

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)	0.000
Ratio-R	0.400	Preferred Cover Depth (m)	0.900
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	4.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
1	0.061	4.00	3.910	1500	1.500
2	0.061	4.00	3.868	1500	1.575
3	0.061	4.00	3.834	1500	1.575
4	0.061	4.00	3.802	1500	1.575
5	0.061	4.00	3.763	1500	1.575
6	0.061	4.00	3.726	1500	1.575
7	0.061	4.00	3.691	1500	1.575
8	0.061	4.00	3.669	1500	1.575
9	0.061	4.00	3.716	1500	1.500
10	0.061	4.00	3.713	1500	1.500
11	0.061	4.00	3.688	1500	1.500
12	0.061	4.00	3.648	1500	1.500
13	0.061	4.00	3.604	1500	1.575
14	0.061	4.00	3.554	1500	1.575
15	0.061	4.00	3.605	1500	1.500
16	0.061	4.00	3.581	1500	1.500
17	0.061	4.00	3.558	1500	1.500
18	0.061	4.00	3.513	1500	1.575
19	0.061	4.00	3.614	1500	1.500
20	0.061	4.00	3.578	1500	1.500
21	0.061	4.00	3.628	1500	1.500
22	0.061	4.00	3.588	1500	1.500
23	0.061	4.00	3.561	1500	1.500
24	0.061	4.00	3.544	1500	1.500
25	0.061	4.00	3.455	1500	1.575
26	0.049	4.00	3.481	1500	1.575
26a	0.000	4.00	3.426	1500	1.574
27	0.000	4.00	3.500	600	1.714
28	0.000	4.00	3.500	600	1.753
29	0.000	4.00	3.500	1500	1.834
30	0.000	4.00	3.500	1500	1.854

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	1	2	20.974	0.600	2.410	2.368	0.042	500.0	600	4.32	50.0
1.001	2	3	16.813	0.600	2.293	2.259	0.034	500.0	675	4.56	50.0
1.002	3	4	15.813	0.600	2.259	2.227	0.032	500.0	675	4.79	50.0
1.003	4	5	19.282	0.600	2.227	2.188	0.039	500.0	675	5.07	50.0
1.004	5	6	18.431	0.600	2.188	2.151	0.037	500.0	675	5.33	50.0
1.005	6	7	17.664	0.600	2.151	2.116	0.035	500.0	675	5.58	50.0
1.006	7	8	11.233	0.600	2.116	2.094	0.022	500.0	675	5.74	50.0
1.007	8	13	32.105	0.600	2.094	2.030	0.064	500.0	675	6.20	50.0
2.000	9	11	13.685	0.600	2.216	2.189	0.027	500.0	600	4.21	50.0
3.000	10	11	12.406	0.600	2.213	2.188	0.025	500.0	600	4.19	50.0
2.001	11	12	19.561	0.600	2.188	2.148	0.040	489.0	600	4.51	50.0
2.002	12	13	21.620	0.600	2.148	2.104	0.044	491.4	600	4.84	50.0
1.008	13	14	24.923	0.600	2.029	1.979	0.050	498.5	675	6.56	50.0
1.009	14	18	20.152	0.600	1.979	1.939	0.040	500.0	675	6.85	50.0
4.000	15	16	11.615	0.600	2.105	2.081	0.024	484.0	600	4.18	50.0
4.001	16	17	11.089	0.600	2.081	2.058	0.023	482.1	600	4.34	50.0
4.002	17	18	22.302	0.600	2.058	2.013	0.045	500.0	600	4.69	50.0
1.010	18	26	15.982	0.600	1.938	1.906	0.032	500.0	675	7.08	50.0
5.000	19	20	17.659	0.600	2.114	2.078	0.036	490.5	600	4.27	50.0
5.001	20	23	8.303	0.600	2.078	2.061	0.017	500.0	600	4.40	50.0
6.000	21	22	19.979	0.600	2.128	2.088	0.040	500.0	600	4.31	50.0
6.001	22	23	13.571	0.600	2.088	2.061	0.027	500.0	600	4.52	50.0
5.002	23	24	8.348	0.600	2.061	2.044	0.017	500.0	600	4.65	50.0
5.003	24	25	18.856	0.600	2.044	1.955	0.089	211.9	600	4.83	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	1.082	305.9	8.3	0.900	0.900	0.061	0.0	67	0.480
1.001	1.165	416.9	16.5	0.900	0.900	0.122	0.0	91	0.580
1.002	1.165	416.9	24.8	0.900	0.900	0.183	0.0	110	0.653
1.003	1.165	416.9	33.1	0.900	0.900	0.244	0.0	127	0.708
1.004	1.165	416.9	41.3	0.900	0.900	0.305	0.0	142	0.755
1.005	1.165	416.9	49.6	0.900	0.900	0.366	0.0	156	0.796
1.006	1.165	416.9	57.9	0.900	0.900	0.427	0.0	168	0.831
1.007	1.165	416.9	66.1	0.900	0.899	0.488	0.0	180	0.862
2.000	1.082	305.9	8.3	0.900	0.899	0.061	0.0	67	0.480
3.000	1.082	305.9	8.3	0.900	0.900	0.061	0.0	67	0.480
2.001	1.094	309.4	24.8	0.900	0.900	0.183	0.0	113	0.666
2.002	1.092	308.6	33.1	0.900	0.900	0.244	0.0	132	0.723
1.008	1.167	417.5	107.5	0.900	0.900	0.793	0.0	232	0.985
1.009	1.165	416.9	115.7	0.900	0.899	0.854	0.0	242	1.004
4.000	1.100	311.0	8.3	0.900	0.900	0.061	0.0	67	0.485
4.001	1.102	311.6	16.5	0.900	0.900	0.122	0.0	93	0.596
4.002	1.082	305.9	24.8	0.900	0.900	0.183	0.0	114	0.660
1.010	1.165	416.9	148.8	0.900	0.900	1.098	0.0	278	1.071
5.000	1.092	308.9	8.3	0.900	0.900	0.061	0.0	67	0.482
5.001	1.082	305.9	16.5	0.900	0.900	0.122	0.0	93	0.588
6.000	1.082	305.9	8.3	0.900	0.900	0.061	0.0	67	0.480
6.001	1.082	305.9	16.5	0.900	0.900	0.122	0.0	93	0.588
5.002	1.082	305.9	41.3	0.900	0.900	0.305	0.0	147	0.764
5.003	1.669	471.9	49.6	0.900	0.900	0.366	0.0	130	1.099

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)
1.011	26	25	12.823	0.600	1.906	1.880	0.026	500.0	675	7.26	50.0
1.012	25	26a	14.243	0.600	1.880	1.852	0.028	500.0	675	7.46	50.0
1.013	26a	27	32.857	0.600	1.852	1.786	0.066	500.0	675	7.93	50.0
1.014	27	28	19.538	0.600	1.786	1.747	0.039	500.0	675	8.21	50.0
1.015	28	29	40.407	0.600	1.747	1.666	0.081	500.0	675	8.79	50.0
1.016	29	30	10.000	0.600	1.666	1.646	0.020	500.0	675	8.93	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)
1.011	1.165	416.9	155.4	0.900	0.900	1.147	0.0	284	1.083
1.012	1.165	416.9	213.3	0.900	0.899	1.574	0.0	342	1.172
1.013	1.165	416.9	213.3	0.899	1.039	1.574	0.0	342	1.172
1.014	1.165	416.9	213.3	1.039	1.078	1.574	0.0	342	1.172
1.015	1.165	416.9	213.3	1.078	1.159	1.574	0.0	342	1.172
1.016	1.165	416.9	213.3	1.159	1.179	1.574	0.0	342	1.172

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	20.974	500.0	600	Circular	3.910	2.410	0.900	3.868	2.368	0.900
1.001	16.813	500.0	675	Circular	3.868	2.293	0.900	3.834	2.259	0.900
1.002	15.813	500.0	675	Circular	3.834	2.259	0.900	3.802	2.227	0.900
1.003	19.282	500.0	675	Circular	3.802	2.227	0.900	3.763	2.188	0.900
1.004	18.431	500.0	675	Circular	3.763	2.188	0.900	3.726	2.151	0.900
1.005	17.664	500.0	675	Circular	3.726	2.151	0.900	3.691	2.116	0.900
1.006	11.233	500.0	675	Circular	3.691	2.116	0.900	3.669	2.094	0.900
1.007	32.105	500.0	675	Circular	3.669	2.094	0.900	3.604	2.030	0.899
2.000	13.685	500.0	600	Circular	3.716	2.216	0.900	3.688	2.189	0.899
3.000	12.406	500.0	600	Circular	3.713	2.213	0.900	3.688	2.188	0.900
2.001	19.561	489.0	600	Circular	3.688	2.188	0.900	3.648	2.148	0.900
2.002	21.620	491.4	600	Circular	3.648	2.148	0.900	3.604	2.104	0.900
1.008	24.923	498.5	675	Circular	3.604	2.029	0.900	3.554	1.979	0.900
1.009	20.152	500.0	675	Circular	3.554	1.979	0.900	3.513	1.939	0.899

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1500	Manhole	Adoptable	2	1500	Manhole	Adoptable
1.001	2	1500	Manhole	Adoptable	3	1500	Manhole	Adoptable
1.002	3	1500	Manhole	Adoptable	4	1500	Manhole	Adoptable
1.003	4	1500	Manhole	Adoptable	5	1500	Manhole	Adoptable
1.004	5	1500	Manhole	Adoptable	6	1500	Manhole	Adoptable
1.005	6	1500	Manhole	Adoptable	7	1500	Manhole	Adoptable
1.006	7	1500	Manhole	Adoptable	8	1500	Manhole	Adoptable
1.007	8	1500	Manhole	Adoptable	13	1500	Manhole	Adoptable
2.000	9	1500	Manhole	Adoptable	11	1500	Manhole	Adoptable
3.000	10	1500	Manhole	Adoptable	11	1500	Manhole	Adoptable
2.001	11	1500	Manhole	Adoptable	12	1500	Manhole	Adoptable
2.002	12	1500	Manhole	Adoptable	13	1500	Manhole	Adoptable
1.008	13	1500	Manhole	Adoptable	14	1500	Manhole	Adoptable
1.009	14	1500	Manhole	Adoptable	18	1500	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)
4.000	11.615	484.0	600	Circular	3.605	2.105	0.900	3.581	2.081	0.900
4.001	11.089	482.1	600	Circular	3.581	2.081	0.900	3.558	2.058	0.900
4.002	22.302	500.0	600	Circular	3.558	2.058	0.900	3.513	2.013	0.900
1.010	15.982	500.0	675	Circular	3.513	1.938	0.900	3.481	1.906	0.900
5.000	17.659	490.5	600	Circular	3.614	2.114	0.900	3.578	2.078	0.900
5.001	8.303	500.0	600	Circular	3.578	2.078	0.900	3.561	2.061	0.900
6.000	19.979	500.0	600	Circular	3.628	2.128	0.900	3.588	2.088	0.900
6.001	13.571	500.0	600	Circular	3.588	2.088	0.900	3.561	2.061	0.900
5.002	8.348	500.0	600	Circular	3.561	2.061	0.900	3.544	2.044	0.900
5.003	18.856	211.9	600	Circular	3.544	2.044	0.900	3.455	1.955	0.900
1.011	12.823	500.0	675	Circular	3.481	1.906	0.900	3.455	1.880	0.900
1.012	14.243	500.0	675	Circular	3.455	1.880	0.900	3.426	1.852	0.899
1.013	32.857	500.0	675	Circular	3.426	1.852	0.899	3.500	1.786	1.039
1.014	19.538	500.0	675	Circular	3.500	1.786	1.039	3.500	1.747	1.078
1.015	40.407	500.0	675	Circular	3.500	1.747	1.078	3.500	1.666	1.159
1.016	10.000	500.0	675	Circular	3.500	1.666	1.159	3.500	1.646	1.179

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.000	15	1500	Manhole	Adoptable	16	1500	Manhole	Adoptable
4.001	16	1500	Manhole	Adoptable	17	1500	Manhole	Adoptable
4.002	17	1500	Manhole	Adoptable	18	1500	Manhole	Adoptable
1.010	18	1500	Manhole	Adoptable	26	1500	Manhole	Adoptable
5.000	19	1500	Manhole	Adoptable	20	1500	Manhole	Adoptable
5.001	20	1500	Manhole	Adoptable	23	1500	Manhole	Adoptable
6.000	21	1500	Manhole	Adoptable	22	1500	Manhole	Adoptable
6.001	22	1500	Manhole	Adoptable	23	1500	Manhole	Adoptable
5.002	23	1500	Manhole	Adoptable	24	1500	Manhole	Adoptable
5.003	24	1500	Manhole	Adoptable	25	1500	Manhole	Adoptable
1.011	26	1500	Manhole	Adoptable	25	1500	Manhole	Adoptable
1.012	25	1500	Manhole	Adoptable	26a	1500	Manhole	Adoptable
1.013	26a	1500	Manhole	Adoptable	27	600	Manhole	Adoptable
1.014	27	600	Manhole	Adoptable	28	600	Manhole	Adoptable
1.015	28	600	Manhole	Adoptable	29	1500	Manhole	Adoptable
1.016	29	1500	Manhole	Adoptable	30	1500	Manhole	Adoptable

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
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	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

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 29 Online Pump Control

Flap Valve	x	Design Depth (m)	1.259	Switch off depth (m)	0.000
Replaces Downstream Link	✓	Design Flow (l/s)	5.0		
Invert Level (m)	1.666	Switch on depth (m)	1.259		

Depth (m)	Flow (l/s)
1.259	5.000

Node 28 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	1.747
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	534.0	0.0	1.453	1086.0	0.0	1.753	1217.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	2.482	0.072	9.1	0.1856	0.0000	OK
10080 minute winter	2	9300	2.408	0.115	0.3	0.2923	0.0000	OK
10080 minute winter	3	9300	2.408	0.149	0.4	0.3786	0.0000	OK
10080 minute winter	4	9000	2.408	0.181	0.5	0.4598	0.0000	OK
10080 minute winter	5	7800	2.408	0.220	0.7	0.5588	0.0000	OK
10080 minute winter	6	7140	2.408	0.257	0.9	0.6529	0.0000	OK
10080 minute winter	7	7140	2.408	0.292	0.9	0.7418	0.0000	OK
10080 minute winter	8	7140	2.408	0.314	1.0	0.7977	0.0000	OK
10080 minute winter	9	10020	2.408	0.192	0.1	0.4952	0.0000	OK
10080 minute winter	10	10020	2.408	0.195	0.1	0.5029	0.0000	OK
10080 minute winter	11	10020	2.408	0.220	0.3	0.5673	0.0000	OK
10080 minute winter	12	10020	2.408	0.260	0.5	0.6704	0.0000	OK
10080 minute winter	13	10020	2.408	0.379	1.4	0.9628	0.0000	OK
10080 minute winter	14	10320	2.408	0.429	1.4	1.0899	0.0000	OK
10080 minute winter	15	7980	2.408	0.303	0.1	0.7812	0.0000	OK
10080 minute winter	16	8520	2.408	0.327	0.2	0.8432	0.0000	OK
10080 minute winter	17	9180	2.408	0.350	0.4	0.9025	0.0000	OK
10080 minute winter	18	8220	2.408	0.470	1.8	1.1941	0.0000	OK
10080 minute winter	19	9420	2.408	0.294	0.1	0.7582	0.0000	OK
10080 minute winter	20	9420	2.408	0.330	0.2	0.8510	0.0000	OK
10080 minute winter	21	9120	2.408	0.280	0.1	0.7220	0.0000	OK
10080 minute winter	22	9420	2.408	0.320	0.2	0.8252	0.0000	OK
10080 minute winter	23	9120	2.408	0.347	0.5	0.8948	0.0000	OK
10080 minute winter	24	9480	2.408	0.364	0.6	0.9386	0.0000	OK
10080 minute winter	25	7920	2.408	0.528	2.6	1.3416	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	9.0	0.547	0.029	0.3468	
10080 minute winter	2	1.001	3	0.3	0.148	0.001	0.8280	
10080 minute winter	3	1.002	4	0.4	0.165	0.001	1.0678	
10080 minute winter	4	1.003	5	0.6	0.181	0.001	1.7112	
10080 minute winter	5	1.004	6	0.8	0.194	0.002	2.0760	
10080 minute winter	6	1.005	7	0.8	0.205	0.002	2.4044	
10080 minute winter	7	1.006	8	0.9	0.217	0.002	1.7416	
10080 minute winter	8	1.007	13	1.0	0.205	0.002	5.9038	
10080 minute winter	9	2.000	11	0.1	0.089	0.000	1.1669	
10080 minute winter	10	3.000	11	0.1	0.084	0.000	1.0719	
10080 minute winter	11	2.001	12	0.4	0.162	0.001	2.0581	
10080 minute winter	12	2.002	13	0.4	0.319	0.001	2.8108	
10080 minute winter	13	1.008	14	1.3	0.267	0.003	5.5469	
10080 minute winter	14	1.009	18	1.4	0.263	0.003	5.0742	
10080 minute winter	15	4.000	16	0.1	0.099	0.000	1.7387	
10080 minute winter	16	4.001	17	0.3	0.138	0.001	1.8151	
10080 minute winter	17	4.002	18	0.4	0.299	0.001	4.0935	
10080 minute winter	18	1.010	26	1.8	0.297	0.004	4.3923	
10080 minute winter	19	5.000	20	0.1	0.099	0.000	2.6123	
10080 minute winter	20	5.001	23	0.2	0.112	0.001	1.3593	
10080 minute winter	21	6.000	22	0.1	0.098	0.000	2.8123	
10080 minute winter	22	6.001	23	0.2	0.111	0.001	2.1813	
10080 minute winter	23	5.002	24	0.5	0.217	0.002	1.4504	
10080 minute winter	24	5.003	25	0.6	0.407	0.001	3.8362	
10080 minute winter	25	1.012	26a	2.6	0.327	0.006	4.3712	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
10080 minute winter	26	9180	2.408	0.502	1.9	1.1987	0.0000	OK
10080 minute winter	26a	9180	2.408	0.556	2.6	0.9820	0.0000	OK
10080 minute winter	27	9180	2.408	0.622	2.6	0.1759	0.0000	OK
10080 minute winter	28	10140	2.408	0.661	2.6	435.9223	0.0000	OK
10080 minute winter	29	9600	2.408	0.742	0.5	1.3108	0.0000	SURCHARGED
15 minute summer	30	1	1.646	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 (m ³)	Discharge Vol (m ³)
10080 minute winter	26	1.011	25	1.9	0.272	0.005	3.7438	
10080 minute winter	26a	1.013	27	2.6	0.328	0.006	10.8144	
10080 minute winter	27	1.014	28	2.6	0.623	0.006	6.8273	
10080 minute winter	28	1.015	29	0.5	0.034	0.001	14.3846	
10080 minute winter	29	Pump	30	0.0				0.0

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute winter	1	4680	2.924	0.514	0.3	1.3271	0.0000	OK
5760 minute winter	2	4680	2.924	0.631	0.6	1.6050	0.0000	OK
5760 minute winter	3	4680	2.924	0.665	0.9	1.6914	0.0000	OK
7200 minute winter	4	5760	2.924	0.697	1.1	1.7727	0.0000	SURCHARGED
7200 minute winter	5	5760	2.924	0.736	1.4	1.8718	0.0000	SURCHARGED
7200 minute winter	6	5760	2.924	0.773	1.6	1.9658	0.0000	SURCHARGED
5760 minute winter	7	4680	2.924	0.808	1.9	2.0548	0.0000	SURCHARGED
5760 minute winter	8	4680	2.924	0.830	2.2	2.1107	0.0000	SURCHARGED
7200 minute winter	9	5760	2.924	0.708	0.3	1.8274	0.0000	SURCHARGED
7200 minute winter	10	5760	2.924	0.711	0.3	1.8352	0.0000	SURCHARGED
7200 minute winter	11	5760	2.924	0.736	0.8	1.8997	0.0000	SURCHARGED
5760 minute winter	12	4680	2.924	0.776	1.1	2.0029	0.0000	SURCHARGED
5760 minute winter	13	4680	2.924	0.895	3.3	2.2759	0.0000	SURCHARGED
5760 minute winter	14	4680	2.924	0.945	3.4	2.4029	0.0000	SURCHARGED
7200 minute winter	15	5760	2.924	0.819	0.3	2.1136	0.0000	SURCHARGED
7200 minute winter	16	5760	2.924	0.843	0.6	2.1756	0.0000	SURCHARGED
7200 minute winter	17	5760	2.924	0.866	0.8	2.2349	0.0000	SURCHARGED
7200 minute winter	18	5760	2.924	0.986	4.1	2.5071	0.0000	SURCHARGED
5760 minute winter	19	4680	2.924	0.810	0.3	2.0903	0.0000	SURCHARGED
7200 minute winter	20	5760	2.924	0.846	0.6	2.1832	0.0000	SURCHARGED
7200 minute winter	21	5760	2.924	0.796	0.3	2.0542	0.0000	SURCHARGED
7200 minute winter	22	5760	2.924	0.836	0.5	2.1574	0.0000	SURCHARGED
7200 minute winter	23	5760	2.924	0.863	1.3	2.2271	0.0000	SURCHARGED
7200 minute winter	24	5760	2.924	0.880	1.5	2.2709	0.0000	SURCHARGED
7200 minute winter	25	5760	2.924	1.044	5.8	2.6544	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)
5760 minute winter	1	1.000	2	0.3	0.299	0.001	5.5561	
5760 minute winter	2	1.001	3	0.6	0.187	0.001	5.9103	
5760 minute winter	3	1.002	4	0.9	0.221	0.002	5.6362	
7200 minute winter	4	1.003	5	1.1	0.219	0.003	6.8833	
7200 minute winter	5	1.004	6	1.3	0.237	0.003	6.5795	
7200 minute winter	6	1.005	7	1.5	0.252	0.004	6.3057	
5760 minute winter	7	1.006	8	1.9	0.261	0.004	4.0099	
5760 minute winter	8	1.007	13	2.0	0.205	0.005	11.4608	
7200 minute winter	9	2.000	11	0.3	0.108	0.001	3.8548	
7200 minute winter	10	3.000	11	0.3	0.103	0.001	3.4945	
7200 minute winter	11	2.001	12	0.7	0.200	0.002	5.5099	
5760 minute winter	12	2.002	13	1.0	0.341	0.003	6.0899	
5760 minute winter	13	1.008	14	3.1	0.267	0.007	8.8970	
5760 minute winter	14	1.009	18	3.3	0.263	0.008	7.1938	
7200 minute winter	15	4.000	16	0.3	0.123	0.001	3.2717	
7200 minute winter	16	4.001	17	0.5	0.169	0.002	3.1235	
7200 minute winter	17	4.002	18	0.7	0.299	0.002	6.2820	
7200 minute winter	18	1.010	26	4.0	0.297	0.010	5.7052	
5760 minute winter	19	5.000	20	0.3	0.099	0.001	4.9741	
7200 minute winter	20	5.001	23	0.5	0.132	0.002	2.3388	
7200 minute winter	21	6.000	22	0.2	0.122	0.001	5.6276	
7200 minute winter	22	6.001	23	0.5	0.131	0.002	3.8226	
7200 minute winter	23	5.002	24	1.2	0.271	0.004	2.3514	
7200 minute winter	24	5.003	25	1.4	0.407	0.003	5.3113	
7200 minute winter	25	1.012	26a	5.7	0.327	0.014	5.0844	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute winter	26	5760	2.924	1.018	4.2	2.4326	0.0000	SURCHARGED
7200 minute winter	26a	5760	2.924	1.072	5.7	1.8946	0.0000	SURCHARGED
7200 minute winter	27	5760	2.924	1.138	5.7	0.3221	0.0000	SURCHARGED
7200 minute winter	28	5760	2.924	1.177	5.7	892.1251	0.0000	SURCHARGED
7200 minute winter	29	5760	2.933	1.267	5.0	2.2382	0.0000	SURCHARGED
15 minute summer	30	1	1.646	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)
7200 minute winter	26	1.011	25	4.1	0.272	0.010	4.5775	
7200 minute winter	26a	1.013	27	5.7	0.328	0.014	11.7292	
7200 minute winter	27	1.014	28	5.7	0.623	0.014	6.9746	
7200 minute winter	28	1.015	29	5.0	0.034	0.012	14.4244	
7200 minute winter	29	Pump	30	5.0				435.7

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	11	3.530	1.120	110.8	2.8887	0.0000	SURCHARGED
15 minute winter	2	11	3.541	1.248	322.3	3.1715	0.0000	SURCHARGED
15 minute winter	3	11	3.520	1.261	265.3	3.2058	0.0000	SURCHARGED
15 minute winter	4	11	3.552	1.325	281.0	3.3686	0.0000	FLOOD RISK
15 minute summer	5	11	3.529	1.341	202.0	3.4081	0.0000	FLOOD RISK
15 minute summer	6	11	3.434	1.283	265.9	3.2619	0.0000	FLOOD RISK
15 minute winter	7	11	3.388	1.272	330.0	3.2326	0.0000	SURCHARGED
15 minute winter	8	11	3.366	1.272	370.3	3.2335	0.0000	SURCHARGED
15 minute winter	9	11	3.480	1.264	49.9	3.2604	0.0000	FLOOD RISK
15 minute winter	10	11	3.473	1.260	51.5	3.2512	0.0000	FLOOD RISK
15 minute winter	11	11	3.452	1.264	148.0	3.2601	0.0000	FLOOD RISK
15 minute winter	12	11	3.360	1.212	194.7	3.1258	0.0000	FLOOD RISK
15 minute winter	13	12	3.311	1.282	408.1	3.2578	0.0000	FLOOD RISK
15 minute winter	14	12	3.262	1.283	408.2	3.2606	0.0000	FLOOD RISK
15 minute winter	15	12	3.226	1.121	40.6	2.8913	0.0000	SURCHARGED
15 minute winter	16	12	3.224	1.143	74.5	2.9488	0.0000	SURCHARGED
15 minute winter	17	12	3.226	1.168	103.5	3.0138	0.0000	SURCHARGED
15 minute winter	18	12	3.219	1.281	546.7	3.2550	0.0000	FLOOD RISK
7200 minute winter	19	5160	3.198	1.084	0.5	2.7965	0.0000	SURCHARGED
7200 minute winter	20	5160	3.198	1.120	1.0	2.8894	0.0000	SURCHARGED
7200 minute winter	21	5160	3.198	1.070	0.5	2.7604	0.0000	SURCHARGED
7200 minute winter	22	5160	3.198	1.110	1.0	2.8636	0.0000	SURCHARGED
7200 minute winter	23	5160	3.198	1.137	2.5	2.9333	0.0000	SURCHARGED
7200 minute winter	24	5160	3.198	1.154	2.9	2.9771	0.0000	SURCHARGED
7200 minute winter	25	5160	3.198	1.318	12.5	3.3502	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	-70.2	0.642	-0.230	5.9079	
15 minute winter	2	1.001	3	-281.8	-0.790	-0.676	6.0019	
15 minute winter	3	1.002	4	-224.7	-0.630	-0.539	5.6449	
15 minute winter	4	1.003	5	-240.5	-0.674	-0.577	6.8833	
15 minute summer	5	1.004	6	232.4	0.651	0.558	6.5795	
15 minute summer	6	1.005	7	186.5	0.624	0.447	6.3057	
15 minute winter	7	1.006	8	335.7	0.941	0.805	4.0099	
15 minute winter	8	1.007	13	373.5	1.046	0.896	11.4608	
15 minute winter	9	2.000	11	54.9	0.298	0.180	3.8548	
15 minute winter	10	3.000	11	52.5	0.288	0.172	3.4945	
15 minute winter	11	2.001	12	154.1	0.603	0.498	5.5099	
15 minute winter	12	2.002	13	210.4	0.747	0.682	6.0899	
15 minute winter	13	1.008	14	381.9	1.070	0.915	8.8970	
15 minute winter	14	1.009	18	427.2	1.197	1.025	7.1938	
15 minute winter	15	4.000	16	36.3	0.307	0.117	3.2717	
15 minute winter	16	4.001	17	73.5	0.469	0.236	3.1235	
15 minute winter	17	4.002	18	114.9	0.616	0.375	6.2820	
15 minute winter	18	1.010	26	556.5	1.559	1.335	5.7052	
7200 minute winter	19	5.000	20	0.5	0.099	0.002	4.9741	
7200 minute winter	20	5.001	23	1.0	0.112	0.003	2.3388	
7200 minute winter	21	6.000	22	0.5	0.098	0.002	5.6276	
7200 minute winter	22	6.001	23	1.0	0.111	0.003	3.8226	
7200 minute winter	23	5.002	24	2.4	0.217	0.008	2.3514	
7200 minute winter	24	5.003	25	2.9	0.407	0.006	5.3113	
7200 minute winter	25	1.012	26a	12.4	0.327	0.030	5.0844	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
7200 minute winter	26	5160	3.198	1.292	9.1	3.0864	0.0000	FLOOD RISK
7200 minute winter	26a	5160	3.198	1.346	12.4	2.3782	0.0000	FLOOD RISK
7200 minute winter	27	5160	3.198	1.412	12.4	0.3996	0.0000	SURCHARGED
7200 minute winter	28	5160	3.198	1.451	12.4	1175.0470	0.0000	SURCHARGED
7200 minute winter	29	5160	3.198	1.532	6.7	2.7068	0.0000	SURCHARGED
15 minute summer	30	1	1.646	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)
7200 minute winter	26	1.011	25	9.1	0.272	0.022	4.5775	
7200 minute winter	26a	1.013	27	12.4	0.332	0.030	11.7292	
7200 minute winter	27	1.014	28	12.4	0.623	0.030	6.9746	
7200 minute winter	28	1.015	29	6.7	0.034	0.016	14.4244	
7200 minute winter	29	Pump	30	5.0				1121.8