.657	525

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	19.000	Drain Down Time (mins)	240
Ratio-R	0.344	Additional Storage (m³/ha)	0.0
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 %)
2	0	0	0
30	0	0	0

Node 21 Online Orifice Control

Flap Valve	x	Invert Level (m)	58.629	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.300		

Node 42 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	56.670	Product Number	CTL-SHE-0507-1923-1900-1923
Design Depth (m)	1.900	Min Outlet Diameter (m)	
Design Flow (l/s)	192.3	Min Node Diameter (mm)	

Node 41 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	56.726
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	8

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	350.0	0.0	1.800	350.0	0.0	1.801	0.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	11	61.040	0.090	13.7	0.1023	0.0000	OK
15 minute winter	2	10	60.650	0.115	30.8	0.2921	0.0000	OK
15 minute winter	3	11	60.456	0.145	43.9	0.3679	0.0000	OK
15 minute winter	4	11	60.342	0.151	51.2	0.2674	0.0000	OK
15 minute winter	5	10	61.296	0.096	16.0	0.1703	0.0000	OK
15 minute winter	6	11	60.147	0.131	70.7	0.3334	0.0000	OK
15 minute winter	7	11	59.767	0.267	95.2	0.6791	0.0000	OK
15 minute winter	8	10	65.128	0.053	16.6	0.0603	0.0000	OK
15 minute winter	9	10	63.714	0.069	28.5	0.0786	0.0000	OK
15 minute winter	10	10	62.687	0.083	42.6	0.1473	0.0000	OK
15 minute winter	11	10	60.525	0.237	77.0	0.6021	0.0000	OK
15 minute winter	12	10	61.385	0.060	12.2	0.0680	0.0000	OK
15 minute winter	13	11	60.413	0.265	97.4	0.6742	0.0000	OK
15 minute winter	14	11	60.304	0.238	107.6	0.4200	0.0000	OK
15 minute summer	15	11	60.168	0.126	106.9	0.2220	0.0000	OK
15 minute winter	16	11	59.517	0.197	206.9	0.5025	0.0000	OK
15 minute winter	17	10	59.363	0.142	32.9	0.3613	0.0000	OK
15 minute winter	18	11	59.201	0.178	44.7	0.4530	0.0000	OK
15 minute winter	19	12	58.990	0.248	51.3	0.6311	0.0000	OK
15 minute winter	20	12	58.980	0.334	57.5	0.8503	0.0000	OK
15 minute winter	21	12	58.973	0.399	79.1	1.3829	0.0000	OK
15 minute winter	22	12	58.770	0.249	87.6	0.4393	0.0000	OK
15 minute winter	23	13	58.713	0.250	86.9	0.4424	0.0000	OK
15 minute winter	24	13	58.662	0.254	85.5	0.4482	0.0000	OK
15 minute winter	25	13	58.607	0.340	91.2	0.6007	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	13.3	0.901	0.333	0.6599	
15 minute winter	2	1.001	3	30.6	0.909	0.204	1.3347	
15 minute winter	3	1.002	4	44.1	1.092	0.273	0.7406	
15 minute winter	4	1.003	6	51.4	1.355	0.314	0.9888	
15 minute winter	5	2.000	6	15.5	0.990	0.357	0.4127	
15 minute winter	6	1.004	7	70.6	1.190	0.269	1.7731	
15 minute winter	7	1.005	16	93.5	1.228	0.808	2.3729	
15 minute winter	8	3.000	9	16.5	1.886	0.124	0.1937	
15 minute winter	9	3.001	10	28.3	2.385	0.202	0.1716	
15 minute winter	10	3.002	11	42.5	3.122	0.280	0.3529	
15 minute winter	11	3.003	13	75.3	1.137	0.680	1.3967	
15 minute winter	12	4.000	13	11.9	1.415	0.152	0.3557	
15 minute winter	13	3.004	14	98.5	1.083	0.615	3.0037	
15 minute winter	14	3.005	15	111.8	1.870	0.689	0.5689	
15 minute summer	15	3.006	16	104.7	2.072	0.167	0.9877	
15 minute winter	16	1.006	26	212.1	3.195	0.356	2.0402	
15 minute winter	17	5.000	18	32.4	0.870	0.458	1.8208	
15 minute winter	18	5.001	19	43.6	1.061	0.617	1.3170	
15 minute winter	19	5.002	20	50.1	0.788	0.313	0.7775	
15 minute winter	20	5.003	21	54.9	0.341	0.252	5.6400	
15 minute winter	21	5.004	22	75.0	0.767	0.344	2.5276	
15 minute winter	22	5.005	23	86.9	0.895	0.400	2.8689	
15 minute winter	23	5.006	24	85.5	0.875	0.391	2.7348	
15 minute winter	24	5.007	25	85.8	0.999	0.393	3.4198	
15 minute winter	25	5.008	26	99.4	0.873	0.281	3.3556	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	12	58.595	0.454	293.4	0.8026	0.0000	OK
15 minute winter	27	13	58.531	0.469	289.4	0.8288	0.0000	OK
15 minute winter	28	13	58.479	0.451	296.0	1.1472	0.0000	OK
15 minute winter	29	10	60.160	0.100	12.5	0.1126	0.0000	OK
15 minute winter	30	13	58.394	0.462	306.4	0.8158	0.0000	OK
15 minute winter	31	13	58.299	0.422	312.5	0.7450	0.0000	OK
60 minute winter	32	47	57.259	0.527	198.0	0.5964	0.0000	OK
15 minute winter	33	10	61.555	0.070	17.8	0.0794	0.0000	OK
15 minute winter	34	11	60.620	0.145	33.7	0.1638	0.0000	OK
15 minute winter	35	11	60.296	0.136	39.1	0.1537	0.0000	OK
15 minute winter	36	11	59.981	0.151	53.5	0.2661	0.0000	OK
15 minute winter	37	11	59.536	0.201	63.4	0.3545	0.0000	OK
15 minute winter	38	11	59.476	0.181	75.1	0.3199	0.0000	OK
15 minute winter	39	11	59.132	0.103	78.2	0.1820	0.0000	OK
60 minute winter	40	48	57.259	0.484	43.6	0.5471	0.0000	OK
60 minute winter	41	48	57.259	0.533	230.5	187.0604	0.0000	OK
60 minute winter	42	48	57.255	0.585	109.0	2.0268	0.0000	SURCHARGED
60 minute winter	43	48	56.876	0.219	108.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	26	1.007	27	287.7	1.117	0.618	8.2373	
15 minute winter	27	1.008	28	285.0	1.116	0.611	3.5271	
15 minute winter	28	1.009	30	296.8	1.157	0.639	9.9329	
15 minute winter	29	6.000	30	12.3	1.040	0.695	0.1332	
15 minute winter	30	1.010	31	306.5	1.239	0.735	6.7955	
15 minute winter	31	1.011	32	311.5	1.474	0.738	2.0587	
60 minute winter	32	1.012	41	196.7	1.370	0.036	1.8915	
15 minute winter	33	7.000	34	17.6	0.954	0.213	0.7515	
15 minute winter	34	7.001	35	32.9	1.257	0.699	0.7642	
15 minute winter	35	7.002	36	39.4	1.189	0.409	1.4489	
15 minute winter	36	7.003	37	53.2	1.550	0.471	1.3982	
15 minute winter	37	7.004	38	63.3	1.124	0.451	0.4540	
15 minute winter	38	7.005	39	74.9	1.962	0.409	1.2217	
15 minute winter	39	7.006	40	78.0	3.453	0.133	0.2187	
60 minute winter	40	7.007	41	35.5	0.811	0.007	14.6231	
60 minute winter	41	1.013	42	109.0	0.431	0.261	0.9082	
60 minute winter	42	1.014	43	108.9	1.139	0.485	0.5733	359.7

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	61.082	0.132	25.8	0.1495	0.0000	OK
15 minute winter	2	10	60.699	0.164	58.5	0.4177	0.0000	OK
15 minute winter	3	11	60.527	0.216	83.7	0.5487	0.0000	OK
15 minute winter	4	11	60.413	0.222	97.0	0.3925	0.0000	OK
15 minute winter	5	10	61.343	0.143	30.2	0.2530	0.0000	OK
15 minute winter	6	11	60.213	0.197	133.8	0.5010	0.0000	OK
15 minute winter	7	11	60.015	0.515	179.3	1.3114	0.0000	SURCHARGED
15 minute winter	8	10	65.149	0.074	31.4	0.0836	0.0000	OK
15 minute winter	9	10	63.746	0.101	54.0	0.1142	0.0000	OK
15 minute winter	10	10	62.720	0.116	80.8	0.2045	0.0000	OK
15 minute winter	11	10	60.701	0.413	145.7	1.0519	0.0000	SURCHARGED
15 minute winter	12	10	61.408	0.083	23.0	0.0935	0.0000	OK
15 minute winter	13	11	60.557	0.409	184.7	1.0415	0.0000	OK
15 minute winter	14	11	60.391	0.325	201.4	0.5741	0.0000	OK
15 minute winter	15	11	60.228	0.186	202.3	0.3282	0.0000	OK
15 minute winter	16	12	59.639	0.319	399.9	0.8116	0.0000	OK
15 minute winter	17	13	59.756	0.535	62.3	1.3604	0.0000	SURCHARGED
15 minute winter	18	13	59.688	0.665	83.4	1.6917	0.0000	SURCHARGED
15 minute winter	19	13	59.585	0.843	78.6	2.1458	0.0000	SURCHARGED
15 minute winter	20	13	59.576	0.930	83.4	2.3678	0.0000	SURCHARGED
15 minute winter	21	13	59.566	0.992	133.9	3.4359	0.0000	SURCHARGED
15 minute winter	22	12	59.218	0.697	150.1	1.2322	0.0000	SURCHARGED
15 minute winter	23	12	59.193	0.730	150.6	1.2905	0.0000	SURCHARGED
15 minute winter	24	12	59.162	0.754	156.3	1.3319	0.0000	SURCHARGED
15 minute winter	25	12	59.078	0.811	178.7	1.4329	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	25.0	1.054	0.628	1.0650	
15 minute winter	2	1.001	3	57.8	1.039	0.385	2.1994	
15 minute winter	3	1.002	4	83.5	1.251	0.517	1.2245	
15 minute winter	4	1.003	6	97.4	1.563	0.595	1.6493	
15 minute winter	5	2.000	6	29.4	1.152	0.677	0.6725	
15 minute winter	6	1.004	7	132.7	1.383	0.505	2.5346	
15 minute winter	7	1.005	16	178.3	1.637	1.541	3.2244	
15 minute winter	8	3.000	9	31.3	2.195	0.235	0.3149	
15 minute winter	9	3.001	10	53.7	2.839	0.382	0.2730	
15 minute winter	10	3.002	11	80.4	3.155	0.530	0.7763	
15 minute winter	11	3.003	13	142.4	1.293	1.286	2.2463	
15 minute winter	12	4.000	13	22.8	1.441	0.291	1.0100	
15 minute winter	13	3.004	14	184.1	1.330	1.150	4.5215	
15 minute winter	14	3.005	15	202.3	2.181	1.247	0.8679	
15 minute winter	15	3.006	16	202.8	2.327	0.324	1.7229	
15 minute winter	16	1.006	26	392.2	3.266	0.658	3.9325	
15 minute winter	17	5.000	18	60.0	0.972	0.848	3.4010	
15 minute winter	18	5.001	19	63.9	1.160	0.903	2.2573	
15 minute winter	19	5.002	20	69.3	0.772	0.433	1.3390	
15 minute winter	20	5.003	21	83.4	0.386	0.382	7.5875	
15 minute winter	21	5.004	22	124.5	0.813	0.571	5.5827	
15 minute winter	22	5.005	23	150.6	0.952	0.693	6.1511	
15 minute winter	23	5.006	24	156.3	0.911	0.715	5.7694	
15 minute winter	24	5.007	25	173.3	1.118	0.795	6.9545	
15 minute winter	25	5.008	26	194.1	0.973	0.548	5.3767	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	26	12	59.043	0.902	507.1	1.5940	0.0000	SURCHARGED
15 minute winter	27	13	58.901	0.839	508.5	1.4832	0.0000	SURCHARGED
15 minute winter	28	13	58.811	0.783	530.6	1.9939	0.0000	SURCHARGED
15 minute winter	29	10	60.317	0.257	23.7	0.2909	0.0000	SURCHARGED
15 minute winter	30	13	58.641	0.709	555.8	1.2526	0.0000	SURCHARGED
15 minute winter	31	13	58.490	0.613	570.6	1.0828	0.0000	OK
60 minute winter	32	48	57.688	0.956	372.9	1.0812	0.0000	OK
15 minute winter	33	10	61.584	0.099	33.6	0.1118	0.0000	OK
15 minute winter	34	11	60.877	0.402	63.8	0.4542	0.0000	SURCHARGED
15 minute winter	35	11	60.363	0.203	72.6	0.2297	0.0000	OK
15 minute winter	36	11	60.063	0.233	99.4	0.4120	0.0000	OK
15 minute winter	37	11	59.643	0.308	118.3	0.5441	0.0000	OK
15 minute winter	38	11	59.560	0.265	140.4	0.4690	0.0000	OK
15 minute winter	39	11	59.179	0.150	146.3	0.2643	0.0000	OK
60 minute winter	40	48	57.688	0.913	83.0	1.0321	0.0000	OK
60 minute winter	41	48	57.688	0.962	433.2	337.6609	0.0000	SURCHARGED
60 minute winter	42	48	57.679	1.009	191.2	3.4957	0.0000	SURCHARGED
60 minute winter	43	48	56.951	0.294	190.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	26	1.007	27	506.2	1.418	1.087	11.3273	
15 minute winter	27	1.008	28	512.9	1.437	1.100	4.8624	
15 minute winter	28	1.009	30	536.6	1.503	1.154	13.8147	
15 minute winter	29	6.000	30	22.9	1.303	1.294	0.1931	
15 minute winter	30	1.010	31	559.2	1.575	1.341	9.5832	
15 minute winter	31	1.011	32	575.0	1.853	1.362	2.9923	
60 minute winter	32	1.012	41	370.3	1.587	0.069	4.1717	
15 minute winter	33	7.000	34	33.3	1.052	0.403	1.1378	
15 minute winter	34	7.001	35	60.9	1.532	1.293	1.1276	
15 minute winter	35	7.002	36	72.7	1.326	0.754	2.3901	
15 minute winter	36	7.003	37	99.0	1.721	0.878	2.3940	
15 minute winter	37	7.004	38	118.1	1.310	0.840	0.7268	
15 minute winter	38	7.005	39	140.1	2.241	0.765	1.9689	
15 minute winter	39	7.006	40	146.0	3.985	0.248	0.3547	
60 minute winter	40	7.007	41	65.9	0.971	0.012	33.2130	
60 minute winter	41	1.013	42	191.2	0.536	0.459	1.0706	
60 minute winter	42	1.014	43	190.9	1.363	0.851	0.8380	691.3