Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	1.0
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)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	1.000	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)
S1		5.00	2.000		534628.961	334603.661	0.500
S2	0.051	5.00	2.000		534640.966	334603.661	0.512
S3		5.00	2.000		534661.903	334603.661	0.500
S4			2.000		534698.346	334603.661	0.536
S5		5.00	2.000		534709.562	334603.659	0.500
S6	0.071	5.00	2.000		534727.109	334603.659	0.518
S8		5.00	2.000		534747.994	334591.892	0.500
S9		5.00	2.000		534785.815	334577.885	0.500
S10	0.090	5.00	2.000		534777.182	334577.901	0.532
Headwall 1			2.000	1350	534755.351	334600.967	1.465
Headwall 2			2.000	1350	534777.182	334589.766	1.465
Headwall 3	0.081	5.00	2.000	1350	534782.742	334599.701	1.600
Headwall 4			2.000	1350	534798.549	334599.701	1.758
SA	0.012	5.00	2.000	1350	534641.692	334597.962	1.100
SB	0.060	5.00	2.000	1350	534698.838	334597.962	1.281
SC			2.000	1350	534732.144	334597.962	1.387
Hydrobrake			2.000	1350	534790.621	334600.244	1.679

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	S1	S2	12.005	0.035	1.500	1.488	0.012	1000.0	2500	5.44	1.0
2.000	S3	S4	36.443	0.035	1.500	1.464	0.036	1000.0	2500	6.35	1.0
3.000	S5	S6	17.547	0.035	1.500	1.482	0.018	1000.0	2500	5.65	1.0
1.002	SA	SB	57.146	0.035	0.900	0.719	0.181	315.0	375	8.50	1.0
1.003	SB	SC	33.306	0.035	0.719	0.613	0.106	315.0	375	10.17	1.0
1.004	SC	Headwall 1	23.401	0.035	0.613	0.539	0.074	315.0	375	11.35	1.0
4.000	S8	S10	32.368	0.035	1.500	1.468	0.032	1000.0	2500	6.19	1.0

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	0.451	902.9	0.1	0.000	0.012	0.023	0.0	2	0.016
2.000	0.451	902.9	0.2	0.000	0.036	0.046	0.0	3	0.020
3.000	0.451	902.9	0.1	0.000	0.018	0.041	0.0	3	0.020
1.002	0.332	36.7	0.3	0.725	0.906	0.086	0.0	25	0.102
1.003	0.332	36.7	0.7	0.906	1.012	0.192	0.0	36	0.129
1.004	0.332	36.7	1.1	1.012	1.086	0.304	0.0	44	0.148
4.000	0.451	902.9	0.3	0.000	0.032	0.071	0.0	4	0.024

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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)
5.000	S9	S10	8.633	0.035	1.500	1.491	0.009	1000.0	2500	5.32	1.0
4.001	S10	Headwall 2	11.865	0.035	1.468	1.430	0.038	315.0	375	6.79	1.0
6.000	Headwall 3	Hydrobrake	7.898	0.600	0.400	0.321	0.079	100.0	150	5.13	1.0
3.001	S6	SC	7.603	0.035	1.482	1.406	0.076	100.0	225	5.95	1.0
1.001	S2	SA	5.745	0.035	1.488	1.406	0.082	70.0	225	5.63	1.0
2.001	S4	SB	5.720	0.035	1.464	1.168	0.296	19.3	225	6.45	1.0
6.001	Hydrobrake	Headwall 4	7.947	0.600	0.321	0.242	0.079	100.0	150	5.26	1.0

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)
5.000	0.451	902.9	0.0	0.000	0.009	0.000	0.0	0	0.000
4.001	0.332	36.7	0.6	0.157	0.195	0.161	0.0	33	0.122
6.000	1.005	17.8	0.3	1.450	1.529	0.081	0.0	14	0.375
3.001	0.419	16.7	0.4	0.293	0.369	0.112	0.0	24	0.176
1.001	0.501	19.9	0.3	0.287	0.369	0.074	0.0	18	0.175
2.001	0.954	37.9	0.2	0.311	0.607	0.046	0.0	11	0.241
6.001	1.005	17.8	0.3	1.529	1.608	0.081	0.0	14	0.375

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	12.005	1000.0	2500	Swale	2.000	1.500	0.000	2.000	1.488	0.012
2.000	36.443	1000.0	2500	Swale	2.000	1.500	0.000	2.000	1.464	0.036
3.000	17.547	1000.0	2500	Swale	2.000	1.500	0.000	2.000	1.482	0.018
1.002	57.146	315.0	375	Circular	2.000	0.900	0.725	2.000	0.719	0.906
1.003	33.306	315.0	375	Circular	2.000	0.719	0.906	2.000	0.613	1.012
1.004	23.401	315.0	375	Circular	2.000	0.613	1.012	2.000	0.539	1.086
4.000	32.368	1000.0	2500	Swale	2.000	1.500	0.000	2.000	1.468	0.032
5.000	8.633	1000.0	2500	Swale	2.000	1.500	0.000	2.000	1.491	0.009
4.001	11.865	315.0	375	Circular	2.000	1.468	0.157	2.000	1.430	0.195
6.000	7.898	100.0	150	Circular	2.000	0.400	1.450	2.000	0.321	1.529
3.001	7.603	100.0	225	Circular	2.000	1.482	0.293	2.000	1.406	0.369
1.001	5.745	70.0	225	Circular	2.000	1.488	0.287	2.000	1.406	0.369
2.001	5.720	19.3	225	Circular	2.000	1.464	0.311	2.000	1.168	0.607

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1		Junction		S2		Junction	
2.000	S3		Junction		S4		Junction	
3.000	S5		Junction		S6		Junction	
1.002	SA	1350	Manhole	1 Adoptable	SB	1350	Manhole	1 Adoptable
1.003	SB	1350	Manhole	1 Adoptable	SC	1350	Manhole	1 Adoptable
1.004	SC	1350	Manhole	1 Adoptable	Headwall 1	1350	Manhole	1 Adoptable
4.000	S8		Junction		S10		Junction	
5.000	S9		Junction		S10		Junction	
4.001	S10		Junction		Headwall 2	1350	Manhole	1 Adoptable
6.000	Headwall 3	1350	Manhole	1 Adoptable	Hydrobrake	1350	Manhole	1 Adoptable
3.001	S6		Junction		SC	1350	Manhole	1 Adoptable
1.001	S2		Junction		SA	1350	Manhole	1 Adoptable
2.001	S4		Junction		SB	1350	Manhole	1 Adoptable

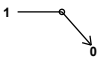
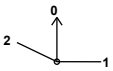
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Pipeline Schedule

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)
6.001	7.947	100.0	150	Circular	2.000	0.321	1.529	2.000	0.242	1.608

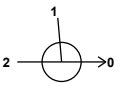
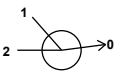
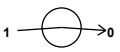
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
6.001	Hydrobrake	1350	Manhole	1 Adoptable	Headwall 4	1350	Manhole	1 Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	534628.961	334603.661	2.000	0.500					
						0	1.000	1.500	2500
S2	534640.966	334603.661	2.000	0.512		1	1.000	1.488	2500
									
						0	1.001	1.488	225
S3	534661.903	334603.661	2.000	0.500					
						0	2.000	1.500	2500
S4	534698.346	334603.661	2.000	0.536		1	2.000	1.464	2500
									
						0	2.001	1.464	225
S5	534709.562	334603.659	2.000	0.500					
						0	3.000	1.500	2500
S6	534727.109	334603.659	2.000	0.518		1	3.000	1.482	2500
									
						0	3.001	1.482	225
S8	534747.994	334591.892	2.000	0.500					
						0	4.000	1.500	2500
S9	534785.815	334577.885	2.000	0.500					
						0	5.000	1.500	2500
S10	534777.182	334577.901	2.000	0.532			1	5.000	1.491	2500
							2	4.000	1.468	2500
						0	4.001	1.468	375
Headwall 1	534755.351	334600.967	2.000	1.465	1350		1	1.004	0.539	375

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
Headwall 2	534777.182	334589.766	2.000	1.465	1350	1	4.001	1.430	375
									
Headwall 3	534782.742	334599.701	2.000	1.600	1350				
						0	6.000	0.400	150
Headwall 4	534798.549	334599.701	2.000	1.758	1350	1	6.001	0.242	150
									
SA	534641.692	334597.962	2.000	1.100	1350		1	1.001	1.406	225
						0	1.002	0.900	375
SB	534698.838	334597.962	2.000	1.281	1350		1	2.001	1.168	225
						2	1.002	0.719	375
						0	1.003	0.719	375
SC	534732.144	334597.962	2.000	1.387	1350		1	3.001	1.406	225
						2	1.003	0.613	375
						0	1.004	0.613	375
Hydrobrake	534790.621	334600.244	2.000	1.679	1350	1	6.000	0.321	150
									
						0	6.001	0.321	150

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	20.000	Additional Storage (m³/ha)	0.0
Ratio-R	0.400	Starting Level (m)	
Summer CV	1.000	Check Discharge Rate(s)	x
Winter CV	1.000	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	0	0	0
100	40	10	0

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Node Hydrobrake Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	0.321	Product Number	CTL-SHE-0049-1200-1200-1200
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.2	Min Node Diameter (mm)	1200

Node Headwall 3 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	27.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	0.400	Main Channel Slope (1:X)	200.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.035

Inlets

Headwall 1			Headwall 2		
Depth (m)	**Area (m²)**	**Inf Area (m²)**	**Depth (m)**	**Area (m²)**	**Inf Area (m²)**
0.000	396.0	0.0	1.500	806.0	0.0

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Results for 2 year Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	20	1.607	0.107	2.3	0.0000	0.0000	OK
30 minute summer	1.000:50%	20	1.607	0.113	6.7	0.0000	0.0000	OK
30 minute summer	S2	20	1.607	0.119	10.5	0.0000	0.0000	OK
30 minute summer	S3	21	1.518	0.018	1.8	0.0000	0.0000	OK
30 minute summer	2.000:50%	22	1.518	0.036	9.5	0.0000	0.0000	OK
30 minute summer	S4	22	1.516	0.052	5.4	0.0000	0.0000	OK
30 minute summer	S5	21	1.632	0.132	4.1	0.0000	0.0000	OK
30 minute summer	3.000:50%	21	1.632	0.141	11.9	0.0000	0.0000	OK
30 minute summer	S6	21	1.632	0.150	14.6	0.0000	0.0000	OK
60 minute summer	S8	40	1.609	0.109	3.7	0.0000	0.0000	OK
60 minute summer	4.000:50%	40	1.609	0.125	11.2	0.0000	0.0000	OK
60 minute summer	S9	40	1.609	0.109	2.0	0.0000	0.0000	OK
60 minute summer	S10	40	1.609	0.141	14.2	0.0000	0.0000	OK
30 minute summer	Headwall 1	23	0.797	0.262	31.1	0.3747	0.0000	OK
960 minute winter	Headwall 2	975	0.778	0.243	2.3	0.3473	0.0000	OK
960 minute winter	Headwall 3	960	0.776	0.376	5.1	0.5376	0.0000	SURCHARGED
15 minute summer	Headwall 4	1	0.242	0.000	0.9	0.0000	0.0000	OK
30 minute summer	SA	21	1.040	0.140	11.5	0.2002	0.0000	OK
30 minute summer	SB	22	0.936	0.217	24.1	0.3104	0.0000	OK
30 minute summer	SC	23	0.878	0.265	32.4	0.3792	0.0000	OK
960 minute winter	Hydrobrake	960	0.775	0.454	2.6	0.6503	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)
30 minute summer	S1	1.000	1.000:50%	-2.3	-0.029	-0.003	1.8671	
30 minute summer	S1	1.000	S2	4.2	-0.024	0.005	1.9814	
30 minute summer	S2	1.001	SA	9.7	0.572	0.486	0.0976	
30 minute summer	S3	2.000	2.000:50%	-1.8	-0.034	-0.002	1.2813	
30 minute summer	S3	2.000	S4	5.4	0.066	0.006	2.1115	
30 minute summer	S4	2.001	SB	4.4	0.633	0.115	0.0394	
30 minute summer	S5	3.000	3.000:50%	-4.1	-0.033	-0.005	3.4744	
30 minute summer	S5	3.000	S6	5.7	-0.024	0.006	3.7370	
30 minute summer	S6	3.001	SC	11.6	0.545	0.696	0.1613	
60 minute summer	S8	4.000	4.000:50%	-3.7	-0.020	-0.004	5.3820	
60 minute summer	S8	4.000	S10	4.6	0.014	0.005	6.2204	
60 minute summer	S9	5.000	S10	-2.0	-0.018	-0.002	2.7715	
60 minute summer	S10	4.001	Headwall 2	9.7	0.386	0.265	0.3068	
30 minute summer	Headwall 1	Flow through pond	Headwall 3	39.5	0.055	0.001	60.3075	
960 minute winter	Headwall 2	Flow through pond	Headwall 3	4.2	0.010	0.000	135.6565	
960 minute winter	Headwall 3	6.000	Hydrobrake	2.6	0.248	0.144	0.1390	
30 minute summer	SA	1.002	SB	10.8	0.210	0.294	2.9484	
30 minute summer	SB	1.003	SC	20.8	0.301	0.567	2.4834	
30 minute summer	SC	1.004	Headwall 1	31.1	0.401	0.847	1.9194	
960 minute winter	Hydrobrake	Hydro-Brake®	Headwall 4	0.9				53.4

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	20	1.672	0.172	3.9	0.0000	0.0000	OK
30 minute summer	1.000:50%	20	1.672	0.178	11.3	0.0000	0.0000	OK
30 minute summer	S2	20	1.672	0.184	20.9	0.0000	0.0000	OK
30 minute summer	S3	21	1.542	0.042	4.1	0.0000	0.0000	OK
30 minute summer	2.000:50%	21	1.542	0.060	18.0	0.0000	0.0000	OK
30 minute summer	S4	22	1.540	0.076	10.4	0.0000	0.0000	OK
30 minute summer	S5	21	1.718	0.218	7.0	0.0000	0.0000	OK
30 minute summer	3.000:50%	21	1.718	0.227	20.7	0.0000	0.0000	OK
30 minute summer	S6	21	1.718	0.236	27.8	0.0000	0.0000	FLOOD RISK
60 minute summer	S8	38	1.677	0.177	6.2	0.0000	0.0000	OK
60 minute summer	4.000:50%	38	1.677	0.193	20.6	0.0000	0.0000	OK
60 minute summer	S9	38	1.677	0.177	3.4	0.0000	0.0000	OK
60 minute summer	S10	38	1.677	0.209	29.8	0.0000	0.0000	OK
30 minute summer	Headwall 1	23	1.208	0.673	58.5	0.9630	0.0000	OK
1440 minute winter	Headwall 2	1470	1.030	0.495	3.0	0.7089	0.0000	OK
1440 minute winter	Headwall 3	1440	1.029	0.629	5.4	0.9003	0.0000	SURCHARGED
15 minute summer	Headwall 4	1	0.242	0.000	0.9	0.0000	0.0000	OK
30 minute summer	SA	22	1.591	0.691	23.2	0.9888	0.0000	SURCHARGED
30 minute summer	SB	22	1.532	0.813	46.3	1.1630	0.0000	SURCHARGED
30 minute summer	SC	22	1.420	0.807	59.7	1.1549	0.0000	SURCHARGED
1440 minute winter	Hydrobrake	1440	1.029	0.708	2.4	1.0128	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)
30 minute summer	S1	1.000	1.000:50%	-3.9	-0.039	-0.004	3.1775	
30 minute summer	S1	1.000	S2	8.8	-0.032	0.010	3.3050	
30 minute summer	S2	1.001	SA	19.8	0.702	0.991	0.1953	
30 minute summer	S3	2.000	2.000:50%	-4.1	-0.047	-0.005	2.4855	
30 minute summer	S3	2.000	S4	10.4	0.065	0.011	3.3600	
30 minute summer	S4	2.001	SB	9.3	0.748	0.245	0.1477	
30 minute summer	S5	3.000	3.000:50%	-7.0	-0.047	-0.008	6.1885	
30 minute summer	S5	3.000	S6	11.6	-0.031	0.013	6.4923	
30 minute summer	S6	3.001	SC	23.3	0.679	1.397	0.2390	
60 minute summer	S8	4.000	4.000:50%	-6.2	-0.027	-0.007	9.1574	
60 minute summer	S8	4.000	S10	10.8	0.018	0.012	10.1011	
60 minute summer	S9	5.000	S10	-3.4	-0.026	-0.004	4.7719	
60 minute summer	S10	4.001	Headwall 2	23.3	0.524	0.634	0.5314	
30 minute summer	Headwall 1	Flow through pond	Headwall 3	69.6	0.056	0.001	122.5455	
1440 minute winter	Headwall 2	Flow through pond	Headwall 3	3.9	0.009	0.000	266.0562	
1440 minute winter	Headwall 3	6.000	Hydrobrake	2.4	0.233	0.133	0.1390	
30 minute summer	SA	1.002	SB	19.6	0.216	0.534	6.3030	
30 minute summer	SB	1.003	SC	36.4	0.343	0.992	3.6736	
30 minute summer	SC	1.004	Headwall 1	58.5	0.531	1.595	2.5811	
1440 minute winter	Hydrobrake	Hydro-Brake®	Headwall 4	1.0				84.0

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Results for 100 year Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	21	1.735	0.235	4.8	0.0000	0.0000	OK
30 minute summer	1.000:50%	21	1.734	0.240	14.2	0.0000	0.0000	OK
30 minute summer	S2	21	1.734	0.246	26.5	0.0000	0.0000	FLOOD RISK
30 minute summer	S3	23	1.593	0.093	10.1	0.0000	0.0000	OK
30 minute summer	2.000:50%	24	1.593	0.111	23.6	0.0000	0.0000	OK
30 minute summer	S4	24	1.593	0.129	14.0	0.0000	0.0000	OK
30 minute summer	S5	21	1.774	0.274	9.1	0.0000	0.0000	OK
30 minute summer	3.000:50%	21	1.774	0.283	26.9	0.0000	0.0000	OK
30 minute summer	S6	21	1.773	0.291	36.4	0.0000	0.0000	FLOOD RISK
30 minute summer	S8	22	1.716	0.216	12.5	0.0000	0.0000	OK
30 minute summer	4.000:50%	22	1.716	0.232	37.4	0.0000	0.0000	OK
30 minute summer	S9	22	1.716	0.216	6.9	0.0000	0.0000	OK
30 minute summer	S10	22	1.716	0.248	48.1	0.0000	0.0000	OK
60 minute summer	Headwall 1	41	1.274	0.739	60.7	1.0582	0.0000	OK
1440 minute winter	Headwall 2	1470	1.189	0.654	3.9	0.9353	0.0000	OK
1440 minute winter	Headwall 3	1440	1.187	0.787	6.7	1.1264	0.0000	SURCHARGED
15 minute summer	Headwall 4	1	0.242	0.000	0.9	0.0000	0.0000	OK
30 minute summer	SA	20	1.664	0.764	34.0	1.0930	0.0000	SURCHARGED
30 minute summer	SB	20	1.597	0.878	54.0	1.2564	0.0000	SURCHARGED
30 minute summer	SC	20	1.499	0.886	64.3	1.2675	0.0000	SURCHARGED
1440 minute winter	Hydrobrake	1440	1.187	0.866	2.2	1.2390	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)
30 minute summer	S1	1.000	1.000:50%	-4.8	-0.046	-0.005	4.5813	
30 minute summer	S1	1.000	S2	10.7	-0.033	0.012	4.7134	
30 minute summer	S2	1.001	SA	22.1	0.723	1.110	0.2285	
30 minute summer	S3	2.000	2.000:50%	-10.1	-0.050	-0.011	5.1994	
30 minute summer	S3	2.000	S4	13.3	0.070	0.015	6.2394	
30 minute summer	S4	2.001	SB	15.4	0.809	0.406	0.1808	
30 minute summer	S5	3.000	3.000:50%	-9.1	-0.050	-0.010	8.1389	
30 minute summer	S5	3.000	S6	14.9	-0.036	0.017	8.4664	
30 minute summer	S6	3.001	SC	27.7	0.762	1.661	0.2491	
30 minute summer	S8	4.000	4.000:50%	-12.5	-0.049	-0.014	11.4991	
30 minute summer	S8	4.000	S10	15.4	-0.021	0.017	12.4985	
30 minute summer	S9	5.000	S10	-6.9	-0.045	-0.008	6.0098	
30 minute summer	S10	4.001	Headwall 2	33.1	0.594	0.902	0.6606	
60 minute summer	Headwall 1	Flow through pond	Headwall 3	51.8	0.039	0.001	201.4411	
1440 minute winter	Headwall 2	Flow through pond	Headwall 3	4.7	0.010	0.000	356.3221	
1440 minute winter	Headwall 3	6.000	Hydrobrake	2.2	0.196	0.124	0.1390	
30 minute summer	SA	1.002	SB	21.6	0.217	0.589	6.3030	
30 minute summer	SB	1.003	SC	38.1	0.351	1.037	3.6736	
30 minute summer	SC	1.004	Headwall 1	61.7	0.559	1.682	2.5811	
1440 minute winter	Hydrobrake	Hydro-Brake®	Headwall 4	1.0				89.4

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Results for 100 year +40% CC +10% A Critical Storm Duration. Lowest mass balance: 99.37%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S1	22	1.908	0.408	11.9	0.0000	0.0000	OK
30 minute summer	1.000:50%	22	1.908	0.414	36.9	0.0000	0.0000	OK
30 minute summer	S2	22	1.907	0.419	40.3	0.0000	0.0000	FLOOD RISK
60 minute summer	S3	45	1.721	0.221	11.0	0.0000	0.0000	OK
60 minute summer	2.000:50%	45	1.720	0.238	36.7	0.0000	0.0000	OK
60 minute summer	S4	45	1.721	0.257	19.4	0.0000	0.0000	FLOOD RISK
30 minute summer	S5	22	1.918	0.418	15.7	0.0000	0.0000	OK
30 minute summer	3.000:50%	22	1.918	0.427	46.0	0.0000	0.0000	OK
30 minute summer	S6	22	1.918	0.436	56.1	0.0000	0.0000	FLOOD RISK
30 minute summer	S8	22	1.795	0.295	18.0	0.0000	0.0000	OK
30 minute summer	4.000:50%	22	1.795	0.311	56.1	0.0000	0.0000	OK
30 minute summer	S9	22	1.795	0.295	10.2	0.0000	0.0000	OK
30 minute summer	S10	22	1.795	0.327	78.2	0.0000	0.0000	OK
1440 minute winter	Headwall 1	1410	1.535	1.000	10.6	1.4303	0.0000	OK
1440 minute winter	Headwall 2	1440	1.534	0.999	5.9	1.4295	0.0000	OK
1440 minute winter	Headwall 3	1440	1.533	1.133	10.4	1.6217	0.0000	SURCHARGED
15 minute summer	Headwall 4	1	0.242	0.000	0.9	0.0000	0.0000	OK
30 minute summer	SA	20	1.823	0.923	45.0	1.3215	0.0000	FLOOD RISK
30 minute summer	SB	19	1.754	1.035	64.1	1.4815	0.0000	FLOOD RISK
60 minute summer	SC	43	1.634	1.021	67.2	1.4617	0.0000	SURCHARGED
1440 minute winter	Hydrobrake	1440	1.533	1.212	2.6	1.7340	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)
30 minute summer	S1	1.000	1.000:50%	14.0	-0.052	0.016	9.2125	
30 minute summer	S1	1.000	S2	26.7	-0.042	0.030	9.3785	
30 minute summer	S2	1.001	SA	23.0	0.730	1.153	0.2285	
60 minute summer	S3	2.000	2.000:50%	-11.0	-0.049	-0.012	13.3477	
60 minute summer	S3	2.000	S4	17.9	0.069	0.020	14.6297	
60 minute summer	S4	2.001	SB	24.5	0.860	0.646	0.2275	
30 minute summer	S5	3.000	3.000:50%	-15.7	-0.066	-0.017	13.9630	
30 minute summer	S5	3.000	S6	19.6	-0.042	0.022	14.3602	
30 minute summer	S6	3.001	SC	32.1	0.806	1.922	0.3024	
30 minute summer	S8	4.000	4.000:50%	-18.0	-0.061	-0.020	16.7421	
30 minute summer	S8	4.000	S10	27.0	0.025	0.030	17.8732	
30 minute summer	S9	5.000	S10	-10.2	-0.056	-0.011	8.8007	
30 minute summer	S10	4.001	Headwall 2	56.4	0.724	1.538	0.8988	
1440 minute winter	Headwall 1	Flow through pond	Headwall 3	7.4	0.013	0.000	577.7463	
1440 minute winter	Headwall 2	Flow through pond	Headwall 3	7.4	0.013	0.000	577.7463	
1440 minute winter	Headwall 3	6.000	Hydrobrake	2.6	0.271	0.148	0.1390	
30 minute summer	SA	1.002	SB	24.9	0.226	0.679	6.3030	
30 minute summer	SB	1.003	SC	41.3	0.374	1.124	3.6736	
60 minute summer	SC	1.004	Headwall 1	63.7	0.577	1.736	2.5811	
1440 minute winter	Hydrobrake	Hydro-Brake®	Headwall 4	1.2				100.0

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