

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	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)	17.000	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	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
MHS20D	0.016	5.00	48.930	450	384761.172	398395.608	1.221
MHS20C	0.006	5.00	48.623	450	384759.836	398394.887	0.999
MHS20B			48.554	450	384761.062	398392.694	0.946
MHS20A		5.00	48.523	450	384762.979	398393.895	0.837
MHS20	0.017	5.00	48.388	600	384765.974	398388.696	0.822
MHS21	0.008	5.00	48.945	600	384780.310	398394.802	1.483
MHS2			48.930	1200	384792.188	398392.937	1.548
TK1(IN)1			48.914		384792.717	398394.361	2.402
TK1(IN)2			48.903		384794.169	398395.098	2.395
RA11A	0.027	5.00	48.945	225	384782.162	398380.767	0.495
MHS22A			48.945	600	384786.396	398382.831	0.704
MHS22	0.016	5.00	48.945	600	384785.759	398384.482	0.715
RA	0.024	5.00	48.945	150	384790.181	398378.030	0.495
MHS23	0.008	5.00	48.945	450	384797.840	398382.128	0.835
RWP14	0.024	5.00	48.945	1200	384808.899	398386.864	0.855
MHS3	0.004	5.00	48.929	1200	384795.939	398391.676	1.049
TK1(IN)3			48.903		384800.503	398398.311	2.415
RE1	0.017	5.00	48.945	150	384788.425	398421.590	1.303
MHS4A	0.010	5.00	48.945	450	384791.006	398416.627	1.361
MHS4B	0.008	5.00	48.945	450	384794.432	398410.040	1.438
MHS4	0.017	5.00	48.865	1200	384797.843	398403.484	1.435
TK1(OUT)			48.903		384808.125	398402.177	2.437
MHS5	0.006	5.00	48.924	1500	384809.756	398398.992	2.442
MHS6	0.002	5.00	48.927	900	384813.650	398400.911	2.488
MHS7	0.008	5.00	47.846	900	384817.410	398393.504	1.490
MHS8			47.783	900	384822.893	398391.400	1.478
JCT8A			47.800		384823.095	398389.286	1.529
MHS8B	0.022	5.00	48.058	450	384829.768	398386.985	1.133
MHS8A			47.897	450	384825.425	398390.500	1.534
MHS10	0.011	5.00	47.930	1500	384823.623	398383.723	1.824
MHS11	0.023	5.00	48.088	450	384843.774	398372.000	1.176
MHS12	0.001	5.00	48.082	600	384839.345	398367.507	1.382
TK2			48.025		384826.846	398380.411	1.900
TK2(END)		5.00	48.080		384829.041	398382.525	1.947
MHS10A	0.001	5.00	47.971	600	384824.751	398378.629	0.991
TK2(END)IN			48.015		384825.439	398379.056	1.885
CMH1			47.863	1200	384817.843	398379.807	1.828

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	MHS20D	MHS20C	1.518	0.600	47.709	47.699	0.010	151.8	150	5.03	50.0
1.001	MHS20C	MHS20B	2.512	0.600	47.624	47.608	0.016	157.0	150	5.08	50.0
1.002	MHS20B	MHS20	6.333	0.600	47.608	47.566	0.042	150.8	150	5.21	50.0
2.000	MHS20A	MHS20	6.000	0.600	47.686	47.566	0.120	50.0	150	5.07	50.0
1.003	MHS20	MHS21	15.582	0.600	47.566	47.462	0.104	149.8	225	5.46	50.0
1.004	MHS21	MHS2	12.024	0.600	47.462	47.382	0.080	150.3	225	5.64	50.0
1.005	MHS2	TK1(IN)1	1.519	0.600	47.382	47.371	0.011	138.1	225	5.67	50.0
1.006	TK1(IN)1	TK1(IN)2	1.628	0.600	46.512	46.508	0.004	407.1	4000	5.68	50.0
3.000	RA11A	MHS22A	4.710	0.600	48.450	48.241	0.209	22.5	225	5.03	50.0
3.001	MHS22A	MHS22	1.770	0.600	48.241	48.230	0.011	160.9	225	5.06	50.0
3.002	MHS22	MHS3	12.465	0.600	48.230	47.880	0.350	35.6	225	5.15	50.0
4.000	RA	MHS23	8.686	0.600	48.450	48.185	0.265	32.8	150	5.08	50.0
4.001	MHS23	MHS3	9.735	0.600	48.110	47.880	0.230	42.3	150	5.19	50.0
5.000	RWP14	MHS3	13.825	0.600	48.090	47.955	0.135	102.4	150	5.23	50.0
3.003	MHS3	TK1(IN)2	3.853	0.600	47.880	47.861	0.019	202.8	225	5.30	50.0
1.007	TK1(IN)2	TK1(IN)3	7.102	0.600	46.508	46.490	0.018	394.6	4000	5.72	50.0
6.000	RE1	MHS4A	5.594	0.600	47.642	47.584	0.058	96.4	150	5.09	50.0
6.001	MHS4A	MHS4B	7.425	0.600	47.584	47.507	0.077	96.4	150	5.21	50.0
6.002	MHS4B	MHS4	7.390	0.600	47.507	47.430	0.077	96.0	150	5.33	50.0
6.003	MHS4	TK1(IN)3	5.817	0.600	47.430	47.391	0.039	149.1	150	5.45	50.0
1.008	TK1(IN)3	TK1(OUT)	8.546	0.600	46.488	46.466	0.022	388.5	4000	5.77	50.0
1.009	TK1(OUT)	MHS5	1.578	0.600	46.490	46.482	0.008	197.3	300	5.79	43.4
1.010	MHS5	MHS6	4.341	0.600	46.482	46.439	0.043	101.0	150	5.87	43.1
1.011	MHS6	MHS7	8.307	0.600	46.439	46.356	0.083	100.1	150	6.00	42.7

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	0.813	14.4	2.2	1.071	0.774	0.016	0.0	40	0.588
1.001	0.799	14.1	3.0	0.849	0.796	0.022	0.0	47	0.633
1.002	0.816	14.4	3.0	0.796	0.672	0.022	0.0	46	0.642
2.000	1.426	25.2	0.0	0.687	0.672	0.000	0.0	0	0.000
1.003	1.066	42.4	5.3	0.597	1.258	0.039	0.0	53	0.729
1.004	1.064	42.3	6.4	1.258	1.323	0.047	0.0	58	0.768
1.005	1.110	44.2	6.4	1.323	1.318	0.047	0.0	58	0.794
1.006	2.741	17539.6	6.4	0.802	0.795	0.047	0.0	9	0.183
3.000	2.768	110.0	3.7	0.270	0.479	0.027	0.0	28	1.282
3.001	1.028	40.9	3.7	0.479	0.490	0.027	0.0	45	0.640
3.002	2.199	87.4	5.8	0.490	0.824	0.043	0.0	39	1.259
4.000	1.764	31.2	3.3	0.345	0.610	0.024	0.0	33	1.143
4.001	1.551	27.4	4.3	0.685	0.899	0.032	0.0	40	1.134
5.000	0.993	17.5	3.3	0.705	0.824	0.024	0.0	44	0.760
3.003	0.914	36.4	14.0	0.824	0.817	0.103	0.0	96	0.854
1.007	2.784	17816.8	20.3	0.795	0.813	0.150	0.0	18	0.298
6.000	1.023	18.1	2.3	1.153	1.211	0.017	0.0	36	0.702
6.001	1.023	18.1	3.7	1.211	1.288	0.027	0.0	46	0.806
6.002	1.026	18.1	4.7	1.288	1.285	0.035	0.0	52	0.866
6.003	0.820	14.5	7.0	1.285	1.362	0.052	0.0	74	0.814
1.008	2.806	17956.8	27.4	0.815	0.837	0.202	0.0	21	0.336
1.009	1.116	78.9	23.8	2.113	2.142	0.202	0.0	113	0.981
1.010	1.000	17.7	24.3	2.292	2.338	0.208	0.0	150	1.019
1.011	1.004	17.7	24.3	2.338	1.340	0.210	0.0	150	1.023

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)
1.012	MHS7	MHS8	5.136	0.600	46.356	46.305	0.051	100.7	150	6.09	42.4
1.013	MHS8	JCT8A	2.124	0.600	46.305	46.271	0.034	62.5	150	6.12	50.0
7.000	MHS8B	MHS8A	5.587	0.600	46.925	46.438	0.487	11.5	150	5.03	50.0
7.001	MHS8A	JCT8A	2.627	0.600	46.363	46.271	0.092	28.6	150	5.05	50.0
1.014	JCT8A	MHS10	5.588	0.600	46.271	46.181	0.090	62.1	150	6.19	50.0
8.000	MHS11	MHS12	6.309	0.600	46.912	46.700	0.212	29.8	150	5.06	50.0
8.001	MHS12	TK2	17.965	0.600	46.700	46.528	0.172	104.4	150	5.36	50.0
9.000	MHS10A	TK2(END)IN	1.000	0.600	46.980	46.972	0.008	125.0	150	5.02	50.0
9.001	TK2(END)IN	TK2	1.953	0.600	46.130	46.125	0.005	390.6	2000	5.03	50.0
10.000	TK2(END)	TK2	3.047	0.600	46.133	46.125	0.008	380.9	2000	5.02	50.0
9.002	TK2	MHS10	3.214	0.600	46.125	46.106	0.019	169.2	225	5.41	50.0
1.015	MHS10	CMH1	6.982	0.600	46.106	46.035	0.071	98.3	225	6.28	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)
1.012	1.001	17.7	25.1	1.340	1.328	0.218	0.0	150	1.020
1.013	1.274	22.5	29.5	1.328	1.379	0.218	0.0	150	1.298
7.000	2.991	52.9	3.0	0.983	1.309	0.022	0.0	24	1.629
7.001	1.891	33.4	3.0	1.384	1.379	0.022	0.0	30	1.172
1.014	1.278	22.6	32.5	1.379	1.599	0.240	0.0	150	1.302
8.000	1.852	32.7	3.1	1.026	1.232	0.023	0.0	31	1.174
8.001	0.983	17.4	3.3	1.232	1.347	0.024	0.0	44	0.752
9.000	0.897	15.9	0.1	0.841	0.893	0.001	0.0	10	0.273
9.001	2.013	4025.8	0.1	0.885	0.900	0.001	0.0	1	0.044
10.000	2.039	4077.2	0.0	0.947	0.900	0.000	0.0	0	0.000
9.002	1.002	39.8	3.4	1.675	1.599	0.025	0.0	44	0.616
1.015	1.318	52.4	37.4	1.599	1.603	0.276	0.0	141	1.430

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	1.518	151.8	150	Circular	48.930	47.709	1.071	48.623	47.699	0.774
1.001	2.512	157.0	150	Circular	48.623	47.624	0.849	48.554	47.608	0.796
1.002	6.333	150.8	150	Circular	48.554	47.608	0.796	48.388	47.566	0.672
2.000	6.000	50.0	150	Circular	48.523	47.686	0.687	48.388	47.566	0.672
1.003	15.582	149.8	225	Circular	48.388	47.566	0.597	48.945	47.462	1.258
1.004	12.024	150.3	225	Circular	48.945	47.462	1.258	48.930	47.382	1.323
1.005	1.519	138.1	225	Circular	48.930	47.382	1.323	48.914	47.371	1.318
1.006	1.628	407.1	4000	Tank 1	48.914	46.512	0.802	48.903	46.508	0.795

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	MHS20D	450	Manhole	Adoptable	MHS20C	450	Manhole	Adoptable
1.001	MHS20C	450	Manhole	Adoptable	MHS20B	450	Manhole	Adoptable
1.002	MHS20B	450	Manhole	Adoptable	MHS20	600	Manhole	Adoptable
2.000	MHS20A	450	Manhole	Adoptable	MHS20	600	Manhole	Adoptable
1.003	MHS20	600	Manhole	Adoptable	MHS21	600	Manhole	Adoptable
1.004	MHS21	600	Manhole	Adoptable	MHS2	1200	Manhole	Adoptable
1.005	MHS2	1200	Manhole	Adoptable	TK1(IN)1		Junction	
1.006	TK1(IN)1		Junction		TK1(IN)2		Junction	

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)
3.000	4.710	22.5	225	Circular	48.945	48.450	0.270	48.945	48.241	0.479
3.001	1.770	160.9	225	Circular	48.945	48.241	0.479	48.945	48.230	0.490
3.002	12.465	35.6	225	Circular	48.945	48.230	0.490	48.929	47.880	0.824
4.000	8.686	32.8	150	Circular	48.945	48.450	0.345	48.945	48.185	0.610
4.001	9.735	42.3	150	Circular	48.945	48.110	0.685	48.929	47.880	0.899
5.000	13.825	102.4	150	Circular	48.945	48.090	0.705	48.929	47.955	0.824
3.003	3.853	202.8	225	Circular	48.929	47.880	0.824	48.903	47.861	0.817
1.007	7.102	394.6	4000	Tank 1	48.903	46.508	0.795	48.903	46.490	0.813
6.000	5.594	96.4	150	Circular	48.945	47.642	1.153	48.945	47.584	1.211
6.001	7.425	96.4	150	Circular	48.945	47.584	1.211	48.945	47.507	1.288
6.002	7.390	96.0	150	Circular	48.945	47.507	1.288	48.865	47.430	1.285
6.003	5.817	149.1	150	Circular	48.865	47.430	1.285	48.903	47.391	1.362
1.008	8.546	388.5	4000	Tank 1	48.903	46.488	0.815	48.903	46.466	0.837
1.009	1.578	197.3	300	Circular	48.903	46.490	2.113	48.924	46.482	2.142
1.010	4.341	101.0	150	Circular	48.924	46.482	2.292	48.927	46.439	2.338
1.011	8.307	100.1	150	Circular	48.927	46.439	2.338	47.846	46.356	1.340
1.012	5.136	100.7	150	Circular	47.846	46.356	1.340	47.783	46.305	1.328
1.013	2.124	62.5	150	Circular	47.783	46.305	1.328	47.800	46.271	1.379
7.000	5.587	11.5	150	Circular	48.058	46.925	0.983	47.897	46.438	1.309
7.001	2.627	28.6	150	Circular	47.897	46.363	1.384	47.800	46.271	1.379
1.014	5.588	62.1	150	Circular	47.800	46.271	1.379	47.930	46.181	1.599
8.000	6.309	29.8	150	Circular	48.088	46.912	1.026	48.082	46.700	1.232
8.001	17.965	104.4	150	Circular	48.082	46.700	1.232	48.025	46.528	1.347
9.000	1.000	125.0	150	Circular	47.971	46.980	0.841	48.015	46.972	0.893
9.001	1.953	390.6	2000	Tank 2	48.015	46.130	0.885	48.025	46.125	0.900

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
3.000	RA11A	225	Manhole	Adoptable	MHS22A	600	Manhole	Adoptable
3.001	MHS22A	600	Manhole	Adoptable	MHS22	600	Manhole	Adoptable
3.002	MHS22	600	Manhole	Adoptable	MHS3	1200	Manhole	Adoptable
4.000	RA	150	Manhole	Adoptable	MHS23	450	Manhole	Adoptable
4.001	MHS23	450	Manhole	Adoptable	MHS3	1200	Manhole	Adoptable
5.000	RWP14	1200	Manhole	Adoptable	MHS3	1200	Manhole	Adoptable
3.003	MHS3	1200	Manhole	Adoptable	TK1(IN)2		Junction	
1.007	TK1(IN)2		Junction		TK1(IN)3		Junction	
6.000	RE1	150	Manhole	Adoptable	MHS4A	450	Manhole	Adoptable
6.001	MHS4A	450	Manhole	Adoptable	MHS4B	450	Manhole	Adoptable
6.002	MHS4B	450	Manhole	Adoptable	MHS4	1200	Manhole	Adoptable
6.003	MHS4	1200	Manhole	Adoptable	TK1(IN)3		Junction	
1.008	TK1(IN)3		Junction		TK1(OUT)		Junction	
1.009	TK1(OUT)		Junction		MHS5	1500	Manhole	Adoptable
1.010	MHS5	1500	Manhole	Adoptable	MHS6	900	Manhole	Adoptable
1.011	MHS6	900	Manhole	Adoptable	MHS7	900	Manhole	Adoptable
1.012	MHS7	900	Manhole	Adoptable	MHS8	900	Manhole	Adoptable
1.013	MHS8	900	Manhole	Adoptable	JCT8A		Junction	
7.000	MHS8B	450	Manhole	Adoptable	MHS8A	450	Manhole	Adoptable
7.001	MHS8A	450	Manhole	Adoptable	JCT8A		Junction	
1.014	JCT8A		Junction		MHS10	1500	Manhole	Adoptable
8.000	MHS11	450	Manhole	Adoptable	MHS12	600	Manhole	Adoptable
8.001	MHS12	600	Manhole	Adoptable	TK2		Junction	
9.000	MHS10A	600	Manhole	Adoptable	TK2(END)IN		Junction	
9.001	TK2(END)IN		Junction		TK2		Junction	

Pipeline Schedule

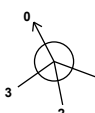
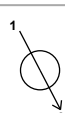
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
10.000	3.047	380.9	2000	Tank 2	48.080	46.133	0.947	48.025	46.125	0.900
9.002	3.214	169.2	225	Circular	48.025	46.125	1.675	47.930	46.106	1.599
1.015	6.982	98.3	225	Circular	47.930	46.106	1.599	47.863	46.035	1.603

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
10.000	TK2(END)		Junction		TK2		Junction	
9.002	TK2		Junction		MHS10	1500	Manhole	Adoptable
1.015	MHS10	1500	Manhole	Adoptable	CMH1	1200	Manhole	Adoptable

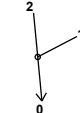
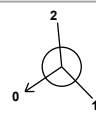
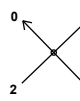
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
MHS20D	384761.172	398395.608	48.930	1.221	450		0	1.000	47.709	150
MHS20C	384759.836	398394.887	48.623	0.999	450		1	1.000	47.699	150
							0	1.001	47.624	150
MHS20B	384761.062	398392.694	48.554	0.946	450		1	1.001	47.608	150
							0	1.002	47.608	150
MHS20A	384762.979	398393.895	48.523	0.837	450		0	2.000	47.686	150
MHS20	384765.974	398388.696	48.388	0.822	600		1	2.000	47.566	150
							2	1.002	47.566	150
							0	1.003	47.566	225
MHS21	384780.310	398394.802	48.945	1.483	600		1	1.003	47.462	225
							0	1.004	47.462	225
MHS2	384792.188	398392.937	48.930	1.548	1200		1	1.004	47.382	225
							0	1.005	47.382	225
TK1(IN)1	384792.717	398394.361	48.914	2.402			1	1.005	47.371	225
							0	1.006	46.512	4000
TK1(IN)2	384794.169	398395.098	48.903	2.395			1	3.003	47.861	225
							2	1.006	46.508	4000
							0	1.007	46.508	4000

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
RA11A	384782.162	398380.767	48.945	0.495	225		0	3.000	48.450	225
MHS22A	384786.396	398382.831	48.945	0.704	600		1	3.000	48.241	225
MHS22	384785.759	398384.482	48.945	0.715	600		1	3.001	48.230	225
RA	384790.181	398378.030	48.945	0.495	150		0	4.000	48.450	150
MHS23	384797.840	398382.128	48.945	0.835	450		1	4.000	48.185	150
RWP14	384808.899	398386.864	48.945	0.855	1200		0	4.001	48.110	150
MHS3	384795.939	398391.676	48.929	1.049	1200		1	5.000	47.955	150
TK1(IN)3	384800.503	398398.311	48.903	2.415			2	4.001	47.880	150
RE1	384788.425	398421.590	48.945	1.303	150		0	3.002	47.880	225
MHS4A	384791.006	398416.627	48.945	1.361	450		0	3.003	47.880	225
MHS4B	384794.432	398410.040	48.945	1.438	450		1	6.003	47.391	150
MHS4	384797.843	398403.484	48.865	1.435	1200		2	1.007	46.490	4000
TK1(OUT)	384808.125	398402.177	48.903	2.437			0	1.008	46.488	4000
							0	1.009	46.490	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
MHS5	384809.756	398398.992	48.924	2.442	1500		1 1.009	46.482	300
							0 1.010	46.482	150
MHS6	384813.650	398400.911	48.927	2.488	900		1 1.010	46.439	150
							0 1.011	46.439	150
MHS7	384817.410	398393.504	47.846	1.490	900		1 1.011	46.356	150
							0 1.012	46.356	150
MHS8	384822.893	398391.400	47.783	1.478	900		1 1.012	46.305	150
							0 1.013	46.305	150
JCT8A	384823.095	398389.286	47.800	1.529			1 7.001	46.271	150
							2 1.013	46.271	150
							0 1.014	46.271	150
MHS8B	384829.768	398386.985	48.058	1.133	450				
							0 7.000	46.925	150
MHS8A	384825.425	398390.500	47.897	1.534	450		1 7.000	46.438	150
							0 7.001	46.363	150
MHS10	384823.623	398383.723	47.930	1.824	1500		1 9.002	46.106	225
							2 1.014	46.181	150
							0 1.015	46.106	225
MHS11	384843.774	398372.000	48.088	1.176	450				
							0 8.000	46.912	150
MHS12	384839.345	398367.507	48.082	1.382	600		1 8.000	46.700	150
							0 8.001	46.700	150
TK2	384826.846	398380.411	48.025	1.900			1 10.000	46.125	2000
							2 9.001	46.125	2000
							3 8.001	46.528	150
							0 9.002	46.125	225
TK2(END)	384829.041	398382.525	48.080	1.947					
							0 10.000	46.133	2000
MHS10A	384824.751	398378.629	47.971	0.991	600				
							0 9.000	46.980	150



Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
TK2(END)IN	384825.439	398379.056	48.015	1.885			1	9.000	46.972	150
							0	9.001	46.130	2000
CMH1	384817.843	398379.807	47.863	1.828	1200		1	1.015	46.035	225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	17.000	Drain Down Time (mins)	240
Ratio-R	0.356	Additional Storage (m³/ha)	0.0
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	40	0	0
100	0	0	0
100	40	0	0

Node MHS5 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	46.482	Product Number	CTL-SHE-0069-2600-1600-2600
Design Depth (m)	1.600	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	2.6	Min Node Diameter (mm)	1200

Node MHS10 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	46.106	Product Number	CTL-SHE-0098-5000-1500-5000
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Results for 1 year Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MHS20D	10	47.748	0.039	1.8	0.0062	0.0000	OK
15 minute winter	MHS20C	10	47.670	0.046	2.5	0.0074	0.0000	OK
15 minute winter	MHS20B	11	47.652	0.044	2.4	0.0069	0.0000	OK
15 minute summer	MHS20A	1	47.686	0.000	0.0	0.0000	0.0000	OK
15 minute winter	MHS20	11	47.615	0.049	4.3	0.0138	0.0000	OK
15 minute winter	MHS21	11	47.517	0.055	5.2	0.0156	0.0000	OK
15 minute winter	MHS2	11	47.437	0.055	5.2	0.0624	0.0000	OK
120 minute winter	TK1(IN)1	96	46.691	0.179	1.8	0.0000	0.0000	OK
120 minute winter	TK1(IN)2	96	46.691	0.183	5.4	0.0000	0.0000	OK
15 minute winter	RA11A	10	48.476	0.026	3.1	0.0010	0.0000	OK
15 minute winter	MHS22A	10	48.285	0.044	3.1	0.0124	0.0000	OK
15 minute winter	MHS22	10	48.266	0.036	4.8	0.0101	0.0000	OK
15 minute winter	RA	10	48.481	0.031	2.8	0.0006	0.0000	OK
15 minute winter	MHS23	10	48.147	0.037	3.7	0.0059	0.0000	OK
15 minute winter	RWP14	10	48.131	0.041	2.8	0.0464	0.0000	OK
15 minute winter	MHS3	11	47.971	0.091	11.7	0.1027	0.0000	OK
120 minute winter	TK1(IN)3	96	46.691	0.203	6.0	0.0000	0.0000	OK
15 minute winter	RE1	10	47.676	0.034	1.9	0.0006	0.0000	OK
15 minute winter	MHS4A	10	47.627	0.043	3.0	0.0068	0.0000	OK
15 minute winter	MHS4B	11	47.556	0.049	3.9	0.0078	0.0000	OK
15 minute winter	MHS4	11	47.498	0.068	5.7	0.0765	0.0000	OK
120 minute winter	TK1(OUT)	96	46.691	0.225	3.4	0.0000	0.0000	OK
120 minute winter	MHS5	96	46.691	0.209	2.1	0.3689	0.0000	SURCHARGED
120 minute winter	MHS6	76	46.475	0.036	2.1	0.0227	0.0000	OK
30 minute winter	MHS7	20	46.397	0.041	2.6	0.0262	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	MHS20D	1.000	MHS20C	1.8	0.519	0.124	0.0052	
15 minute winter	MHS20C	1.001	MHS20B	2.4	0.548	0.172	0.0111	
15 minute winter	MHS20B	1.002	MHS20	2.4	0.522	0.167	0.0292	
15 minute summer	MHS20A	2.000	MHS20	0.0	0.000	0.000	0.0148	
15 minute winter	MHS20	1.003	MHS21	4.3	0.617	0.101	0.1078	
15 minute winter	MHS21	1.004	MHS2	5.2	0.688	0.122	0.0904	
15 minute winter	MHS2	1.005	TK1(IN)1	5.1	0.715	0.116	0.0109	
120 minute winter	TK1(IN)1	1.006	TK1(IN)2	1.4	0.027	0.000	1.1776	
120 minute winter	TK1(IN)2	1.007	TK1(IN)3	3.9	0.069	0.000	5.4498	
15 minute winter	RA11A	3.000	MHS22A	3.1	0.789	0.028	0.0188	
15 minute winter	MHS22A	3.001	MHS22	3.0	0.644	0.074	0.0084	
15 minute winter	MHS22	3.002	MHS3	4.8	0.527	0.055	0.1183	
15 minute winter	RA	4.000	MHS23	2.8	1.067	0.089	0.0225	
15 minute winter	MHS23	4.001	MHS3	3.6	0.510	0.133	0.0705	
15 minute winter	RWP14	5.000	MHS3	2.7	0.711	0.155	0.0529	
15 minute winter	MHS3	3.003	TK1(IN)2	11.5	0.795	0.317	0.0558	
120 minute winter	TK1(IN)3	1.008	TK1(OUT)	3.4	0.053	0.000	7.3098	
15 minute winter	RE1	6.000	MHS4A	1.9	0.527	0.104	0.0200	
15 minute winter	MHS4A	6.001	MHS4B	3.0	0.650	0.163	0.0338	
15 minute winter	MHS4B	6.002	MHS4	3.9	0.611	0.213	0.0469	
15 minute winter	MHS4	6.003	TK1(IN)3	5.7	0.759	0.393	0.0437	
120 minute winter	TK1(OUT)	1.009	MHS5	2.0	0.314	0.026	0.0808	
120 minute winter	MHS5	Hydro-Brake®	MHS6	2.0				
120 minute winter	MHS6	1.011	MHS7	2.1	0.631	0.118	0.0283	
30 minute winter	MHS7	1.012	MHS8	2.6	0.696	0.146	0.0191	

Results for 1 year Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	MHS8	20	46.343	0.038	2.6	0.0243	0.0000	OK
15 minute winter	JCT8A	11	46.319	0.048	4.6	0.0000	0.0000	OK
15 minute winter	MHS8B	10	46.948	0.023	2.5	0.0037	0.0000	OK
15 minute winter	MHS8A	10	46.391	0.028	2.5	0.0045	0.0000	OK
30 minute winter	MHS10	25	46.274	0.168	5.4	0.2976	0.0000	OK
15 minute winter	MHS11	10	46.941	0.029	2.6	0.0045	0.0000	OK
15 minute winter	MHS12	11	46.740	0.040	2.7	0.0113	0.0000	OK
30 minute winter	TK2	25	46.274	0.149	3.4	0.0000	0.0000	OK
30 minute winter	TK2(END)	25	46.274	0.141	1.0	0.0000	0.0000	OK
30 minute winter	MHS10A	22	46.989	0.009	0.1	0.0025	0.0000	OK
30 minute winter	TK2(END)IN	25	46.274	0.144	0.8	0.0000	0.0000	OK
15 minute summer	CMH1	1	46.035	0.000	4.0	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)
30 minute winter	MHS8	1.013	JCT8A	2.6	0.757	0.115	0.0087	18.4
15 minute winter	JCT8A	1.014	MHS10	4.6	0.978	0.205	0.0342	
15 minute winter	MHS8B	7.000	MHS8A	2.5	1.496	0.047	0.0093	
15 minute winter	MHS8A	7.001	JCT8A	2.5	0.778	0.074	0.0092	
30 minute winter	MHS10	Hydro-Brake®	CMH1	4.2				
15 minute winter	MHS11	8.000	MHS12	2.6	0.866	0.079	0.0191	
15 minute winter	MHS12	8.001	TK2	2.6	0.711	0.152	0.0669	
30 minute winter	TK2	9.002	MHS10	1.6	-0.143	0.040	0.0962	
30 minute winter	TK2(END)	10.000	TK2	-1.0	-0.022	0.000	0.8861	
30 minute winter	MHS10A	9.000	TK2(END)IN	0.1	0.251	0.006	0.0004	
30 minute winter	TK2(END)IN	9.001	TK2	-0.7	-0.027	0.000	0.5738	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MHS20D	10	47.788	0.079	6.3	0.0125	0.0000	OK
15 minute winter	MHS20C	10	47.726	0.102	8.6	0.0162	0.0000	OK
15 minute winter	MHS20B	10	47.702	0.094	8.5	0.0150	0.0000	OK
15 minute summer	MHS20A	1	47.686	0.000	0.0	0.0000	0.0000	OK
15 minute winter	MHS20	10	47.664	0.098	15.1	0.0277	0.0000	OK
15 minute winter	MHS21	11	47.573	0.111	17.9	0.0313	0.0000	OK
360 minute winter	MHS2	336	47.495	0.113	2.9	0.1277	0.0000	OK
360 minute winter	TK1(IN)1	336	47.495	0.983	2.9	0.0000	0.0000	OK
360 minute winter	TK1(IN)2	336	47.495	0.987	8.3	0.0000	0.0000	OK
15 minute winter	RA11A	10	48.498	0.048	10.6	0.0019	0.0000	OK
15 minute winter	MHS22A	10	48.324	0.083	10.6	0.0236	0.0000	OK
15 minute winter	MHS22	10	48.296	0.066	16.8	0.0188	0.0000	OK
15 minute winter	RA	10	48.510	0.060	9.4	0.0011	0.0000	OK
15 minute winter	MHS23	10	48.181	0.071	12.4	0.0112	0.0000	OK
15 minute winter	RWP14	10	48.169	0.079	9.4	0.0892	0.0000	OK
15 minute winter	MHS3	10	48.070	0.190	40.0	0.2152	0.0000	OK
360 minute winter	TK1(IN)3	336	47.495	1.007	8.6	0.0000	0.0000	OK
15 minute winter	RE1	10	47.713	0.071	6.7	0.0013	0.0000	OK
15 minute winter	MHS4A	11	47.685	0.101	10.5	0.0160	0.0000	OK
15 minute winter	MHS4B	11	47.664	0.157	13.4	0.0249	0.0000	SURCHARGED
15 minute winter	MHS4	11	47.607	0.177	19.4	0.2006	0.0000	SURCHARGED
360 minute winter	TK1(OUT)	336	47.495	1.029	4.5	0.0000	0.0000	SURCHARGED
360 minute winter	MHS5	336	47.495	1.013	2.3	1.7898	0.0000	SURCHARGED
60 minute winter	MHS6	51	46.812	0.373	2.5	0.2375	0.0000	SURCHARGED
60 minute winter	MHS7	51	46.811	0.455	4.1	0.2892	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	MHS20D	1.000	MHS20C	6.2	0.723	0.434	0.0131	
15 minute winter	MHS20C	1.001	MHS20B	8.5	0.699	0.604	0.0307	
15 minute winter	MHS20B	1.002	MHS20	8.4	0.709	0.582	0.0754	
15 minute summer	MHS20A	2.000	MHS20	0.0	0.000	0.000	0.0352	
15 minute winter	MHS20	1.003	MHS21	14.9	0.831	0.351	0.2794	
15 minute winter	MHS21	1.004	MHS2	18.1	0.941	0.427	0.2309	
360 minute winter	MHS2	1.005	TK1(IN)1	2.9	0.608	0.065	0.0322	
360 minute winter	TK1(IN)1	1.006	TK1(IN)2	2.3	0.012	0.000	6.4154	
360 minute winter	TK1(IN)2	1.007	TK1(IN)3	5.5	0.036	0.000	28.2986	
15 minute winter	RA11A	3.000	MHS22A	10.6	1.092	0.096	0.0462	
15 minute winter	MHS22A	3.001	MHS22	10.5	0.908	0.257	0.0205	
15 minute winter	MHS22	3.002	MHS3	16.7	0.714	0.191	0.2841	
15 minute winter	RA	4.000	MHS23	9.3	1.475	0.299	0.0549	
15 minute winter	MHS23	4.001	MHS3	12.4	0.834	0.452	0.1254	
15 minute winter	RWP14	5.000	MHS3	9.3	0.823	0.533	0.1653	
15 minute winter	MHS3	3.003	TK1(IN)2	39.5	1.169	1.087	0.1298	
360 minute winter	TK1(IN)3	1.008	TK1(OUT)	4.5	0.023	0.000	34.8047	
15 minute winter	RE1	6.000	MHS4A	6.6	0.676	0.367	0.0569	
15 minute winter	MHS4A	6.001	MHS4B	10.3	0.791	0.568	0.1120	
15 minute winter	MHS4B	6.002	MHS4	13.1	0.744	0.723	0.1301	
15 minute winter	MHS4	6.003	TK1(IN)3	19.4	1.111	1.340	0.0977	
360 minute winter	TK1(OUT)	1.009	MHS5	2.1	0.126	0.027	0.1111	
360 minute winter	MHS5	Hydro-Brake®	MHS6	2.1				
60 minute winter	MHS6	1.011	MHS7	2.5	0.636	0.144	0.1462	
60 minute winter	MHS7	1.012	MHS8	4.0	0.735	0.224	0.0904	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	MHS8	51	46.809	0.504	4.0	0.3207	0.0000	SURCHARGED
60 minute winter	JCT8A	51	46.809	0.538	6.7	0.0000	0.0000	SURCHARGED
15 minute winter	MHS8B	10	46.969	0.044	8.6	0.0070	0.0000	OK
60 minute winter	MHS8A	52	46.809	0.446	4.6	0.0709	0.0000	SURCHARGED
60 minute winter	MHS10	52	46.806	0.700	8.2	1.2369	0.0000	SURCHARGED
15 minute winter	MHS11	10	46.968	0.056	9.0	0.0089	0.0000	OK
60 minute winter	MHS12	52	46.806	0.106	5.0	0.0301	0.0000	OK
60 minute winter	TK2	52	46.806	0.681	7.0	0.0000	0.0000	SURCHARGED
60 minute winter	TK2(END)	52	46.806	0.673	2.3	0.0000	0.0000	OK
15 minute winter	MHS10A	11	46.997	0.017	0.4	0.0048	0.0000	OK
60 minute winter	TK2(END)IN	52	46.806	0.676	1.6	0.0000	0.0000	OK
15 minute summer	CMH1	1	46.035	0.000	4.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	MHS8	1.013	JCT8A	3.4	0.753	0.152	0.0374	
60 minute winter	JCT8A	1.014	MHS10	6.6	0.926	0.292	0.0984	
15 minute winter	MHS8B	7.000	MHS8A	8.6	2.090	0.162	0.0566	
60 minute winter	MHS8A	7.001	JCT8A	4.1	0.749	0.122	0.0462	
60 minute winter	MHS10	Hydro-Brake®	CMH1	4.9				51.8
15 minute winter	MHS11	8.000	MHS12	9.0	1.164	0.274	0.0486	
60 minute winter	MHS12	8.001	TK2	5.0	0.847	0.288	0.2782	
60 minute winter	TK2	9.002	MHS10	2.8	-0.175	0.071	0.1278	
60 minute winter	TK2(END)	10.000	TK2	-2.3	-0.036	-0.001	4.1259	
15 minute winter	MHS10A	9.000	TK2(END)IN	0.4	0.372	0.025	0.0011	
60 minute winter	TK2(END)IN	9.001	TK2	-1.4	-0.028	0.000	2.6504	

Results for 100 year Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MHS20D	10	47.784	0.075	5.8	0.0119	0.0000	OK
15 minute winter	MHS20C	10	47.720	0.096	7.9	0.0153	0.0000	OK
15 minute winter	MHS20B	10	47.697	0.089	7.8	0.0141	0.0000	OK
15 minute summer	MHS20A	1	47.686	0.000	0.0	0.0000	0.0000	OK
15 minute winter	MHS20	10	47.659	0.093	13.8	0.0263	0.0000	OK
15 minute winter	MHS21	11	47.567	0.105	16.5	0.0297	0.0000	OK
15 minute winter	MHS2	11	47.485	0.103	16.5	0.1169	0.0000	OK
240 minute winter	TK1(IN)1	236	47.421	0.909	3.6	0.0000	0.0000	OK
240 minute winter	TK1(IN)2	236	47.421	0.913	10.5	0.0000	0.0000	OK
15 minute winter	RA11A	10	48.496	0.046	9.7	0.0018	0.0000	OK
15 minute winter	MHS22A	10	48.321	0.080	9.7	0.0225	0.0000	OK
15 minute winter	MHS22	10	48.293	0.063	15.4	0.0180	0.0000	OK
15 minute winter	RA	10	48.508	0.058	8.7	0.0010	0.0000	OK
15 minute winter	MHS23	10	48.178	0.068	11.5	0.0107	0.0000	OK
15 minute winter	RWP14	10	48.166	0.076	8.7	0.0862	0.0000	OK
15 minute winter	MHS3	10	48.060	0.180	36.8	0.2031	0.0000	OK
240 minute winter	TK1(IN)3	236	47.421	0.933	11.0	0.0000	0.0000	OK
15 minute winter	RE1	10	47.709	0.067	6.1	0.0012	0.0000	OK
15 minute winter	MHS4A	10	47.671	0.087	9.6	0.0138	0.0000	OK
15 minute winter	MHS4B	11	47.629	0.122	12.5	0.0194	0.0000	OK
15 minute winter	MHS4	11	47.593	0.163	18.0	0.1838	0.0000	SURCHARGED
240 minute winter	TK1(OUT)	236	47.421	0.955	5.4	0.0000	0.0000	SURCHARGED
240 minute winter	MHS5	236	47.421	0.939	2.4	1.6584	0.0000	SURCHARGED
60 minute winter	MHS6	50	46.761	0.322	2.5	0.2051	0.0000	SURCHARGED
60 minute winter	MHS7	50	46.760	0.404	4.0	0.2568	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	MHS20D	1.000	MHS20C	5.7	0.708	0.399	0.0123	
15 minute winter	MHS20C	1.001	MHS20B	7.8	0.688	0.554	0.0286	
15 minute winter	MHS20B	1.002	MHS20	7.7	0.694	0.534	0.0706	
15 minute summer	MHS20A	2.000	MHS20	0.0	0.000	0.000	0.0333	
15 minute winter	MHS20	1.003	MHS21	13.7	0.816	0.323	0.2610	
15 minute winter	MHS21	1.004	MHS2	16.5	0.921	0.391	0.2159	
15 minute winter	MHS2	1.005	TK1(IN)1	16.6	0.987	0.376	0.0256	
240 minute winter	TK1(IN)1	1.006	TK1(IN)2	3.4	0.049	0.000	5.9306	
240 minute winter	TK1(IN)2	1.007	TK1(IN)3	7.0	0.070	0.000	26.1860	
15 minute winter	RA11A	3.000	MHS22A	9.7	1.070	0.088	0.0433	
15 minute winter	MHS22A	3.001	MHS22	9.6	0.886	0.235	0.0192	
15 minute winter	MHS22	3.002	MHS3	15.3	0.701	0.175	0.2690	
15 minute winter	RA	4.000	MHS23	8.6	1.446	0.276	0.0518	
15 minute winter	MHS23	4.001	MHS3	11.4	0.781	0.417	0.1231	
15 minute winter	RWP14	5.000	MHS3	8.6	0.822	0.491	0.1527	
15 minute winter	MHS3	3.003	TK1(IN)2	36.2	1.129	0.997	0.1235	
240 minute winter	TK1(IN)3	1.008	TK1(OUT)	5.4	0.042	0.000	32.2621	
15 minute winter	RE1	6.000	MHS4A	6.0	0.665	0.335	0.0509	
15 minute winter	MHS4A	6.001	MHS4B	9.6	0.792	0.529	0.0952	
15 minute winter	MHS4B	6.002	MHS4	12.2	0.736	0.673	0.1219	
15 minute winter	MHS4	6.003	TK1(IN)3	18.0	1.042	1.245	0.0964	
240 minute winter	TK1(OUT)	1.009	MHS5	2.1	0.135	0.027	0.1111	
240 minute winter	MHS5	Hydro-Brake®	MHS6	2.1				
60 minute winter	MHS6	1.011	MHS7	2.5	0.634	0.140	0.1462	
60 minute winter	MHS7	1.012	MHS8	3.9	0.735	0.222	0.0904	

Results for 100 year Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	MHS8	50	46.758	0.453	3.9	0.2883	0.0000	SURCHARGED
60 minute winter	JCT8A	50	46.758	0.487	7.6	0.0000	0.0000	SURCHARGED
15 minute winter	MHS8B	10	46.967	0.042	7.9	0.0067	0.0000	OK
60 minute winter	MHS8A	50	46.758	0.395	4.3	0.0628	0.0000	SURCHARGED
60 minute winter	MHS10	50	46.755	0.649	8.4	1.1468	0.0000	SURCHARGED
15 minute winter	MHS11	10	46.965	0.053	8.3	0.0085	0.0000	OK
15 minute winter	MHS12	10	46.775	0.075	8.7	0.0213	0.0000	OK
60 minute winter	TK2	50	46.755	0.630	8.2	0.0000	0.0000	SURCHARGED
60 minute winter	TK2(END)	50	46.755	0.622	2.6	0.0000	0.0000	OK
15 minute winter	MHS10A	10	46.996	0.016	0.4	0.0046	0.0000	OK
60 minute winter	TK2(END)IN	50	46.755	0.625	1.9	0.0000	0.0000	OK
15 minute summer	CMH1	1	46.035	0.000	4.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	MHS8	1.013	JCT8A	3.9	0.756	0.173	0.0374	
60 minute winter	JCT8A	1.014	MHS10	6.5	0.942	0.288	0.0984	
15 minute winter	MHS8B	7.000	MHS8A	7.9	2.045	0.149	0.0538	
60 minute winter	MHS8A	7.001	JCT8A	4.7	0.746	0.140	0.0462	
60 minute winter	MHS10	Hydro-Brake®	CMH1	4.9				50.9
15 minute winter	MHS11	8.000	MHS12	8.3	1.145	0.252	0.0456	
15 minute winter	MHS12	8.001	TK2	8.4	0.970	0.485	0.1565	
60 minute winter	TK2	9.002	MHS10	-4.1	-0.178	-0.104	0.1278	
60 minute winter	TK2(END)	10.000	TK2	-2.6	-0.029	-0.001	3.8152	
15 minute winter	MHS10A	9.000	TK2(END)IN	0.4	0.361	0.023	0.0010	
60 minute winter	TK2(END)IN	9.001	TK2	-1.7	-0.014	0.000	2.4512	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	MHS20D	240	47.885	0.176	1.7	0.0279	0.0000	SURCHARGED
240 minute winter	MHS20C	240	47.885	0.261	2.3	0.0414	0.0000	SURCHARGED
240 minute winter	MHS20B	240	47.884	0.276	2.3	0.0439	0.0000	SURCHARGED
240 minute winter	MHS20A	236	47.885	0.199	0.5	0.0316	0.0000	SURCHARGED
240 minute winter	MHS20	240	47.884	0.318	4.1	0.0900	0.0000	SURCHARGED
240 minute winter	MHS21	240	47.884	0.422	4.9	0.1195	0.0000	SURCHARGED
240 minute winter	MHS2	236	47.885	0.503	4.9	0.5684	0.0000	SURCHARGED
240 minute winter	TK1(IN)1	236	47.887	1.375	60.3	0.0000	0.0000	OK
240 minute winter	TK1(IN)2	240	47.884	1.376	46.1	0.0000	0.0000	OK
15 minute winter	RA11A	10	48.506	0.056	13.6	0.0022	0.0000	OK
15 minute winter	MHS22A	10	48.337	0.096	13.6	0.0270	0.0000	OK
15 minute winter	MHS22	10	48.306	0.076	21.6	0.0214	0.0000	OK
15 minute winter	RA	10	48.520	0.070	12.1	0.0013	0.0000	OK
15 minute winter	MHS23	10	48.208	0.098	16.0	0.0156	0.0000	OK
15 minute winter	RWP14	10	48.181	0.091	12.1	0.1030	0.0000	OK
15 minute winter	MHS3	10	48.114	0.234	51.1	0.2644	0.0000	SURCHARGED
240 minute winter	TK1(IN)3	240	47.883	1.395	14.9	0.0000	0.0000	OK
240 minute winter	RE1	240	47.883	0.241	1.8	0.0043	0.0000	SURCHARGED
240 minute winter	MHS4A	240	47.883	0.299	2.9	0.0476	0.0000	SURCHARGED
240 minute winter	MHS4B	240	47.883	0.376	3.7	0.0598	0.0000	SURCHARGED
240 minute winter	MHS4	236	47.883	0.453	5.5	0.5123	0.0000	SURCHARGED
240 minute winter	TK1(OUT)	236	47.883	1.417	7.9	0.0000	0.0000	SURCHARGED
240 minute winter	MHS5	236	47.883	1.401	4.5	2.4761	0.0000	SURCHARGED
120 minute winter	MHS6	100	47.110	0.671	2.4	0.4268	0.0000	SURCHARGED
120 minute winter	MHS7	100	47.109	0.753	3.5	0.4788	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)
240 minute winter	MHS20D	1.000	MHS20C	1.7	0.514	0.118	0.0267	
240 minute winter	MHS20C	1.001	MHS20B	2.3	0.537	0.163	0.0442	
240 minute winter	MHS20B	1.002	MHS20	2.3	0.513	0.160	0.1115	
240 minute winter	MHS20A	2.000	MHS20	-0.5	-0.050	-0.019	0.1056	
240 minute winter	MHS20	1.003	MHS21	4.2	0.614	0.099	0.6197	
240 minute winter	MHS21	1.004	MHS2	4.9	0.677	0.116	0.4782	
240 minute winter	MHS2	1.005	TK1(IN)1	4.9	0.706	0.111	0.0604	
240 minute winter	TK1(IN)1	1.006	TK1(IN)2	-59.6	0.050	-0.003	8.9564	
240 minute winter	TK1(IN)2	1.007	TK1(IN)3	9.4	0.115	0.001	39.3369	
15 minute winter	RA11A	3.000	MHS22A	13.6	1.154	0.123	0.0559	
15 minute winter	MHS22A	3.001	MHS22	13.5	0.973	0.329	0.0245	
15 minute winter	MHS22	3.002	MHS3	21.5	0.748	0.245	0.3207	
15 minute winter	RA	4.000	MHS23	12.0	1.568	0.385	0.0665	
15 minute winter	MHS23	4.001	MHS3	15.7	0.960	0.573	0.1450	
15 minute winter	RWP14	5.000	MHS3	11.9	0.823	0.679	0.1991	
15 minute winter	MHS3	3.003	TK1(IN)2	50.5	1.308	1.390	0.1446	
240 minute winter	TK1(IN)3	1.008	TK1(OUT)	7.9	0.038	0.000	48.0729	
240 minute winter	RE1	6.000	MHS4A	1.8	0.525	0.100	0.0985	
240 minute winter	MHS4A	6.001	MHS4B	2.9	0.653	0.160	0.1307	
240 minute winter	MHS4B	6.002	MHS4	3.7	0.602	0.203	0.1301	
240 minute winter	MHS4	6.003	TK1(IN)3	5.5	0.751	0.378	0.1024	
240 minute winter	TK1(OUT)	1.009	MHS5	4.4	0.154	0.056	0.1111	
240 minute winter	MHS5	Hydro-Brake®	MHS6	2.4				
120 minute winter	MHS6	1.011	MHS7	2.4	0.666	0.134	0.1462	
120 minute winter	MHS7	1.012	MHS8	5.1	0.721	0.289	0.0904	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 91.34%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	MHS8	100	47.107	0.802	8.1	0.5104	0.0000	SURCHARGED
120 minute winter	JCT8A	100	47.107	0.836	6.4	0.0000	0.0000	SURCHARGED
120 minute winter	MHS8B	100	47.107	0.182	3.8	0.0289	0.0000	SURCHARGED
120 minute winter	MHS8A	100	47.107	0.744	3.8	0.1183	0.0000	SURCHARGED
120 minute winter	MHS10	100	47.105	0.999	7.7	1.7649	0.0000	SURCHARGED
120 minute winter	MHS11	100	47.105	0.193	4.0	0.0308	0.0000	SURCHARGED
120 minute winter	MHS12	100	47.105	0.405	4.2	0.1147	0.0000	SURCHARGED
120 minute winter	TK2	100	47.105	0.980	5.8	0.0000	0.0000	SURCHARGED
120 minute winter	TK2(END)	100	47.105	0.972	1.8	0.0000	0.0000	OK
120 minute winter	MHS10A	100	47.105	0.125	0.2	0.0353	0.0000	OK
120 minute winter	TK2(END)IN	100	47.105	0.975	1.3	0.0000	0.0000	OK
15 minute summer	CMH1	1	46.035	0.000	4.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	MHS8	1.013	JCT8A	3.3	0.778	0.146	0.0374	
120 minute winter	JCT8A	1.014	MHS10	5.3	0.875	0.236	0.0984	
120 minute winter	MHS8B	7.000	MHS8A	3.8	1.559	0.072	0.0984	
120 minute winter	MHS8A	7.001	JCT8A	5.3	0.594	0.158	0.0462	
120 minute winter	MHS10	Hydro-Brake®	CMH1	4.9				73.6
120 minute winter	MHS11	8.000	MHS12	4.0	0.968	0.122	0.1111	
120 minute winter	MHS12	8.001	TK2	4.2	0.788	0.242	0.3163	
120 minute winter	TK2	9.002	MHS10	2.5	-0.138	0.063	0.1278	
120 minute winter	TK2(END)	10.000	TK2	-1.8	-0.014	0.000	5.9470	
120 minute winter	MHS10A	9.000	TK2(END)IN	0.2	0.304	0.013	0.0161	
120 minute winter	TK2(END)IN	9.001	TK2	-1.1	-0.011	0.000	3.8176	