

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	40	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	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)	Depth (m)
S1	0.202	5.00	185.180	1200	1.180
S2	0.202	5.00	181.470	1200	1.970
S3	0.202	5.00	179.880	1200	4.530
S4	0.202	5.00	176.220	1500	4.295
S5	0.202	5.00	172.280	1500	4.780
S6	0.202	5.00	171.300	1800	5.300
S7	0.202	5.00	171.000	1800	6.000
S8	0.202	5.00	168.410	1800	4.410
S9	0.202	5.00	167.350	2100	3.850
S10	0.202	5.00	166.910	2100	3.910
S11	0.202	5.00	166.700	2100	4.700
S12	0.202	5.00	164.000	2100	5.000
S13	0.202	5.00	157.000	1875	2.525
S14	0.202	5.00	179.160	1200	1.160
S15a	0.202	5.00	176.500	1200	1.500
S15	0.202	5.00	175.560	1500	1.560
S16	0.202	5.00	172.200	1500	2.200
S17	0.202	5.00	171.500	2100	3.000
S18	0.202	5.00	182.550	1200	1.550
S19	0.202	5.00	180.900	1200	2.900
S20	0.202	5.00	178.360	1200	2.360
S21	0.202	5.00	177.560	1200	2.560
S22	0.202	5.00	174.630	1500	2.630
S23	0.202	5.00	172.600	1500	2.600
S24	0.202	5.00	167.880	1500	1.880
S25	0.202	5.00	164.000	1200	1.320
H1	0.000		157.000		2.625
H2		5.00	157.000		1.300
S26			157.000	1200	1.700

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	S1	S2	51.000	0.600	184.000	179.500	4.500	11.3	300	5.18	50.0
1.001	S2	S3	25.000	0.600	179.500	175.500	4.000	6.3	300	5.25	50.0
1.002	S3	S4	55.000	0.600	175.350	172.000	3.350	16.4	450	5.43	50.0
1.003	S4	S5	55.000	0.600	171.925	167.500	4.425	12.4	525	5.69	50.0
1.004	S5	S6	18.000	0.600	167.500	166.000	1.500	12.0	600	5.74	50.0
1.005	S6	S7	35.000	0.600	166.000	165.000	1.000	35.0	600	5.88	50.0
1.006	S7	S8	68.000	0.600	165.000	164.000	1.000	68.0	600	6.26	50.0
1.007	S8	S9	33.000	0.600	164.000	163.500	0.500	66.0	900	6.40	50.0
1.008	S9	S10	25.000	0.600	163.500	163.000	0.500	50.0	975	6.60	50.0
1.009	S10	S11	15.000	0.600	163.000	162.000	1.000	15.0	975	6.63	50.0
1.010	S11	S12	75.000	0.600	162.000	159.000	3.000	25.0	975	6.82	50.0
1.011	S12	S13	71.000	0.600	159.000	155.500	3.500	20.3	975	6.98	50.0
2.000	S14	S15a	54.000	0.600	178.000	175.000	3.000	18.0	300	5.24	50.0
2.001	S15a	S15	23.000	0.600	175.000	174.000	1.000	23.0	300	5.36	50.0
2.002	S15	S4	51.000	0.600	174.000	172.000	2.000	25.5	525	5.55	50.0
3.000	S18	S19	30.000	0.600	181.000	178.000	3.000	10.0	300	5.10	50.0
3.001	S19	S3	24.000	0.600	178.000	175.500	2.500	9.6	300	5.18	50.0
4.000	S20	S21	18.000	0.600	176.000	175.000	1.000	18.0	300	5.08	50.0
4.001	S21	S4	41.000	0.600	175.000	172.150	2.850	14.4	300	5.24	50.0
5.000	S22	S5	52.000	0.600	172.000	167.500	4.500	11.6	450	5.14	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)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	4.695	331.9	38.3	0.880	1.670	0.202	0.0	68	3.165
1.001	6.327	447.2	76.7	1.670	4.080	0.404	0.0	83	4.770
1.002	5.036	800.9	191.6	4.080	3.770	1.010	0.0	149	4.167
1.003	6.377	1380.4	421.6	3.770	4.255	2.222	0.0	198	5.633
1.004	7.054	1994.4	498.2	4.180	4.700	2.626	0.0	203	5.911
1.005	4.125	1166.2	613.2	4.700	5.400	3.232	0.0	309	4.173
1.006	2.956	835.7	689.9	5.400	3.810	3.636	0.0	418	3.282
1.007	3.859	2455.3	766.5	3.510	2.950	4.040	0.0	344	3.435
1.008	4.661	3479.9	804.9	2.875	2.935	4.242	0.0	317	3.833
1.009	8.520	6361.5	843.2	2.935	3.725	4.444	0.0	237	6.024
1.010	6.597	4925.4	919.8	3.725	4.025	4.848	0.0	282	5.120
1.011	7.325	5468.9	958.2	4.025	0.525	5.050	0.0	274	5.595
2.000	3.723	263.1	38.3	0.860	1.200	0.202	0.0	77	2.685
2.001	3.292	232.7	76.7	1.200	1.260	0.404	0.0	118	2.960
2.002	4.448	962.8	115.0	1.035	3.695	0.606	0.0	121	3.042
3.000	4.999	353.4	38.3	1.250	2.600	0.202	0.0	66	3.304
3.001	5.102	360.7	76.7	2.600	4.080	0.404	0.0	93	4.083
4.000	3.723	263.1	38.3	2.060	2.260	0.202	0.0	77	2.685
4.001	4.166	294.5	76.7	2.260	3.770	0.404	0.0	104	3.521
5.000	6.005	955.1	38.3	2.180	4.330	0.202	0.0	60	2.985

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)
6.000	S23	S7	71.000	0.600	170.000	165.150	4.850	14.6	450	5.22	50.0
7.000	S24	S8	81.000	0.600	166.000	164.300	1.700	47.6	600	5.38	50.0
8.000	S25	S11	52.000	0.600	162.680	162.450	0.230	226.1	300	5.83	50.0
1.012	S13	H1	10.000	0.600	154.475	154.375	0.100	100.0	975	7.03	50.0
1.013	H2	S26	10.000	0.600	155.700	155.300	0.400	25.0	100	5.11	50.0
9.000	S16	S17	51.000	0.600	170.000	168.500	1.500	34.0	525	5.22	50.0
9.001	S17	S6	60.000	0.600	168.500	166.000	2.500	24.0	600	5.42	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)	Pro Depth (mm)	Pro Velocity (m/s)
6.000	5.334	848.3	38.3	2.150	5.400	0.202	0.0	65	2.765
7.000	3.533	999.0	38.3	1.280	3.510	0.202	0.0	79	1.744
8.000	1.041	73.6	38.3	1.020	3.950	0.202	0.0	154	1.052
1.012	3.292	2457.8	996.5	1.550	1.650	5.252	0.0	431	3.128
1.013	1.550	12.2	0.0	1.200	1.600	0.000	0.0	0	0.000
9.000	3.850	833.5	38.3	1.675	2.475	0.202	0.0	76	2.004
9.001	4.984	1409.1	76.7	2.400	4.700	0.404	0.0	93	2.725

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	51.000	11.3	300	Circular	185.180	184.000	0.880	181.470	179.500	1.670
1.001	25.000	6.3	300	Circular	181.470	179.500	1.670	179.880	175.500	4.080
1.002	55.000	16.4	450	Circular	179.880	175.350	4.080	176.220	172.000	3.770
1.003	55.000	12.4	525	Circular	176.220	171.925	3.770	172.280	167.500	4.255
1.004	18.000	12.0	600	Circular	172.280	167.500	4.180	171.300	166.000	4.700
1.005	35.000	35.0	600	Circular	171.300	166.000	4.700	171.000	165.000	5.400
1.006	68.000	68.0	600	Circular	171.000	165.000	5.400	168.410	164.000	3.810
1.007	33.000	66.0	900	Circular	168.410	164.000	3.510	167.350	163.500	2.950
1.008	25.000	50.0	975	Circular	167.350	163.500	2.875	166.910	163.000	2.935

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	1200	Manhole	Adoptable	S2	1200	Manhole	Adoptable
1.001	S2	1200	Manhole	Adoptable	S3	1200	Manhole	Adoptable
1.002	S3	1200	Manhole	Adoptable	S4	1500	Manhole	Adoptable
1.003	S4	1500	Manhole	Adoptable	S5	1500	Manhole	Adoptable
1.004	S5	1500	Manhole	Adoptable	S6	1800	Manhole	Adoptable
1.005	S6	1800	Manhole	Adoptable	S7	1800	Manhole	Adoptable
1.006	S7	1800	Manhole	Adoptable	S8	1800	Manhole	Adoptable
1.007	S8	1800	Manhole	Adoptable	S9	2100	Manhole	Adoptable
1.008	S9	2100	Manhole	Adoptable	S10	2100	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)
1.009	15.000	15.0	975	Circular	166.910	163.000	2.935	166.700	162.000	3.725
1.010	75.000	25.0	975	Circular	166.700	162.000	3.725	164.000	159.000	4.025
1.011	71.000	20.3	975	Circular	164.000	159.000	4.025	157.000	155.500	0.525
2.000	54.000	18.0	300	Circular	179.160	178.000	0.860	176.500	175.000	1.200
2.001	23.000	23.0	300	Circular	176.500	175.000	1.200	175.560	174.000	1.260
2.002	51.000	25.5	525	Circular	175.560	174.000	1.035	176.220	172.000	3.695
3.000	30.000	10.0	300	Circular	182.550	181.000	1.250	180.900	178.000	2.600
3.001	24.000	9.6	300	Circular	180.900	178.000	2.600	179.880	175.500	4.080
4.000	18.000	18.0	300	Circular	178.360	176.000	2.060	177.560	175.000	2.260
4.001	41.000	14.4	300	Circular	177.560	175.000	2.260	176.220	172.150	3.770
5.000	52.000	11.6	450	Circular	174.630	172.000	2.180	172.280	167.500	4.330
6.000	71.000	14.6	450	Circular	172.600	170.000	2.150	171.000	165.150	5.400
7.000	81.000	47.6	600	Circular	167.880	166.000	1.280	168.410	164.300	3.510
8.000	52.000	226.1	300	Circular	164.000	162.680	1.020	166.700	162.450	3.950
1.012	10.000	100.0	975	Circular	157.000	154.475	1.550	157.000	154.375	1.650
1.013	10.000	25.0	100	Circular	157.000	155.700	1.200	157.000	155.300	1.600
9.000	51.000	34.0	525	Circular	172.200	170.000	1.675	171.500	168.500	2.475

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.009	S10	2100	Manhole	Adoptable	S11	2100	Manhole	Adoptable
1.010	S11	2100	Manhole	Adoptable	S12	2100	Manhole	Adoptable
1.011	S12	2100	Manhole	Adoptable	S13	1875	Manhole	Adoptable
2.000	S14	1200	Manhole	Adoptable	S15a	1200	Manhole	Adoptable
2.001	S15a	1200	Manhole	Adoptable	S15	1500	Manhole	Adoptable
2.002	S15	1500	Manhole	Adoptable	S4	1500	Manhole	Adoptable
3.000	S18	1200	Manhole	Adoptable	S19	1200	Manhole	Adoptable
3.001	S19	1200	Manhole	Adoptable	S3	1200	Manhole	Adoptable
4.000	S20	1200	Manhole	Adoptable	S21	1200	Manhole	Adoptable
4.001	S21	1200	Manhole	Adoptable	S4	1500	Manhole	Adoptable
5.000	S22	1500	Manhole	Adoptable	S5	1500	Manhole	Adoptable
6.000	S23	1500	Manhole	Adoptable	S7	1800	Manhole	Adoptable
7.000	S24	1500	Manhole	Adoptable	S8	1800	Manhole	Adoptable
8.000	S25	1200	Manhole	Adoptable	S11	2100	Manhole	Adoptable
1.012	S13	1875	Manhole	Adoptable	H1		Junction	
1.013	H2		Junction		S26	1200	Manhole	Adoptable
9.000	S16	1500	Manhole	Adoptable	S17	2100	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)
9.001	60.000	24.0	600	Circular	171.500	168.500	2.400	171.300	166.000	4.700

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
9.001	S17	2100	Manhole	Adoptable	S6	1800	Manhole	Adoptable

Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	185.180	1.180	1200				
					0	1.000	184.000 300
S2	181.470	1.970	1200				
					1	1.000	179.500 300
					0	1.001	179.500 300
S3	179.880	4.530	1200				
					1	3.001	175.500 300
					2	1.001	175.500 300
					0	1.002	175.350 450
S4	176.220	4.295	1500				
					1	4.001	172.150 300
					2	2.002	172.000 525
					3	1.002	172.000 450
					0	1.003	171.925 525
S5	172.280	4.780	1500				
					1	5.000	167.500 450
					2	1.003	167.500 525
					0	1.004	167.500 600
S6	171.300	5.300	1800				
					1	9.001	166.000 600
					2	1.004	166.000 600
					0	1.005	166.000 600
S7	171.000	6.000	1800				
					1	6.000	165.150 450
					2	1.005	165.000 600
					0	1.006	165.000 600
S8	168.410	4.410	1800				
					1	7.000	164.300 600
					2	1.006	164.000 600
					0	1.007	164.000 900
S9	167.350	3.850	2100				
					1	1.007	163.500 900
					0	1.008	163.500 975
S10	166.910	3.910	2100				
					1	1.008	163.000 975
					0	1.009	163.000 975

Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S11	166.700	4.700	2100		1	8.000	162.450	300
					2	1.009	162.000	975
					0	1.010	162.000	975
S12	164.000	5.000	2100		1	1.010	159.000	975
					0	1.011	159.000	975
S13	157.000	2.525	1875		1	1.011	155.500	975
					0	1.012	154.475	975
S14	179.160	1.160	1200		0	2.000	178.000	300
S15a	176.500	1.500	1200		1	2.000	175.000	300
					0	2.001	175.000	300
S15	175.560	1.560	1500		1	2.001	174.000	300
					0	2.002	174.000	525
S16	172.200	2.200	1500		0	9.000	170.000	525
					1	9.000	168.500	525
S17	171.500	3.000	2100		0	9.001	168.500	600
					1	9.000	168.500	525
S18	182.550	1.550	1200		0	3.000	181.000	300
					1	3.000	178.000	300
S19	180.900	2.900	1200		0	3.001	178.000	300
					1	3.000	178.000	300
S20	178.360	2.360	1200		0	4.000	176.000	300
					1	4.000	175.000	300
S21	177.560	2.560	1200		0	4.001	175.000	300
					1	4.000	175.000	300
S22	174.630	2.630	1500		0	5.000	172.000	450
					1	4.001	175.000	300

Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S23	172.600	2.600	1500				
				0	6.000	170.000	450
S24	167.880	1.880	1500				
				0	7.000	166.000	600
S25	164.000	1.320	1200				
				0	8.000	162.680	300
H1	157.000	2.625		1	1.012	154.375	975
				◦			
H2	157.000	1.300					
				◦			
				0	1.013	155.700	100
S26	157.000	1.700	1200	1	1.013	155.300	100
							

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	20.000	Drain Down Time (mins)	240
Ratio-R	0.400	Additional Storage (m³/ha)	20.0
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 %)
1	0	0	0
30	0	0	0
100	40	0	0

Node H2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	4.70000	Safety Factor	2.0	Invert Level (m)	155.500
Side Inf Coefficient (m/hr)	4.70000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	650.0	0.0	1.500	1250.0	0.0	1.501	0.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	184.059	0.059	28.5	0.2676	0.0000	OK
15 minute winter	S2	10	179.574	0.074	56.7	0.2358	0.0000	OK
15 minute winter	S3	10	175.480	0.130	140.8	0.2626	0.0000	OK
15 minute winter	S4	10	172.095	0.170	305.9	0.4609	0.0000	OK
15 minute winter	S5	10	167.679	0.179	361.0	0.4664	0.0000	OK
15 minute winter	S6	11	166.271	0.271	441.9	0.8963	0.0000	OK
15 minute winter	S7	11	165.357	0.357	501.2	1.1481	0.0000	OK
15 minute winter	S8	11	164.322	0.322	557.8	1.1135	0.0000	OK
15 minute winter	S9	11	163.809	0.309	583.5	1.3956	0.0000	OK
15 minute winter	S10	11	163.233	0.233	608.1	1.0463	0.0000	OK
15 minute winter	S11	11	162.247	0.247	660.6	1.0666	0.0000	OK
15 minute winter	S12	12	159.239	0.239	684.4	1.0190	0.0000	OK
15 minute winter	S13	12	154.867	0.392	705.2	1.7115	0.0000	OK
15 minute winter	S14	10	178.066	0.066	28.5	0.3037	0.0000	OK
15 minute winter	S15a	10	175.104	0.104	56.6	0.3982	0.0000	OK
15 minute winter	S15	10	174.105	0.105	84.2	0.4593	0.0000	OK
15 minute winter	S16	10	170.065	0.065	28.5	0.2347	0.0000	OK
15 minute winter	S17	10	168.580	0.080	56.6	0.3842	0.0000	OK
15 minute winter	S18	10	181.057	0.057	28.5	0.2133	0.0000	OK
15 minute winter	S19	10	178.083	0.083	56.8	0.2100	0.0000	OK
15 minute winter	S20	10	176.066	0.066	28.5	0.1878	0.0000	OK
15 minute winter	S21	10	175.091	0.091	56.8	0.2461	0.0000	OK
15 minute winter	S22	10	172.053	0.053	28.5	0.1737	0.0000	OK
15 minute winter	S23	10	170.056	0.056	28.5	0.1844	0.0000	OK
15 minute winter	S24	11	166.068	0.068	28.5	0.2664	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	S1	1.000	S2	28.2	2.438	0.085	0.5921	341.9
15 minute winter	S2	1.001	S3	56.1	4.273	0.125	0.3282	
15 minute winter	S3	1.002	S4	139.0	3.774	0.174	2.0265	
15 minute winter	S4	1.003	S5	304.3	4.869	0.220	3.4447	
15 minute winter	S5	1.004	S6	360.2	3.742	0.181	1.7429	
15 minute winter	S6	1.005	S7	447.2	2.998	0.383	5.2182	
15 minute winter	S7	1.006	S8	503.6	3.066	0.603	11.1686	
15 minute winter	S8	1.007	S9	556.7	2.817	0.227	6.5356	
15 minute winter	S9	1.008	S10	581.3	3.463	0.167	4.2316	
15 minute winter	S10	1.009	S11	606.3	4.290	0.095	2.1276	
15 minute winter	S11	1.010	S12	657.6	4.567	0.134	10.7998	
15 minute winter	S12	1.011	S13	683.0	5.045	0.125	9.6153	
15 minute winter	S13	1.012	H1	706.9	2.741	0.288	2.5809	
15 minute winter	S14	2.000	S15a	28.1	1.717	0.107	0.8943	
15 minute winter	S15a	2.001	S15	55.8	2.547	0.240	0.5035	
15 minute winter	S15	2.002	S4	83.0	2.751	0.086	1.5391	
15 minute winter	S16	9.000	S17	28.1	1.567	0.034	0.9172	
15 minute winter	S17	9.001	S6	55.3	0.815	0.039	4.3669	
15 minute winter	S18	3.000	S19	28.3	2.264	0.080	0.3784	
15 minute winter	S19	3.001	S3	56.2	3.649	0.156	0.3699	
15 minute winter	S20	4.000	S21	28.3	1.935	0.108	0.2651	
15 minute winter	S21	4.001	S4	56.0	3.185	0.190	0.7212	
15 minute winter	S22	5.000	S5	28.2	0.885	0.030	1.7903	
15 minute winter	S23	6.000	S7	28.1	1.786	0.033	2.9103	
15 minute winter	S24	7.000	S8	27.4	1.577	0.027	1.4087	

Results for 1 year Critical Storm Duration. Lowest mass balance: 98.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S25	11	162.809	0.129	28.5	0.5404	0.0000	OK
15 minute winter	H1	12	154.721	0.346	706.9	0.0000	0.0000	OK
15 minute summer	H2	1	155.500	-0.200	0.0	0.0000	0.0000	OK
15 minute summer	S26	1	155.300	0.000	0.0	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)
15 minute winter	S25	8.000	S11	27.4	0.967	0.373	1.4759	
15 minute summer	H2	1.013	S26	0.0	0.000	0.000	0.0000	0.0
15 minute summer	H2	Infiltration		0.0				

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	184.092	0.092	69.9	0.4209	0.0000	OK
15 minute winter	S2	10	179.621	0.121	139.2	0.3863	0.0000	OK
15 minute winter	S3	10	175.566	0.216	346.1	0.4364	0.0000	OK
15 minute winter	S4	10	172.204	0.279	755.6	0.7553	0.0000	OK
15 minute winter	S5	12	167.995	0.494	900.5	1.2915	0.0000	OK
15 minute winter	S6	12	167.617	1.617	1047.3	5.3471	0.0000	SURCHARGED
15 minute winter	S7	12	166.598	1.598	1110.4	5.1434	0.0000	SURCHARGED
15 minute winter	S8	12	164.528	0.528	1216.0	1.8276	0.0000	OK
15 minute winter	S9	12	163.994	0.494	1275.5	2.2296	0.0000	OK
15 minute winter	S10	12	163.380	0.380	1332.1	1.7102	0.0000	OK
15 minute winter	S11	12	162.380	0.380	1450.3	1.6431	0.0000	OK
15 minute winter	S12	12	159.372	0.372	1508.5	1.5893	0.0000	OK
15 minute winter	S13	12	155.106	0.631	1565.0	2.7503	0.0000	OK
15 minute winter	S14	10	178.104	0.104	69.9	0.4809	0.0000	OK
15 minute winter	S15a	10	175.183	0.183	139.1	0.7008	0.0000	OK
15 minute winter	S15	10	174.162	0.162	207.0	0.7070	0.0000	OK
15 minute winter	S16	10	170.101	0.101	69.9	0.3626	0.0000	OK
15 minute winter	S17	10	168.624	0.124	139.1	0.5965	0.0000	OK
15 minute winter	S18	10	181.090	0.090	69.9	0.3347	0.0000	OK
15 minute winter	S19	10	178.138	0.138	139.4	0.3492	0.0000	OK
15 minute winter	S20	10	176.105	0.105	69.9	0.2997	0.0000	OK
15 minute winter	S21	10	175.151	0.151	139.4	0.4097	0.0000	OK
15 minute winter	S22	10	172.081	0.081	69.9	0.2678	0.0000	OK
15 minute winter	S23	10	170.086	0.086	69.9	0.2849	0.0000	OK
15 minute winter	S24	10	166.105	0.105	69.9	0.4097	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	S1	1.000	S2	69.4	3.083	0.209	1.1504	839.8
15 minute winter	S2	1.001	S3	138.0	5.412	0.309	0.6376	
15 minute winter	S3	1.002	S4	343.4	4.754	0.429	3.9837	
15 minute winter	S4	1.003	S5	761.3	5.698	0.552	8.8095	
15 minute winter	S5	1.004	S6	847.4	4.003	0.425	4.7710	
15 minute winter	S6	1.005	S7	985.9	3.501	0.845	9.8587	
15 minute winter	S7	1.006	S8	1103.5	3.923	1.320	18.5088	
15 minute winter	S8	1.007	S9	1220.9	3.291	0.497	12.2596	
15 minute winter	S9	1.008	S10	1277.6	3.957	0.367	8.0886	
15 minute winter	S10	1.009	S11	1333.1	4.969	0.210	4.0281	
15 minute winter	S11	1.010	S12	1453.9	5.495	0.295	19.8471	
15 minute winter	S12	1.011	S13	1510.4	6.164	0.276	17.4040	
15 minute winter	S13	1.012	H1	1565.4	3.349	0.637	4.6705	
15 minute winter	S14	2.000	S15a	69.2	2.077	0.263	1.8042	
15 minute winter	S15a	2.001	S15	137.2	3.266	0.589	0.9656	
15 minute winter	S15	2.002	S4	204.4	3.153	0.212	3.4208	
15 minute winter	S16	9.000	S17	69.2	2.051	0.083	1.7263	
15 minute winter	S17	9.001	S6	137.1	0.901	0.097	9.7088	
15 minute winter	S18	3.000	S19	69.5	2.835	0.197	0.7404	
15 minute winter	S19	3.001	S3	138.3	4.588	0.383	0.7234	
15 minute winter	S20	4.000	S21	69.6	2.420	0.264	0.5189	
15 minute winter	S21	4.001	S4	137.9	4.014	0.468	1.4085	
15 minute winter	S22	5.000	S5	69.4	1.036	0.073	4.6068	
15 minute winter	S23	6.000	S7	69.2	1.814	0.082	6.3709	
15 minute winter	S24	7.000	S8	68.6	1.734	0.069	5.1561	

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S25	11	162.915	0.235	69.9	0.9861	0.0000	OK
15 minute winter	H1	12	154.917	0.542	1565.4	0.0000	0.0000	OK
15 minute summer	H2	1	155.500	-0.200	0.0	0.0000	0.0000	OK
15 minute summer	S26	1	155.300	0.000	0.0	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)
15 minute winter	S25	8.000	S11	67.3	1.223	0.915	2.8557	
15 minute summer	H2	1.013	S26	0.0	0.000	0.000	0.0000	0.0
15 minute summer	H2	Infiltration		0.0				

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	184.127	0.127	126.9	0.5791	0.0000	OK
15 minute summer	S2	10	179.671	0.171	240.9	0.5427	0.0000	OK
15 minute winter	S3	12	176.684	1.334	639.9	2.6986	0.0000	SURCHARGED
15 minute winter	S4	12	175.003	3.078	1278.4	8.3358	0.0000	SURCHARGED
15 minute winter	S5	13	172.044	4.544	1313.9	11.8696	0.0000	FLOOD RISK
15 minute winter	S6	13	171.064	5.064	1454.6	16.7460	0.0000	FLOOD RISK
15 minute winter	S7	13	168.997	3.997	1600.8	12.8614	0.0000	SURCHARGED
15 minute winter	S8	12	164.690	0.690	1734.4	2.3890	0.0000	OK
15 minute winter	S9	12	164.131	0.631	1837.6	2.8473	0.0000	OK
15 minute winter	S10	12	163.492	0.492	1942.7	2.2124	0.0000	OK
15 minute winter	S11	12	162.482	0.482	2159.7	2.0848	0.0000	OK
15 minute winter	S12	12	159.479	0.479	2271.2	2.0460	0.0000	OK
15 minute winter	S13	12	155.333	0.858	2387.7	3.7432	0.0000	OK
15 minute winter	S14	10	178.145	0.145	126.9	0.6688	0.0000	OK
15 minute winter	S15a	12	175.970	0.970	253.0	3.7089	0.0000	SURCHARGED
15 minute winter	S15	12	175.192	1.192	351.5	5.1953	0.0000	SURCHARGED
15 minute winter	S16	13	171.182	1.182	126.9	4.2596	0.0000	SURCHARGED
15 minute winter	S17	12	171.146	2.646	397.7	12.7269	0.0000	SURCHARGED
15 minute winter	S18	10	181.123	0.123	126.9	0.4595	0.0000	OK
15 minute winter	S19	10	178.205	0.205	253.4	0.5166	0.0000	OK
15 minute winter	S20	12	176.484	0.484	126.9	1.3768	0.0000	SURCHARGED
15 minute winter	S21	12	176.317	1.317	254.2	3.5681	0.0000	SURCHARGED
15 minute winter	S22	10	172.109	0.109	126.9	0.3601	0.0000	OK
15 minute winter	S23	10	170.116	0.116	126.9	0.3838	0.0000	OK
15 minute winter	S24	10	166.141	0.141	126.9	0.5505	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	S1	1.000	S2	126.2	3.757	0.380	1.7654	1546.9
15 minute summer	S2	1.001	S3	241.0	6.051	0.539	1.2718	
15 minute winter	S3	1.002	S4	601.7	4.887	0.751	8.7144	
15 minute winter	S4	1.003	S5	1060.8	5.701	0.768	11.8818	
15 minute winter	S5	1.004	S6	1232.4	4.376	0.618	5.0702	
15 minute winter	S6	1.005	S7	1402.7	4.980	1.203	9.8587	
15 minute winter	S7	1.006	S8	1571.3	5.579	1.880	19.1541	
15 minute winter	S8	1.007	S9	1738.4	3.510	0.708	16.4464	
15 minute winter	S9	1.008	S10	1843.5	4.168	0.530	11.0744	
15 minute winter	S10	1.009	S11	1947.1	5.252	0.306	5.5756	
15 minute winter	S11	1.010	S12	2172.1	5.946	0.441	27.4018	
15 minute winter	S12	1.011	S13	2288.5	6.790	0.418	23.9369	
15 minute winter	S13	1.012	H1	2390.0	3.683	0.972	6.4562	
15 minute winter	S14	2.000	S15a	126.0	2.196	0.479	2.8113	
15 minute winter	S15a	2.001	S15	224.5	3.431	0.965	1.6196	
15 minute winter	S15	2.002	S4	329.2	3.073	0.342	11.0177	
15 minute winter	S16	9.000	S17	125.9	2.383	0.151	11.0177	
15 minute winter	S17	9.001	S6	386.0	1.638	0.274	16.9006	
15 minute winter	S18	3.000	S19	126.5	3.215	0.358	1.1756	
15 minute winter	S19	3.001	S3	255.9	5.107	0.710	1.4321	
15 minute winter	S20	4.000	S21	127.2	2.714	0.484	1.2675	
15 minute winter	S21	4.001	S4	240.8	4.261	0.818	2.8872	
15 minute winter	S22	5.000	S5	126.3	1.116	0.132	4.8882	
15 minute winter	S23	6.000	S7	126.0	1.883	0.149	6.7654	
15 minute winter	S24	7.000	S8	125.1	1.746	0.125	9.6627	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.33%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S25	11	163.345	0.665	126.9	2.7888	0.0000	SURCHARGED
15 minute winter	H1	12	155.104	0.729	2390.0	0.0000	0.0000	OK
15 minute summer	H2	1	155.500	-0.200	0.0	0.0000	0.0000	OK
15 minute summer	S26	1	155.300	0.000	0.0	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)
15 minute winter	S25	8.000	S11	119.5	1.699	1.624	3.5390	
15 minute summer	H2	1.013	S26	0.0	0.000	0.000	0.0000	0.0
15 minute summer	H2	Infiltration		0.0				