

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	Maximum Rainfall (mm/hr)	0.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	9.900
Ratio-R	0.400	Preferred Cover Depth (m)	1.500
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
61	0.187	5.00	127.139	1200	444768.240	303022.536	1.725
72	0.081	5.00	128.287	1200	444825.434	302985.788	1.725
73	0.022	5.00	127.818	1500	444825.439	303012.844	1.668
76	0.027	5.00	128.937	1200	444887.821	303031.622	1.725
77	0.007	5.00	128.670	1200	444874.187	303038.010	1.695
78	0.047	5.00	128.511	1200	444863.690	303039.713	1.790
74	0.083	5.00	127.962	1500	444828.168	303040.018	2.389
75	0.086	5.00	127.725	1500	444813.183	303042.079	2.407
62	0.023	5.00	127.322	1500	444779.278	303050.999	2.669
63	0.022	5.00	127.210	1500	444787.030	303073.936	2.710
64	0.035	5.00	126.870	1500	444791.627	303099.555	2.570
65	0.122	5.00	126.583	1500	444770.906	303104.466	2.433
66	0.095	5.00	125.900	1500	444743.092	303115.175	1.900
67	0.151	5.00	125.550	1500	444758.031	303155.770	1.650
68	0.094	5.00	125.200	1500	444772.154	303179.379	1.450
79	0.173	5.00	127.978	1200	444905.219	303094.375	1.725
80	0.091	5.00	127.787	1200	444875.201	303096.724	2.040
88	0.123	5.00	127.168	1200	444818.922	303097.398	1.725
81	0.066	5.00	127.317	1200	444832.830	303097.561	2.208
82	0.065	5.00	125.904	1500	444833.047	303151.357	1.454
83	0.078	5.00	126.600	1500	444874.793	303151.284	2.375
84			125.600	1500	444873.877	303164.741	1.420
85			125.600	1500	444851.001	303168.407	1.500
86			125.400	1500	444833.873	303169.060	1.400
87			125.200	1500	444815.843	303170.781	1.350
69			125.200	1500	444769.580	303181.271	1.500
70			125.200	1500	444764.191	303187.829	1.550
71			124.300	1500	444765.358	303196.429	0.700

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	61	62	30.528	0.600	125.414	124.803	0.611	50.0	300	5.23	0.0
2.000	72	73	27.056	0.600	126.562	126.300	0.262	103.3	225	5.35	0.0
2.001	73	74	27.311	0.600	126.150	125.573	0.577	47.3	375	5.52	0.0
3.000	76	77	15.056	0.600	127.212	126.975	0.237	63.5	225	5.15	0.0
3.001	77	78	10.634	0.600	126.975	126.796	0.179	59.4	225	5.26	0.0
3.002	78	74	35.523	0.600	126.721	125.573	1.148	30.9	300	5.47	0.0
2.002	74	75	15.126	0.600	125.573	125.318	0.255	59.3	375	5.63	0.0
2.003	75	62	35.059	0.600	125.318	124.728	0.590	59.4	375	5.88	0.0
1.001	62	63	24.212	0.600	124.653	124.500	0.153	158.2	450	6.13	0.0
1.002	63	64	26.028	0.600	124.500	124.300	0.200	130.1	450	6.37	0.0
1.003	64	65	21.295	0.600	124.300	124.150	0.150	142.0	450	6.58	0.0
1.004	65	66	29.804	0.600	124.150	124.000	0.150	198.7	450	6.93	0.0
1.005	66	67	43.257	0.600	124.000	123.900	0.100	432.6	450	7.67	0.0
1.006	67	68	27.511	0.600	123.900	123.750	0.150	183.4	450	7.97	0.0
1.007	68	69	3.195	0.600	123.750	123.700	0.050	63.9	525	7.99	0.0
4.000	79	80	30.110	0.600	126.253	125.747	0.506	59.5	225	5.30	0.0
4.001	80	81	42.379	0.600	125.747	125.109	0.638	66.4	225	5.74	0.0
5.000	88	81	13.909	0.600	125.443	125.109	0.334	41.6	225	5.11	0.0
4.002	81	82	53.796	0.600	125.109	124.600	0.509	105.7	300	6.32	0.0
4.003	82	83	41.746	0.600	124.450	124.300	0.150	278.3	450	6.90	0.0
4.004	83	84	13.488	0.600	124.225	124.180	0.045	299.7	525	7.07	0.0
4.005	84	85	23.168	0.600	124.180	124.100	0.080	289.6	600	7.34	0.0
4.006	85	86	17.140	0.600	124.100	124.000	0.100	171.4	525	7.51	0.0
4.007	86	87	18.112	0.600	124.000	123.850	0.150	120.7	525	7.66	0.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	2.229	157.6	0.0	1.425	2.219	0.187	0.0	0	0.000
2.000	1.286	51.1	0.0	1.500	1.293	0.081	0.0	0	0.000
2.001	2.639	291.5	0.0	1.293	2.014	0.103	0.0	0	0.000
3.000	1.643	65.3	0.0	1.500	1.470	0.027	0.0	0	0.000
3.001	1.700	67.6	0.0	1.470	1.490	0.034	0.0	0	0.000
3.002	2.836	200.5	0.0	1.490	2.089	0.081	0.0	0	0.000
2.002	2.356	260.2	0.0	2.014	2.032	0.267	0.0	0	0.000
2.003	2.354	260.0	0.0	2.032	2.219	0.353	0.0	0	0.000
1.001	1.613	256.6	0.0	2.219	2.260	0.563	0.0	0	0.000
1.002	1.780	283.1	0.0	2.260	2.120	0.585	0.0	0	0.000
1.003	1.704	271.0	0.0	2.120	1.983	0.620	0.0	0	0.000
1.004	1.438	228.8	0.0	1.983	1.450	0.742	0.0	0	0.000
1.005	0.971	154.4	0.0	1.450	1.200	0.837	0.0	0	0.000
1.006	1.498	238.2	0.0	1.200	1.000	0.988	0.0	0	0.000
1.007	2.805	607.2	0.0	0.925	0.975	1.082	0.0	0	0.000
4.000	1.698	67.5	0.0	1.500	1.815	0.173	0.0	0	0.000
4.001	1.607	63.9	0.0	1.815	1.983	0.264	0.0	0	0.000
5.000	2.033	80.8	0.0	1.500	1.983	0.123	0.0	0	0.000
4.002	1.529	108.1	0.0	1.908	1.004	0.453	0.0	0	0.000
4.003	1.213	193.0	0.0	1.004	1.850	0.518	0.0	0	0.000
4.004	1.288	278.9	0.0	1.850	0.895	0.596	0.0	0	0.000
4.005	1.426	403.1	0.0	0.820	0.900	0.596	0.0	0	0.000
4.006	1.708	369.7	0.0	0.975	0.875	0.596	0.0	0	0.000
4.007	2.037	441.0	0.0	0.875	0.825	0.596	0.0	0	0.000

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
4.008	87	69	47.437	0.600	123.850	123.700	0.150	316.2	525	8.29	0.0
1.008	69	70	8.488	0.600	123.700	123.650	0.050	169.8	525	8.37	0.0
1.009	70	71	8.679	0.600	123.650	123.600	0.050	173.6	450	8.46	0.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
4.008	1.254	271.4	0.0	0.825	0.975	0.596	0.0	0	0.000
1.008	1.716	371.5	0.0	0.975	1.025	1.678	0.0	0	0.000
1.009	1.540	244.9	0.0	1.100	0.250	1.678	0.0	0	0.000

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	30.528	50.0	300	Circular_Default Sewer Type	127.139	125.414	1.425	127.322	124.803	2.219
2.000	27.056	103.3	225	Circular_Default Sewer Type	128.287	126.562	1.500	127.818	126.300	1.293
2.001	27.311	47.3	375	Circular_Default Sewer Type	127.818	126.150	1.293	127.962	125.573	2.014
3.000	15.056	63.5	225	Circular_Default Sewer Type	128.937	127.212	1.500	128.670	126.975	1.470
3.001	10.634	59.4	225	Circular_Default Sewer Type	128.670	126.975	1.470	128.511	126.796	1.490
3.002	35.523	30.9	300	Circular_Default Sewer Type	128.511	126.721	1.490	127.962	125.573	2.089
2.002	15.126	59.3	375	Circular_Default Sewer Type	127.962	125.573	2.014	127.725	125.318	2.032
2.003	35.059	59.4	375	Circular_Default Sewer Type	127.725	125.318	2.032	127.322	124.728	2.219
1.001	24.212	158.2	450	Circular_Default Sewer Type	127.322	124.653	2.219	127.210	124.500	2.260
1.002	26.028	130.1	450	Circular_Default Sewer Type	127.210	124.500	2.260	126.870	124.300	2.120
1.003	21.295	142.0	450	Circular_Default Sewer Type	126.870	124.300	2.120	126.583	124.150	1.983
1.004	29.804	198.7	450	Circular_Default Sewer Type	126.583	124.150	1.983	125.900	124.000	1.450
1.005	43.257	432.6	450	Circular_Default Sewer Type	125.900	124.000	1.450	125.550	123.900	1.200
1.006	27.511	183.4	450	Circular_Default Sewer Type	125.550	123.900	1.200	125.200	123.750	1.000
1.007	3.195	63.9	525	Circular_Default Sewer Type	125.200	123.750	0.925	125.200	123.700	0.975
4.000	30.110	59.5	225	Circular_Default Sewer Type	127.978	126.253	1.500	127.787	125.747	1.815
4.001	42.379	66.4	225	Circular_Default Sewer Type	127.787	125.747	1.815	127.317	125.109	1.983

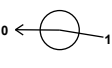
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	61	1200	Manhole	Adoptable	62	1500	Manhole	Adoptable
2.000	72	1200	Manhole	Adoptable	73	1500	Manhole	Adoptable
2.001	73	1500	Manhole	Adoptable	74	1500	Manhole	Adoptable
3.000	76	1200	Manhole	Adoptable	77	1200	Manhole	Adoptable
3.001	77	1200	Manhole	Adoptable	78	1200	Manhole	Adoptable
3.002	78	1200	Manhole	Adoptable	74	1500	Manhole	Adoptable
2.002	74	1500	Manhole	Adoptable	75	1500	Manhole	Adoptable
2.003	75	1500	Manhole	Adoptable	62	1500	Manhole	Adoptable
1.001	62	1500	Manhole	Adoptable	63	1500	Manhole	Adoptable
1.002	63	1500	Manhole	Adoptable	64	1500	Manhole	Adoptable
1.003	64	1500	Manhole	Adoptable	65	1500	Manhole	Adoptable
1.004	65	1500	Manhole	Adoptable	66	1500	Manhole	Adoptable
1.005	66	1500	Manhole	Adoptable	67	1500	Manhole	Adoptable
1.006	67	1500	Manhole	Adoptable	68	1500	Manhole	Adoptable
1.007	68	1500	Manhole	Adoptable	69	1500	Manhole	Adoptable
4.000	79	1200	Manhole	Adoptable	80	1200	Manhole	Adoptable
4.001	80	1200	Manhole	Adoptable	81	1200	Manhole	Adoptable

Pipeline Schedule

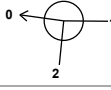
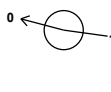
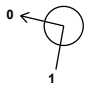
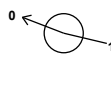
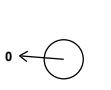
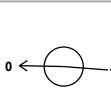
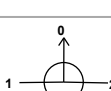
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
5.000	13.909	41.6	225	Circular_Default Sewer Type	127.168	125.443	1.500	127.317	125.109	1.983
4.002	53.796	105.7	300	Circular_Default Sewer Type	127.317	125.109	1.908	125.904	124.600	1.004
4.003	41.746	278.3	450	Circular_Default Sewer Type	125.904	124.450	1.004	126.600	124.300	1.850
4.004	13.488	299.7	525	Circular_Default Sewer Type	126.600	124.225	1.850	125.600	124.180	0.895
4.005	23.168	289.6	600	Circular_Default Sewer Type	125.600	124.180	0.820	125.600	124.100	0.900
4.006	17.140	171.4	525	Circular_Default Sewer Type	125.600	124.100	0.975	125.400	124.000	0.875
4.007	18.112	120.7	525	Circular_Default Sewer Type	125.400	124.000	0.875	125.200	123.850	0.825
4.008	47.437	316.2	525	Circular_Default Sewer Type	125.200	123.850	0.825	125.200	123.700	0.975
1.008	8.488	169.8	525	Circular_Default Sewer Type	125.200	123.700	0.975	125.200	123.650	1.025
1.009	8.679	173.6	450	Circular_Default Sewer Type	125.200	123.650	1.100	124.300	123.600	0.250

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.000	88	1200	Manhole	Adoptable	81	1200	Manhole	Adoptable
4.002	81	1200	Manhole	Adoptable	82	1500	Manhole	Adoptable
4.003	82	1500	Manhole	Adoptable	83	1500	Manhole	Adoptable
4.004	83	1500	Manhole	Adoptable	84	1500	Manhole	Adoptable
4.005	84	1500	Manhole	Adoptable	85	1500	Manhole	Adoptable
4.006	85	1500	Manhole	Adoptable	86	1500	Manhole	Adoptable
4.007	86	1500	Manhole	Adoptable	87	1500	Manhole	Adoptable
4.008	87	1500	Manhole	Adoptable	69	1500	Manhole	Adoptable
1.008	69	1500	Manhole	Adoptable	70	1500	Manhole	Adoptable
1.009	70	1500	Manhole	Adoptable	71	1500	Manhole	Adoptable

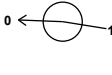
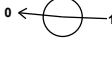
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
61	444768.240	303022.536	127.139	1.725	1200					
						0	1.000	125.414	300	
72	444825.434	302985.788	128.287	1.725	1200					
						0	2.000	126.562	225	
73	444825.439	303012.844	127.818	1.668	1500		1	2.000	126.300	225
						0	2.001	126.150	375	
76	444887.821	303031.622	128.937	1.725	1200					
						0	3.000	127.212	225	
77	444874.187	303038.010	128.670	1.695	1200		1	3.000	126.975	225
						0	3.001	126.975	225	
78	444863.690	303039.713	128.511	1.790	1200		1	3.001	126.796	225
						0	3.002	126.721	300	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
74	444828.168	303040.018	127.962	2.389	1500		1	3.002	125.573	300
							2	2.001	125.573	375
							0	2.002	125.573	375
75	444813.183	303042.079	127.725	2.407	1500		1	2.002	125.318	375
							0	2.003	125.318	375
62	444779.278	303050.999	127.322	2.669	1500		1	2.003	124.728	375
							2	1.000	124.803	300
							0	1.001	124.653	450
63	444787.030	303073.936	127.210	2.710	1500		1	1.001	124.500	450
							0	1.002	124.500	450
64	444791.627	303099.555	126.870	2.570	1500		1	1.002	124.300	450
							0	1.003	124.300	450
65	444770.906	303104.466	126.583	2.433	1500		1	1.003	124.150	450
							0	1.004	124.150	450
66	444743.092	303115.175	125.900	1.900	1500		1	1.004	124.000	450
							0	1.005	124.000	450
67	444758.031	303155.770	125.550	1.650	1500		1	1.005	123.900	450
							0	1.006	123.900	450
68	444772.154	303179.379	125.200	1.450	1500		1	1.006	123.750	450
							0	1.007	123.750	525
79	444905.219	303094.375	127.978	1.725	1200					
							0	4.000	126.253	225
80	444875.201	303096.724	127.787	2.040	1200		1	4.000	125.747	225
							0	4.001	125.747	225
88	444818.922	303097.398	127.168	1.725	1200					
							0	5.000	125.443	225
81	444832.830	303097.561	127.317	2.208	1200		1	5.000	125.109	225
							2	4.001	125.109	225
							0	4.002	125.109	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
82	444833.047	303151.357	125.904	1.454	1500	 1	4.002	124.600	300
83	444874.793	303151.284	126.600	2.375	1500	 1	0 4.003 124.450 450 1 4.003 124.300 450		
84	444873.877	303164.741	125.600	1.420	1500	 1	0 4.004 124.225 525 1 4.004 124.180 525		
85	444851.001	303168.407	125.600	1.500	1500	 1	0 4.005 124.180 600 1 4.005 124.100 600		
86	444833.873	303169.060	125.400	1.400	1500	 1	0 4.006 124.100 525 1 4.006 124.000 525		
87	444815.843	303170.781	125.200	1.350	1500	 1	0 4.007 124.000 525 1 4.007 123.850 525		
69	444769.580	303181.271	125.200	1.500	1500	 1	0 4.008 123.850 525 1 4.008 123.700 525 2 1.007 123.700 525		
70	444764.191	303187.829	125.200	1.550	1500	 1	0 1.008 123.700 525 1 1.008 123.650 525		
71	444765.358	303196.429	124.300	0.700	1500	 1	0 1.009 123.650 450 1 1.009 123.600 450		

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	✓
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	20.000	Additional Storage (m³/ha)	20.0
Ratio-R	0.400	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 %)
2	0	0	0
30	0	0	0
100	40	0	0

Node 70 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	123.650	Product Number	CTL-SHE-0152-1100-1000-1100
Design Depth (m)	1.000	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	11.0	Min Node Diameter (mm)	1200

Node 70 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	123.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	230.4	0.0	1.500	758.9	0.0

Node 85 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	124.100
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	64

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	505.2	0.0	1.500	1281.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 78.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	61	10	125.511	0.097	34.1	0.3206	0.0000	OK
15 minute winter	72	10	126.646	0.084	14.8	0.1745	0.0000	OK
15 minute winter	73	11	126.213	0.063	18.4	0.1278	0.0000	OK
15 minute winter	76	10	127.254	0.042	4.9	0.0602	0.0000	OK
15 minute winter	77	10	127.022	0.047	6.1	0.0574	0.0000	OK
15 minute winter	78	10	126.775	0.054	14.6	0.0897	0.0000	OK
15 minute winter	74	11	125.688	0.115	47.7	0.2830	0.0000	OK
15 minute winter	75	11	125.446	0.128	62.1	0.3172	0.0000	OK
15 minute winter	62	11	124.864	0.211	99.2	0.4091	0.0000	OK
15 minute winter	63	11	124.707	0.207	104.0	0.3994	0.0000	OK
15 minute winter	64	11	124.528	0.228	110.3	0.4656	0.0000	OK
15 minute winter	65	11	124.426	0.276	130.5	0.7635	0.0000	OK
15 minute winter	66	12	124.350	0.350	144.0	0.9685	0.0000	OK
480 minute winter	67	344	124.227	0.326	20.0	1.1744	0.0000	OK
360 minute winter	68	280	124.230	0.480	27.5	1.4705	0.0000	OK
15 minute winter	79	10	126.360	0.107	31.5	0.3366	0.0000	OK
15 minute winter	80	10	125.891	0.144	47.7	0.2906	0.0000	OK
15 minute winter	88	10	125.523	0.080	22.4	0.2052	0.0000	OK
15 minute winter	81	11	125.309	0.200	81.0	0.3458	0.0000	OK
15 minute winter	82	11	124.757	0.307	91.4	0.8157	0.0000	OK
15 minute summer	83	11	124.707	0.481	110.7	1.1670	0.0000	OK
15 minute summer	84	11	124.691	0.511	141.2	0.9022	0.0000	OK
480 minute winter	85	352	124.224	0.124	15.4	66.9925	0.0000	OK
480 minute winter	86	352	124.224	0.224	11.9	0.3964	0.0000	OK
480 minute winter	87	352	124.224	0.374	12.8	0.6612	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	61	1.000	62	33.5	1.746	0.212	0.5853	
15 minute winter	72	2.000	73	14.4	1.092	0.281	0.3574	
15 minute winter	73	2.001	74	18.2	0.916	0.062	0.5562	
15 minute winter	76	3.000	77	4.8	0.875	0.074	0.0835	
15 minute winter	77	3.001	78	6.0	1.029	0.089	0.0623	
15 minute winter	78	3.002	74	14.4	0.891	0.072	0.5926	
15 minute winter	74	2.002	75	47.3	1.535	0.182	0.4666	
15 minute winter	75	2.003	62	62.6	1.819	0.241	1.2120	
15 minute winter	62	1.001	63	100.2	1.390	0.390	1.7443	
15 minute winter	63	1.002	64	104.3	1.375	0.368	1.9757	
15 minute winter	64	1.003	65	109.6	1.201	0.404	1.9425	
15 minute winter	65	1.004	66	127.7	1.098	0.558	3.4799	
15 minute winter	66	1.005	67	143.1	1.162	0.927	5.3190	
480 minute winter	67	1.006	68	19.4	0.665	0.081	3.8740	
360 minute winter	68	1.007	69	38.6	0.683	0.064	0.6753	
15 minute winter	79	4.000	80	31.1	1.368	0.461	0.6838	
15 minute winter	80	4.001	81	46.8	1.461	0.733	1.3492	
15 minute winter	88	5.000	81	22.2	0.920	0.275	0.3449	
15 minute winter	81	4.002	82	80.2	1.656	0.743	2.6059	
15 minute winter	82	4.003	83	99.0	1.169	0.513	5.5070	
15 minute summer	83	4.004	84	141.2	1.002	0.506	2.8446	
15 minute summer	84	4.005	85	176.3	2.345	0.437	2.9829	
480 minute winter	85	4.006	86	11.4	0.717	0.031	1.0880	
480 minute winter	86	4.007	87	12.8	0.494	0.029	2.2874	
480 minute winter	87	4.008	69	12.7	0.088	0.047	9.0241	

Results for 2 year Critical Storm Duration. Lowest mass balance: 78.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
360 minute winter	69	272	124.224	0.524	49.4	0.9265	0.0000	OK
480 minute winter	70	360	124.224	0.574	34.1	170.2046	0.0000	SURCHARGED
15 minute summer	71	1	123.950	0.350	2.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
360 minute winter	69	1.008	70	39.1	0.413	0.105	1.8329	
480 minute winter	70	Hydro-Brake®	71	11.0				289.9

Results for 30 year Critical Storm Duration. Lowest mass balance: 78.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	61	10	125.549	0.135	64.7	0.4457	0.0000	OK
15 minute winter	72	10	126.685	0.123	28.0	0.2544	0.0000	OK
15 minute winter	73	10	126.236	0.086	35.0	0.1754	0.0000	OK
15 minute winter	76	10	127.270	0.058	9.3	0.0839	0.0000	OK
15 minute winter	77	10	127.042	0.067	11.6	0.0808	0.0000	OK
15 minute winter	78	10	126.796	0.075	27.8	0.1235	0.0000	OK
15 minute winter	74	10	125.742	0.169	90.9	0.4156	0.0000	OK
15 minute winter	75	10	125.500	0.182	118.8	0.4513	0.0000	OK
15 minute winter	62	12	125.246	0.593	189.5	1.1502	0.0000	SURCHARGED
15 minute winter	63	12	125.155	0.655	193.9	1.2649	0.0000	SURCHARGED
15 minute winter	64	12	125.051	0.751	181.6	1.5326	0.0000	SURCHARGED
15 minute winter	65	12	124.949	0.799	214.5	2.2145	0.0000	SURCHARGED
15 minute winter	66	12	124.768	0.768	240.3	2.1259	0.0000	SURCHARGED
960 minute winter	67	630	124.512	0.612	30.2	2.2001	0.0000	SURCHARGED
180 minute winter	68	172	124.770	1.020	660.3	3.1240	0.0000	SURCHARGED
15 minute winter	79	12	127.009	0.756	59.9	2.3714	0.0000	SURCHARGED
15 minute winter	80	12	126.692	0.945	78.2	1.9120	0.0000	SURCHARGED
15 minute winter	88	11	125.808	0.365	42.6	0.9337	0.0000	SURCHARGED
15 minute winter	81	11	125.700	0.591	133.2	1.0212	0.0000	SURCHARGED
15 minute winter	82	9	124.996	0.546	153.5	1.4525	0.0000	SURCHARGED
15 minute winter	83	9	124.893	0.668	193.7	1.6195	0.0000	SURCHARGED
15 minute winter	84	9	124.863	0.683	211.6	1.2065	0.0000	SURCHARGED
240 minute winter	85	200	124.398	0.298	57.8	174.0755	0.0000	OK
180 minute winter	86	164	124.419	0.419	37.7	0.7411	0.0000	OK
180 minute winter	87	156	124.425	0.575	71.2	1.0165	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	61	1.000	62	64.3	1.888	0.408	1.5161	
15 minute winter	72	2.000	73	27.4	1.282	0.535	0.5794	
15 minute winter	73	2.001	74	34.7	1.050	0.119	0.9179	
15 minute winter	76	3.000	77	9.2	1.031	0.141	0.1347	
15 minute winter	77	3.001	78	11.5	1.223	0.170	0.0997	
15 minute winter	78	3.002	74	27.5	1.027	0.137	0.9673	
15 minute winter	74	2.002	75	89.8	1.815	0.345	0.7641	
15 minute winter	75	2.003	62	120.5	1.780	0.464	2.8275	
15 minute winter	62	1.001	63	186.3	1.499	0.726	3.8362	
15 minute winter	63	1.002	64	172.1	1.453	0.608	4.1240	
15 minute winter	64	1.003	65	181.5	1.214	0.670	3.3741	
15 minute winter	65	1.004	66	214.6	1.354	0.938	4.7222	
15 minute winter	66	1.005	67	240.2	1.516	1.556	6.8538	
960 minute winter	67	1.006	68	41.5	0.645	0.174	4.3589	
180 minute winter	68	1.007	69	-625.1	-2.894	-1.029	0.6902	
15 minute winter	79	4.000	80	48.8	1.433	0.723	1.1975	
15 minute winter	80	4.001	81	74.8	1.881	1.171	1.6855	
15 minute winter	88	5.000	81	39.6	1.037	0.490	0.5532	
15 minute winter	81	4.002	82	132.3	1.880	1.224	3.7883	
15 minute winter	82	4.003	83	166.7	1.396	0.864	6.6144	
15 minute winter	83	4.004	84	211.6	1.361	0.759	2.9138	
15 minute winter	84	4.005	85	255.6	2.646	0.634	3.2856	
240 minute winter	85	4.006	86	41.2	0.864	0.112	2.6385	
180 minute winter	86	4.007	87	46.1	0.599	0.104	3.6317	
180 minute winter	87	4.008	69	64.1	0.297	0.236	10.2479	

Results for 30 year Critical Storm Duration. Lowest mass balance: 78.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
180 minute winter	69	152	124.841	1.141	543.6	2.0158	0.0000	SURCHARGED
360 minute winter	70	248	124.390	0.740	159.2	244.0915	0.0000	SURCHARGED
15 minute summer	71	1	123.950	0.350	10.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
180 minute winter	69	1.008	70	-251.2	-1.163	-0.676	1.8337	
360 minute winter	70	Hydro-Brake®	71	11.0				301.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 78.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	61	12	127.016	1.602	117.5	5.2842	0.0000	FLOOD RISK
15 minute winter	72	13	127.217	0.655	50.9	1.3550	0.0000	SURCHARGED
15 minute winter	73	13	127.099	0.949	63.2	1.9276	0.0000	SURCHARGED
15 minute winter	76	10	127.293	0.081	17.0	0.1168	0.0000	OK
15 minute winter	77	13	127.145	0.170	21.3	0.2063	0.0000	OK
15 minute winter	78	12	127.125	0.404	50.5	0.6697	0.0000	SURCHARGED
15 minute winter	74	13	127.071	1.498	151.2	3.6885	0.0000	SURCHARGED
15 minute winter	75	13	126.997	1.679	170.5	4.1664	0.0000	SURCHARGED
15 minute winter	62	12	126.766	2.113	243.6	4.0973	0.0000	SURCHARGED
15 minute winter	63	12	126.588	2.088	244.5	4.0298	0.0000	SURCHARGED
15 minute winter	64	12	126.388	2.088	261.0	4.2590	0.0000	SURCHARGED
15 minute winter	65	12	126.189	2.039	313.3	5.6481	0.0000	SURCHARGED
15 minute winter	66	12	125.806	1.806	359.0	4.9958	0.0000	FLOOD RISK
15 minute winter	67	12	125.134	1.234	431.5	4.4377	0.0000	SURCHARGED
60 minute summer	68	248	124.993	1.243	759.8	3.8082	0.0000	FLOOD RISK
15 minute winter	79	10	127.978	1.725	108.7	5.4113	11.9181	FLOOD
15 minute winter	80	10	127.787	2.040	105.4	4.1269	1.8361	FLOOD
15 minute winter	88	11	127.060	1.617	77.3	4.1345	0.0000	FLOOD RISK
15 minute winter	81	11	126.699	1.590	188.4	2.7487	0.0000	SURCHARGED
15 minute winter	82	8	125.244	0.794	226.7	2.1138	0.0000	SURCHARGED
15 minute winter	83	8	125.099	0.874	273.5	2.1182	0.0000	SURCHARGED
15 minute winter	84	8	125.047	0.867	276.3	1.5317	0.0000	SURCHARGED
480 minute winter	85	472	124.830	0.730	61.8	507.9696	0.0000	SURCHARGED
480 minute winter	86	472	124.839	0.839	82.3	1.4819	0.0000	SURCHARGED
480 minute winter	87	488	124.847	0.997	78.3	1.7611	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	61	1.000	62	90.3	1.940	0.573	2.1498	
15 minute winter	72	2.000	73	49.4	1.417	0.966	1.0760	
15 minute winter	73	2.001	74	56.4	1.104	0.194	3.0123	
15 minute winter	76	3.000	77	16.9	1.187	0.258	0.3051	
15 minute winter	77	3.001	78	21.0	1.426	0.310	0.3824	
15 minute winter	78	3.002	74	50.1	1.111	0.250	2.5015	
15 minute winter	74	2.002	75	125.2	1.788	0.481	1.6684	
15 minute winter	75	2.003	62	155.6	1.771	0.598	3.8669	
15 minute winter	62	1.001	63	236.6	1.496	0.922	3.8362	
15 minute winter	63	1.002	64	248.4	1.568	0.877	4.1240	
15 minute winter	64	1.003	65	265.4	1.675	0.979	3.3741	
15 minute winter	65	1.004	66	316.1	1.995	1.382	4.7222	
15 minute winter	66	1.005	67	357.3	2.255	2.314	6.8538	
15 minute winter	67	1.006	68	430.7	2.719	1.808	4.3589	
60 minute summer	68	1.007	69	824.2	4.229	1.357	0.6902	
15 minute winter	79	4.000	80	56.3	1.432	0.833	1.1975	
15 minute winter	80	4.001	81	87.8	2.209	1.375	1.6855	
15 minute winter	88	5.000	81	71.7	1.802	0.887	0.5532	
15 minute winter	81	4.002	82	188.2	2.673	1.742	3.7883	
15 minute winter	82	4.003	83	227.3	1.523	1.178	6.6144	
15 minute winter	83	4.004	84	276.3	1.600	0.991	2.9138	
15 minute winter	84	4.005	85	305.2	2.790	0.757	3.2962	
480 minute winter	85	4.006	86	82.3	0.740	0.223	3.7028	
480 minute winter	86	4.007	87	78.3	0.543	0.178	3.9128	
480 minute winter	87	4.008	69	88.0	0.407	0.324	10.2479	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 78.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	69	79	125.093	1.393	1107.8	2.4615	0.0000	FLOOD RISK
600 minute winter	70	555	124.800	1.150	96.8	468.6839	0.0000	SURCHARGED
15 minute summer	71	1	123.950	0.350	11.0	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)
60 minute summer	69	1.008	70	338.9	1.569	0.912	1.8337	
600 minute winter	70	Hydro-Brake®	71	11.0				407.5