

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)	20.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.300	Preferred Cover Depth (m)	1.200
CV	1.000	Include Intermediate Ground	x
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)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
S10	0.113	5.00	81.461	1500	431235.460	410690.969	1.511	79.950
S11	0.056	5.00	81.211	1500	431243.924	410690.992	1.753	79.458
S12	0.192	5.00	81.171	1500	431243.778	410745.615	1.946	79.225
S13	0.165	5.00	86.724	1500	431125.617	410714.431	1.550	85.174
S14	0.147	5.00	84.029	1500	431176.154	410699.621	1.500	82.529
S15	0.014	5.00	83.232	1500	431183.207	410723.757	1.506	81.726
S16	0.144	5.00	82.181	1800	431184.421	410745.472	3.231	78.950
S17	0.130	5.00	83.501	1500	431135.078	410798.879	1.600	81.901
S18	0.013	5.00	81.519	1500	431166.439	410791.298	1.476	80.043
S19	0.123	5.00	80.957	1800	431183.271	410791.343	2.107	78.850
S20	0.025	5.00	80.808	1500	431183.226	410809.277	2.058	78.750
S21	0.027	5.00	81.959	1500	431241.156	410813.418	1.524	80.435
S22	0.124	5.00	82.325	1500	431241.112	410829.248	1.974	80.351
S23	0.064	5.00	80.483	1800	431192.283	410829.118	1.894	78.589
S24	0.007	5.00	78.122	1500	431192.204	410858.700	1.909	76.213
S25			76.948	1500	431188.439	410868.529	0.948	76.000
HW2	0.216	5.00	77.000	1500	431191.036	410875.487	1.284	75.716
HW3		5.00	77.484	1500	431178.755	410896.812	1.884	75.600
FC2			76.930	1500	431172.291	410899.685	1.402	75.528
HW4			76.000	1500	431156.581	410901.111	0.551	75.449

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)
C1 S1.001	S10	S11	8.464	0.600	79.950	79.600	0.350	24.2	300	5.04	50.0
C1 S1.002	S11	S12	54.623	0.600	79.458	79.300	0.158	345.7	450	5.88	50.0
C1 S1.003	S12	S16	59.357	0.600	79.225	79.025	0.200	296.8	525	6.65	50.0
C1 S2.000	S13	S14	52.662	0.600	85.174	82.529	2.645	19.9	300	5.25	50.0
C1 S2.001	S14	S15	25.145	0.600	82.529	81.726	0.803	31.3	300	5.40	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
C1 S1.001	3.210	226.9	20.4	1.211	1.311	0.113	0.0
C1 S1.002	1.087	173.0	30.5	1.303	1.421	0.169	0.0
C1 S1.003	1.295	280.3	65.2	1.421	2.631	0.361	0.0
C1 S2.000	3.539	250.2	29.8	1.250	1.200	0.165	0.0
C1 S2.001	2.820	199.3	56.4	1.200	1.206	0.312	0.0

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)
C1 S2.002	S15	S16	21.749	0.600	81.729	79.258	2.471	8.8	300	5.46	50.0
C1 S1.004	S16	S19	45.885	0.600	78.950	78.850	0.100	458.8	600	7.32	50.0
C1 S3.000	S17	S18	32.264	0.600	81.901	80.043	1.858	17.4	225	5.17	50.0
C1 S3.001	S18	S19	16.832	0.600	80.043	79.226	0.817	20.6	225	5.27	50.0
C1 S1.005	S19	S20	17.935	0.600	78.850	78.750	0.100	179.3	600	7.49	50.0
C1 S1.006	S20	S23	21.810	0.600	78.750	78.664	0.086	254.5	600	7.73	50.0
C1 S4.000	S21	S22	15.830	0.600	80.435	80.351	0.084	188.5	300	5.23	50.0
C1 S4.001	S22	S23	48.829	0.600	80.351	78.964	1.387	35.2	300	5.54	50.0
C1 S1.007	S23	S24	29.582	0.600	78.589	76.213	2.376	12.5	675	7.79	50.0
C1 S1.008	S24	S25	10.525	0.600	76.247	76.000	0.247	42.6	675	7.84	50.0
C1 S1.009	S25	HW2	7.427	0.600	76.000	75.866	0.134	55.4	675	7.87	50.0
C1 S1.011	HW3	FC2	6.498	0.600	75.600	75.578	0.022	300.0	675	5.07	50.0
C1 S1.012	FC2	HW4	15.775	0.600	75.528	75.449	0.079	200.0	225	5.36	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
C1 S2.002	5.330	376.7	58.9	1.203	2.623	0.326	0.0
C1 S1.004	1.130	319.5	150.2	2.631	1.507	0.831	0.0
C1 S3.000	3.155	125.4	23.5	1.375	1.251	0.130	0.0
C1 S3.001	2.895	115.1	25.8	1.251	1.506	0.143	0.0
C1 S1.005	1.815	513.2	198.2	1.507	1.458	1.097	0.0
C1 S1.006	1.522	430.2	202.7	1.458	1.219	1.122	0.0
C1 S4.000	1.142	80.7	4.9	1.224	1.674	0.027	0.0
C1 S4.001	2.658	187.9	27.3	1.674	1.219	0.151	0.0
C1 S1.007	7.451	2666.3	241.6	1.219	1.234	1.337	0.0
C1 S1.008	4.021	1439.1	242.9	1.200	0.273	1.344	0.0
C1 S1.009	3.525	1261.3	242.9	0.273	0.459	1.344	0.0
C1 S1.011	1.508	539.5	0.0	1.209	0.677	0.000	0.0
C1 S1.012	0.921	36.6	0.0	1.177	0.326	0.000	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)
C1 S1.001	8.464	24.2	300	Circular_Default Sewer Type	81.461	79.950	1.211	81.211	79.600	1.311
C1 S1.002	54.623	345.7	450	Circular_Default Sewer Type	81.211	79.458	1.303	81.171	79.300	1.421
C1 S1.003	59.357	296.8	525	Circular_Default Sewer Type	81.171	79.225	1.421	82.181	79.025	2.631
C1 S2.000	52.662	19.9	300	Circular_Default Sewer Type	86.724	85.174	1.250	84.029	82.529	1.200
C1 S2.001	25.145	31.3	300	Circular_Default Sewer Type	84.029	82.529	1.200	83.232	81.726	1.206
C1 S2.002	21.749	8.8	300	Circular_Default Sewer Type	83.232	81.729	1.203	82.181	79.258	2.623





Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
C1 S1.001	S10	1500	Manhole	Adoptable	S11	1500	Manhole	Adoptable
C1 S1.002	S11	1500	Manhole	Adoptable	S12	1500	Manhole	Adoptable
C1 S1.003	S12	1500	Manhole	Adoptable	S16	1800	Manhole	Adoptable
C1 S2.000	S13	1500	Manhole	Adoptable	S14	1500	Manhole	Adoptable
C1 S2.001	S14	1500	Manhole	Adoptable	S15	1500	Manhole	Adoptable
C1 S2.002	S15	1500	Manhole	Adoptable	S16	1800	Manhole	Adoptable

Pipeline Schedule


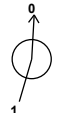
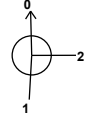

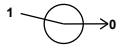
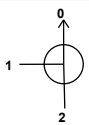
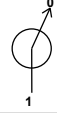


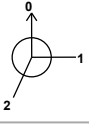



Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
C1 S1.004	45.885	458.8	600	Circular_Default Sewer Type	82.181	78.950	2.631	80.957	78.850	1.507
C1 S3.000	32.264	17.4	225	Circular_Default Sewer Type	83.501	81.901	1.375	81.519	80.043	1.251
C1 S3.001	16.832	20.6	225	Circular_Default Sewer Type	81.519	80.043	1.251	80.957	79.226	1.506
C1 S1.005	17.935	179.3	600	Circular_Default Sewer Type	80.957	78.850	1.507	80.808	78.750	1.458
C1 S1.006	21.810	254.5	600	Circular_Default Sewer Type	80.808	78.750	1.458	80.483	78.664	1.219
C1 S4.000	15.830	188.5	300	Circular_Default Sewer Type	81.959	80.435	1.224	82.325	80.351	1.674
C1 S4.001	48.829	35.2	300	Circular_Default Sewer Type	82.325	80.351	1.674	80.483	78.964	1.219
C1 S1.007	29.582	12.5	675	Circular_Default Sewer Type	80.483	78.589	1.219	78.122	76.213	1.234
C1 S1.008	10.525	42.6	675	Circular_Default Sewer Type	78.122	76.247	1.200	76.948	76.000	0.273
C1 S1.009	7.427	55.4	675	Circular_Default Sewer Type	76.948	76.000	0.273	77.000	75.866	0.459
C1 S1.011	6.498	300.0	675	Circular_Default Sewer Type	77.484	75.600	1.209	76.930	75.578	0.677
C1 S1.012	15.775	200.0	225	Circular_Default Sewer Type	76.930	75.528	1.177	76.000	75.449	0.326

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
C1 S1.004	S16	1800	Manhole	Adoptable	S19	1800	Manhole	Adoptable
C1 S3.000	S17	1500	Manhole	Adoptable	S18	1500	Manhole	Adoptable
C1 S3.001	S18	1500	Manhole	Adoptable	S19	1800	Manhole	Adoptable
C1 S1.005	S19	1800	Manhole	Adoptable	S20	1500	Manhole	Adoptable
C1 S1.006	S20	1500	Manhole	Adoptable	S23	1800	Manhole	Adoptable
C1 S4.000	S21	1500	Manhole	Adoptable	S22	1500	Manhole	Adoptable
C1 S4.001	S22	1500	Manhole	Adoptable	S23	1800	Manhole	Adoptable
C1 S1.007	S23	1800	Manhole	Adoptable	S24	1500	Manhole	Adoptable
C1 S1.008	S24	1500	Manhole	Adoptable	S25	1500	Manhole	Adoptable
C1 S1.009	S25	1500	Manhole	Adoptable	HW2	1500	Manhole	Adoptable
C1 S1.011	HW3	1500	Manhole	Adoptable	FC2	1500	Manhole	Adoptable
C1 S1.012	FC2	1500	Manhole	Adoptable	HW4	1500	Manhole	Adoptable


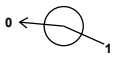

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S10	431235.460	410690.969	81.461	1.511	1500				
						0	C1 S1.001	79.950	300
S11	431243.924	410690.992	81.211	1.753	1500				
						1	C1 S1.001	79.600	300
						0	C1 S1.002	79.458	450
S12	431243.778	410745.615	81.171	1.946	1500				
						1	C1 S1.002	79.300	450
						0	C1 S1.003	79.225	525
S13	431125.617	410714.431	86.724	1.550	1500				
						0	C1 S2.000	85.174	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S14	431176.154	410699.621	84.029	1.500	1500		1 C1 S2.000	82.529	300
							0 C1 S2.001	82.529	300
S15	431183.207	410723.757	83.232	1.506	1500		1 C1 S2.001	81.726	300
							0 C1 S2.002	81.729	300
S16	431184.421	410745.472	82.181	3.231	1800		1 C1 S2.002	79.258	300
							2 C1 S1.003	79.025	525
							0 C1 S1.004	78.950	600
S17	431135.078	410798.879	83.501	1.600	1500		0 C1 S3.000	81.901	225
S18	431166.439	410791.298	81.519	1.476	1500		1 C1 S3.000	80.043	225
							0 C1 S3.001	80.043	225
S19	431183.271	410791.343	80.957	2.107	1800		1 C1 S3.001	79.226	225
							2 C1 S1.004	78.850	600
							0 C1 S1.005	78.850	600
S20	431183.226	410809.277	80.808	2.058	1500		1 C1 S1.005	78.750	600
							0 C1 S1.006	78.750	600
S21	431241.156	410813.418	81.959	1.524	1500		0 C1 S4.000	80.435	300
S22	431241.112	410829.248	82.325	1.974	1500		1 C1 S4.000	80.351	300
							0 C1 S4.001	80.351	300
S23	431192.283	410829.118	80.483	1.894	1800		1 C1 S4.001	78.964	300
							2 C1 S1.006	78.664	600
							0 C1 S1.007	78.589	675
S24	431192.204	410858.700	78.122	1.909	1500		1 C1 S1.007	76.213	675
							0 C1 S1.008	76.247	675
S25	431188.439	410868.529	76.948	0.948	1500		1 C1 S1.008	76.000	675
							0 C1 S1.009	76.000	675
HW2	431191.036	410875.487	77.000	1.284	1500		1 C1 S1.009	75.866	675

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
HW3	431178.755	410896.812	77.484	1.884	1500				
						0	C1 S1.011	75.600	675
FC2	431172.291	410899.685	76.930	1.402	1500		1	C1 S1.011	75.578
						0	C1 S1.012	75.528	225
HW4	431156.581	410901.111	76.000	0.551	1500		1	C1 S1.012	75.449
									225

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	✓	Check Discharge Rate(s)	✓
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	✓
Winter CV	1.000	Additional Storage (m ³ /ha)	20.0	100 year 360 minute (m ³)	

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	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)		Betterment (%)	0
SAAR (mm)		QBar	
Soil Index	1	Q 1 year (l/s)	
SPR	0.10	Q 30 year (l/s)	
Region	1	Q 100 year (l/s)	
Growth Factor 1 year	0.85		

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)		Storm Duration (mins)	360
Soil Index	1	Betterment (%)	0
SPR	0.10	PR	
CWI		Runoff Volume (m ³)	

Node FC2 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	75.528	Product Number	CTL-SHE-0157-1190-1050-1190
Design Depth (m)	1.050	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	11.9	Min Node Diameter (mm)	1500

Node HW3 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	23.274
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	75.600	Main Channel Slope (1:X)	200.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.035

Inlets

HW2

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	1035.0	0.0	1.300	1593.0	0.0

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

Node Size	✓	Maximum Full Bore Velocity (m/s)	3.000
Node Losses	✓	Proportional Velocity	✓
Link Size	✓	Return Period (years)	
Minimum Diameter (mm)	150	Minimum Proportional Velocity (m/s)	0.750
Link Length	✓	Maximum Proportional Velocity (m/s)	3.000
Maximum Length (m)	100.000	Surcharged Depth	✓
Coordinates	✓	Return Period (years)	
Accuracy (m)	1.000	Maximum Surcharged Depth (m)	0.100
Crossings	✓	Flooding	✓
Cover Depth	✓	Return Period (years)	30
Minimum Cover Depth (m)		Time to Half Empty	x
Maximum Cover Depth (m)	3.000	Discharge Rates	✓
Backdrops	✓	Discharge Volume	✓
Minimum Backdrop Height (m)		100 year 360 minute (m ³)	
Maximum Backdrop Height (m)	1.500	First Flush	✓
Full Bore Velocity	✓	Return Period (years)	30
Minimum Full Bore Velocity (m/s)		First Flush Depth (mm)	5

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
2 year 15 minute summer	104.606	29.600	2 year 120 minute summer	31.407	8.300
2 year 15 minute winter	73.408	29.600	2 year 120 minute winter	20.866	8.300
2 year 30 minute summer	67.853	19.200	2 year 180 minute summer	25.346	6.522
2 year 30 minute winter	47.616	19.200	2 year 180 minute winter	16.475	6.522
2 year 60 minute summer	45.408	12.000	2 year 240 minute summer	20.634	5.453
2 year 60 minute winter	30.168	12.000	2 year 240 minute winter	13.709	5.453

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
2 year 360 minute summer	16.317	4.199	100 year 120 minute summer	95.148	25.145
2 year 360 minute winter	10.606	4.199	100 year 120 minute winter	63.214	25.145
2 year 480 minute summer	13.101	3.462	100 year 180 minute summer	71.667	18.442
2 year 480 minute winter	8.704	3.462	100 year 180 minute winter	46.585	18.442
2 year 600 minute summer	10.857	2.970	100 year 240 minute summer	56.088	14.822
2 year 600 minute winter	7.418	2.970	100 year 240 minute winter	37.263	14.822
2 year 720 minute summer	9.752	2.614	100 year 360 minute summer	42.495	10.935
2 year 720 minute winter	6.554	2.614	100 year 360 minute winter	27.623	10.935
2 year 960 minute summer	8.082	2.128	100 year 480 minute summer	33.441	8.838
2 year 960 minute winter	5.353	2.128	100 year 480 minute winter	22.218	8.838
2 year 1440 minute summer	5.908	1.583	100 year 600 minute summer	27.419	7.500
2 year 1440 minute winter	3.970	1.583	100 year 600 minute winter	18.735	7.500
30 year 15 minute summer	279.082	78.970	100 year 720 minute summer	24.486	6.563
30 year 15 minute winter	195.847	78.970	100 year 720 minute winter	16.456	6.563
30 year 30 minute summer	183.166	51.830	100 year 960 minute summer	20.204	5.320
30 year 30 minute winter	128.538	51.830	100 year 960 minute winter	13.384	5.320
30 year 60 minute summer	123.908	32.745	100 year 1440 minute summer	14.697	3.939
30 year 60 minute winter	82.322	32.745	100 year 1440 minute winter	9.878	3.939
30 year 120 minute summer	74.207	19.611	100 year +40% CC 15 minute summer	498.795	141.142
30 year 120 minute winter	49.301	19.611	100 year +40% CC 15 minute winter	350.032	141.142
30 year 180 minute summer	56.290	14.485	100 year +40% CC 30 minute summer	332.403	94.058
30 year 180 minute winter	36.590	14.485	100 year +40% CC 30 minute winter	233.265	94.058
30 year 240 minute summer	44.179	11.675	100 year +40% CC 60 minute summer	226.620	59.889
30 year 240 minute winter	29.351	11.675	100 year +40% CC 60 minute winter	150.561	59.889
30 year 360 minute summer	33.467	8.612	100 year +40% CC 120 minute summer	133.207	35.203
30 year 360 minute winter	21.754	8.612	100 year +40% CC 120 minute winter	88.499	35.203
30 year 480 minute summer	26.279	6.945	100 year +40% CC 180 minute summer	100.333	25.819
30 year 480 minute winter	17.459	6.945	100 year +40% CC 180 minute winter	65.219	25.819
30 year 600 minute summer	21.493	5.879	100 year +40% CC 240 minute summer	78.523	20.751
30 year 600 minute winter	14.686	5.879	100 year +40% CC 240 minute winter	52.169	20.751
30 year 720 minute summer	19.147	5.132	100 year +40% CC 360 minute summer	59.493	15.310
30 year 720 minute winter	12.868	5.132	100 year +40% CC 360 minute winter	38.672	15.310
30 year 960 minute summer	15.732	4.143	100 year +40% CC 480 minute summer	46.818	12.373
30 year 960 minute winter	10.421	4.143	100 year +40% CC 480 minute winter	31.105	12.373
30 year 1440 minute summer	11.402	3.056	100 year +40% CC 600 minute summer	38.387	10.500
30 year 1440 minute winter	7.663	3.056	100 year +40% CC 600 minute winter	26.228	10.500
100 year 15 minute summer	356.282	100.816	100 year +40% CC 720 minute summer	34.281	9.188
100 year 15 minute winter	250.023	100.816	100 year +40% CC 720 minute winter	23.039	9.188
100 year 30 minute summer	237.430	67.185	100 year +40% CC 960 minute summer	28.286	7.448
100 year 30 minute winter	166.618	67.185	100 year +40% CC 960 minute winter	18.737	7.448
100 year 60 minute summer	161.871	42.778	100 year +40% CC 1440 minute summer	20.576	5.515
100 year 60 minute winter	107.544	42.778	100 year +40% CC 1440 minute winter	13.829	5.515

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	S10	10	80.013	0.063	19.3	0.2067	0.0000	OK
15 minute summer	S11	11	79.582	0.124	28.7	0.2987	0.0000	OK
15 minute summer	S12	11	79.385	0.160	59.2	0.5992	0.0000	OK
15 minute summer	S13	10	85.241	0.067	28.2	0.2618	0.0000	OK
15 minute summer	S14	10	82.643	0.114	53.0	0.4266	0.0000	OK
15 minute summer	S15	11	81.809	0.083	54.6	0.1624	0.0000	OK
15 minute summer	S16	11	79.239	0.289	137.2	0.9928	0.0000	OK
15 minute summer	S17	10	81.965	0.064	22.2	0.2157	0.0000	OK
15 minute summer	S18	10	80.116	0.073	24.2	0.1418	0.0000	OK
15 minute summer	S19	11	79.135	0.285	179.0	1.0595	0.0000	OK
15 minute summer	S20	12	79.041	0.291	179.8	0.5857	0.0000	OK
15 minute summer	S21	10	80.483	0.048	4.6	0.1013	0.0000	OK
15 minute summer	S22	10	80.426	0.075	25.7	0.2266	0.0000	OK
15 minute summer	S23	12	78.715	0.126	212.1	0.4062	0.0000	OK
15 minute summer	S24	12	76.458	0.245	213.5	0.4503	0.0000	OK
15 minute summer	S25	12	76.232	0.232	214.8	0.4106	0.0000	OK
480 minute summer	HW2	336	75.884	0.168	56.7	0.8605	0.0000	OK
480 minute summer	HW3	336	75.884	0.284	34.1	0.5012	0.0000	OK
480 minute summer	FC2	336	75.883	0.355	11.8	0.6281	0.0000	SURCHARGED
480 minute summer	HW4	336	75.536	0.087	11.8	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)
15 minute summer	S10	C1 S1.001	S11	19.1	1.872	0.084	0.0866	
15 minute summer	S11	C1 S1.002	S12	27.9	0.835	0.161	1.8238	
15 minute summer	S12	C1 S1.003	S16	59.2	0.876	0.211	4.1047	
15 minute summer	S13	C1 S2.000	S14	27.9	1.552	0.112	0.9595	
15 minute summer	S14	C1 S2.001	S15	52.2	2.586	0.262	0.5097	
15 minute summer	S15	C1 S2.002	S16	54.5	3.730	0.145	0.3180	
15 minute summer	S16	C1 S1.004	S19	135.3	1.016	0.423	6.1111	
15 minute summer	S17	C1 S3.000	S18	22.0	2.168	0.176	0.3281	
15 minute summer	S18	C1 S3.001	S19	23.9	2.225	0.208	0.1811	
15 minute summer	S19	C1 S1.005	S20	175.7	1.317	0.342	2.3925	
15 minute summer	S20	C1 S1.006	S23	181.0	1.419	0.421	2.7822	
15 minute summer	S21	C1 S4.000	S22	4.5	0.437	0.056	0.1657	
15 minute summer	S22	C1 S4.001	S23	25.1	1.854	0.134	0.6611	
15 minute summer	S23	C1 S1.007	S24	212.6	2.676	0.080	2.4054	
15 minute summer	S24	C1 S1.008	S25	214.8	2.110	0.149	1.0721	
15 minute summer	S25	C1 S1.009	HW2	215.4	2.304	0.171	0.6965	
480 minute summer	HW2	Flow through Pond	HW3	34.1	0.026	0.000	245.4792	
480 minute summer	HW3	C1 S1.011	FC2	11.8	0.419	0.022	0.9717	
480 minute summer	FC2	C1 S1.012	HW4	11.8	0.805	0.322	0.2312	367.3

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	S10	10	80.060	0.110	51.5	0.3593	0.0000	OK
15 minute summer	S11	10	79.673	0.215	76.7	0.5167	0.0000	OK
15 minute summer	S12	12	79.621	0.396	163.9	1.4816	0.0000	OK
15 minute summer	S13	10	85.285	0.111	75.1	0.4340	0.0000	OK
15 minute summer	S14	10	82.746	0.217	141.6	0.8073	0.0000	OK
15 minute summer	S15	10	81.857	0.131	145.8	0.2560	0.0000	OK
15 minute summer	S16	11	79.563	0.613	345.3	2.1057	0.0000	SURCHARGED
15 minute summer	S17	10	82.010	0.109	59.3	0.3704	0.0000	OK
15 minute summer	S18	10	80.168	0.125	64.5	0.2435	0.0000	OK
15 minute summer	S19	11	79.433	0.583	445.5	2.1654	0.0000	OK
15 minute summer	S20	11	79.299	0.549	454.7	1.1036	0.0000	OK
15 minute summer	S21	10	80.513	0.078	12.3	0.1652	0.0000	OK
15 minute summer	S22	10	80.479	0.128	68.6	0.3867	0.0000	OK
15 minute summer	S23	11	78.792	0.203	548.0	0.6527	0.0000	OK
15 minute summer	S24	11	76.645	0.432	550.8	0.7944	0.0000	OK
15 minute summer	S25	11	76.411	0.411	549.8	0.7259	0.0000	OK
360 minute winter	HW2	352	76.185	0.468	93.7	2.4032	0.0000	OK
360 minute winter	HW3	352	76.184	0.584	81.2	1.0313	0.0000	OK
360 minute winter	FC2	360	76.184	0.656	12.2	1.1584	0.0000	SURCHARGED
30 minute summer	HW4	24	75.536	0.087	11.9	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)
15 minute summer	S10	C1 S1.001	S11	51.2	2.389	0.226	0.1814	
15 minute summer	S11	C1 S1.002	S12	76.8	1.015	0.444	5.0632	
15 minute summer	S12	C1 S1.003	S16	148.8	0.924	0.531	11.6000	
15 minute summer	S13	C1 S2.000	S14	74.6	1.913	0.298	2.0608	
15 minute summer	S14	C1 S2.001	S15	139.4	3.303	0.700	1.0566	
15 minute summer	S15	C1 S2.002	S16	145.3	4.262	0.386	1.0766	
15 minute summer	S16	C1 S1.004	S19	337.0	1.200	1.055	12.8757	
15 minute summer	S17	C1 S3.000	S18	58.6	2.845	0.467	0.6744	
15 minute summer	S18	C1 S3.001	S19	65.4	2.756	0.568	0.5008	
15 minute summer	S19	C1 S1.005	S20	443.8	1.611	0.865	4.9302	
15 minute summer	S20	C1 S1.006	S23	453.3	1.824	1.054	5.3743	
15 minute summer	S21	C1 S4.000	S22	12.1	0.569	0.151	0.3413	
15 minute summer	S22	C1 S4.001	S23	67.4	2.417	0.358	1.3628	
15 minute summer	S23	C1 S1.007	S24	547.8	3.327	0.205	4.8959	
15 minute summer	S24	C1 S1.008	S25	549.8	2.465	0.382	2.3475	
15 minute summer	S25	C1 S1.009	HW2	548.8	2.868	0.435	1.4201	
360 minute winter	HW2	Flow through Pond	HW3	81.2	0.056	0.000	604.7175	
360 minute winter	HW3	C1 S1.011	FC2	12.2	0.380	0.023	2.1625	
360 minute winter	FC2	C1 S1.012	HW4	11.9	0.807	0.325	0.2324	357.2

Results for 100 year Critical Storm Duration. Lowest mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	S10	11	80.146	0.196	65.7	0.6385	0.0000	OK
15 minute summer	S11	11	80.118	0.660	106.1	1.5889	0.0000	SURCHARGED
15 minute summer	S12	11	80.100	0.875	193.4	3.2714	0.0000	SURCHARGED
15 minute summer	S13	10	85.301	0.127	95.9	0.4960	0.0000	OK
15 minute summer	S14	11	82.805	0.276	180.7	1.0286	0.0000	OK
15 minute summer	S15	11	81.876	0.150	185.2	0.2933	0.0000	OK
15 minute summer	S16	11	79.929	0.979	460.0	3.3645	0.0000	SURCHARGED
15 minute summer	S17	10	82.028	0.127	75.5	0.4298	0.0000	OK
15 minute summer	S18	11	80.205	0.162	82.9	0.3145	0.0000	OK
15 minute summer	S19	12	79.675	0.825	565.7	3.0608	0.0000	SURCHARGED
15 minute summer	S20	12	79.451	0.701	584.6	1.4095	0.0000	SURCHARGED
15 minute summer	S21	10	80.524	0.089	15.7	0.1886	0.0000	OK
15 minute summer	S22	10	80.499	0.148	87.6	0.4470	0.0000	OK
15 minute summer	S23	12	78.818	0.229	692.7	0.7384	0.0000	OK
15 minute summer	S24	12	76.727	0.514	698.0	0.9451	0.0000	OK
15 minute summer	S25	12	76.486	0.486	706.6	0.8582	0.0000	OK
600 minute winter	HW2	585	76.364	0.648	94.0	3.3268	0.0000	OK
600 minute winter	HW3	585	76.364	0.764	89.9	1.3501	0.0000	SURCHARGED
600 minute winter	FC2	585	76.364	0.836	12.1	1.4773	0.0000	SURCHARGED
15 minute summer	HW4	15	75.536	0.087	11.9	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)
15 minute summer	S10	C1 S1.001	S11	75.0	2.527	0.330	0.5039	
15 minute summer	S11	C1 S1.002	S12	93.2	1.024	0.539	8.6547	
15 minute summer	S12	C1 S1.003	S16	195.0	0.972	0.696	12.8231	
15 minute summer	S13	C1 S2.000	S14	95.3	1.958	0.381	2.5312	
15 minute summer	S14	C1 S2.001	S15	177.4	3.378	0.890	1.2959	
15 minute summer	S15	C1 S2.002	S16	185.1	4.536	0.491	1.1395	
15 minute summer	S16	C1 S1.004	S19	437.7	1.554	1.370	12.9248	
15 minute summer	S17	C1 S3.000	S18	75.3	2.906	0.601	0.8483	
15 minute summer	S18	C1 S3.001	S19	81.6	2.718	0.709	0.5921	
15 minute summer	S19	C1 S1.005	S20	573.2	2.035	1.117	5.0519	
15 minute summer	S20	C1 S1.006	S23	588.6	2.111	1.368	5.8048	
15 minute summer	S21	C1 S4.000	S22	15.5	0.599	0.192	0.4119	
15 minute summer	S22	C1 S4.001	S23	86.1	2.569	0.458	1.6398	
15 minute summer	S23	C1 S1.007	S24	694.8	3.454	0.261	5.8890	
15 minute summer	S24	C1 S1.008	S25	706.6	2.588	0.491	2.8742	
15 minute summer	S25	C1 S1.009	HW2	711.8	3.059	0.564	1.7203	
600 minute winter	HW2	Flow through Pond	HW3	89.9	0.023	0.000	838.8016	
600 minute winter	HW3	C1 S1.011	FC2	12.1	0.394	0.022	2.3196	
600 minute winter	FC2	C1 S1.012	HW4	11.9	0.807	0.324	0.2322	464.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute summer	S10	11	81.026	1.076	92.0	3.5094	0.0000	SURCHARGED
15 minute summer	S11	11	80.951	1.493	130.4	3.5923	0.0000	FLOOD RISK
15 minute summer	S12	11	80.858	1.633	262.5	6.1083	0.0000	SURCHARGED
15 minute summer	S13	10	85.328	0.154	134.3	0.6019	0.0000	OK
15 minute summer	S14	11	83.491	0.962	253.1	3.5857	0.0000	SURCHARGED
15 minute summer	S15	11	81.970	0.244	247.5	0.4760	0.0000	OK
15 minute summer	S16	11	80.654	1.704	608.3	5.8559	0.0000	SURCHARGED
15 minute summer	S17	12	82.143	0.242	105.8	0.8209	0.0000	SURCHARGED
15 minute summer	S18	11	81.015	0.972	112.9	1.8883	0.0000	SURCHARGED
15 minute summer	S19	11	80.184	1.334	795.4	4.9527	0.0000	SURCHARGED
15 minute summer	S20	11	79.744	0.994	809.4	1.9987	0.0000	SURCHARGED
15 minute summer	S21	10	80.551	0.116	22.0	0.2459	0.0000	OK
15 minute summer	S22	10	80.534	0.183	122.5	0.5542	0.0000	OK
15 minute summer	S23	11	78.872	0.283	977.1	0.9104	0.0000	OK
15 minute summer	S24	11	76.921	0.708	981.2	1.3024	0.0000	OK
960 minute winter	S25	885	76.699	0.699	210.6	1.2351	0.0000	FLOOD RISK
960 minute winter	HW2	915	76.677	0.961	211.1	4.9315	0.0000	OK
960 minute winter	HW3	915	76.677	1.077	195.6	1.9027	0.0000	SURCHARGED
960 minute winter	FC2	915	76.677	1.149	12.0	2.0299	0.0000	FLOOD RISK
960 minute winter	HW4	915	75.536	0.087	11.9	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)
15 minute summer	S10	C1 S1.001	S11	87.0	2.531	0.384	0.5960	
15 minute summer	S11	C1 S1.002	S12	125.8	1.023	0.727	8.6547	
15 minute summer	S12	C1 S1.003	S16	259.8	1.203	0.927	12.8231	
15 minute summer	S13	C1 S2.000	S14	133.5	2.191	0.534	2.8168	
15 minute summer	S14	C1 S2.001	S15	236.6	3.412	1.187	1.6562	
15 minute summer	S15	C1 S2.002	S16	244.7	4.377	0.649	1.4248	
15 minute summer	S16	C1 S1.004	S19	606.0	2.152	1.897	12.9248	
15 minute summer	S17	C1 S3.000	S18	102.3	2.917	0.816	1.2832	
15 minute summer	S18	C1 S3.001	S19	100.9	2.758	0.877	0.6694	
15 minute summer	S19	C1 S1.005	S20	791.4	2.810	1.542	5.0519	
15 minute summer	S20	C1 S1.006	S23	809.2	2.873	1.881	6.0464	
15 minute summer	S21	C1 S4.000	S22	21.6	0.618	0.268	0.5558	
15 minute summer	S22	C1 S4.001	S23	120.5	2.773	0.641	2.1266	
15 minute summer	S23	C1 S1.007	S24	975.8	3.566	0.366	7.3740	
15 minute summer	S24	C1 S1.008	S25	971.7	2.769	0.675	3.6777	
960 minute winter	S25	C1 S1.009	HW2	171.8	1.609	0.136	2.6513	
960 minute winter	HW2	Flow through Pond	HW3	195.6	0.025	0.001	1278.1299	
960 minute winter	HW3	C1 S1.011	FC2	12.0	0.352	0.022	2.3196	
960 minute winter	FC2	C1 S1.012	HW4	11.9	0.808	0.326	0.2331	731.9