

Design Settings

Rainfall Methodology	FSR	CV	0.750	Minimum Backdrop Height (m)	0.500
Return Period (years)	100	Time of Entry (mins)	4.00	Preferred Cover Depth (m)	0.600
Additional Flow (%)	0	Maximum Time of Concentration (mins)	30.00	Include Intermediate Ground	✓
FSR Region	England and Wales	Maximum Rainfall (mm/hr)	250.0	Enforce best practice design rules	✓
M5-60 (mm)	17.000	Minimum Velocity (m/s)	1.00		
Ratio-R	0.400	Connection Type	Level Soffits		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
MHS10		4.00	50.328	1500	386909.320	393382.350	1.916
S5	0.060	4.00	50.950	600	386960.824	393391.035	1.585
MHS11a			50.742	1500	386995.935	393363.476	4.442
MHS20c			50.934	1500	387002.298	393376.813	3.498
S4			50.950	450	386966.410	393392.073	1.452
MHS20			50.827	1200	387006.194	393395.779	2.770
S6	0.020	4.00	50.900	475	386994.282	393398.782	0.821
MHS25		4.00	50.830	475	386968.687	393403.323	1.230
Assumed Tank Manifold Connection 2			50.500		386997.907	393362.959	3.985
Assumed Tank Manifold Connection1			50.500		387001.987	393375.057	3.985
S1	0.010	4.00	50.200	1500	386956.452	393371.546	1.936
S2			50.300	1500	386955.366	393366.693	2.053
S3			50.740	1500	386994.776	393357.854	2.628
MHS26	0.015	4.00	50.900	475	386995.013	393401.676	0.750
S7	0.005	4.00	50.950	450	386997.884	393387.763	0.750
S8			50.750	1200	386995.819	393378.560	0.775
Tank 1			50.500	1350	387006.852	393358.827	4.040
FCC			49.500	3000	387004.185	393345.866	3.150
MHS13a			49.500	1350	387030.584	393272.725	3.400

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	MHS10	S1	48.354	0.600	48.412	48.264	0.148	326.0	375	4.81	139.3
2.000	MHS25	S4	11.478	0.600	49.600	49.498	0.102	112.6	150	4.20	146.1
2.002	S5	S1	19.973	0.600	49.365	49.165	0.200	100.0	225	4.55	142.1
3.002	MHS20	MHS20c	19.362	0.600	48.057	47.436	0.621	31.2	300	4.24	145.7
3.003	MHS20c	Assumed Tank Manifold Connection1	1.783	0.600	47.436	46.515	0.921	1.9	300	4.24	145.7
1.004	MHS11a	Assumed Tank Manifold Connection 2	2.039	0.600	46.600	46.515	0.085	24.0	450	5.63	131.1
3.001	S6	MHS20	12.285	0.600	50.079	49.450	0.629	19.5	150	4.12	147.1
4.001	S8	MHS20c	6.710	0.600	49.975	49.638	0.337	19.9	225	4.16	146.6
1.001	S1	S2	4.973	0.600	48.264	48.247	0.017	300.0	375	4.89	138.4
1.002	S2	S3	40.389	0.600	48.247	48.112	0.135	300.0	375	5.53	132.0
1.003	S3	MHS11a	5.740	0.600	48.112	48.093	0.019	300.0	375	5.63	131.2
2.001	S4	S5	5.682	0.600	49.498	49.440	0.058	98.0	150	4.30	145.0
4.000	S7	S8	9.432	0.600	50.200	50.050	0.150	62.9	150	4.12	147.1
3.000	MHS26	S6	2.985	0.600	50.150	50.079	0.071	42.0	150	4.03	148.2
1.005	Assumed Tank Manifold Connection 2	Tank 1	9.853	0.600	46.515	46.460	0.055	179.1	450	5.74	130.1
3.004	Assumed Tank Manifold Connection1	Tank 1	16.943	0.600	46.515	46.460	0.055	308.1	300	4.56	142.0
1.006	Tank 1	FCC	13.233	0.600	46.460	46.350	0.110	120.3	450	5.86	129.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.998	110.2	0.0	1.541	1.561	0.000	0.0	0	0.000
2.000	0.946	16.7	0.0	1.080	1.302	0.000	0.0	0	0.000
2.002	1.307	52.0	23.1	1.360	0.810	0.060	0.0	105	1.270
3.002	2.825	199.7	13.8	2.470	3.198	0.035	0.0	53	1.644
3.003	11.377	804.2	15.8	3.198	3.685	0.040	0.0	29	4.584
1.004	4.164	662.3	24.9	3.692	3.535	0.070	0.0	58	2.031
3.001	2.289	40.5	14.0	0.671	1.227	0.035	0.0	61	2.081
4.001	2.945	117.1	2.0	0.550	1.071	0.005	0.0	21	1.131
1.001	1.041	114.9	26.3	1.561	1.678	0.070	0.0	121	0.848
1.002	1.041	114.9	25.0	1.678	2.253	0.070	0.0	118	0.837
1.003	1.041	114.9	24.9	2.253	2.274	0.070	0.0	118	0.837
2.001	1.015	17.9	0.0	1.302	1.360	0.000	0.0	0	0.000
4.000	1.270	22.4	2.0	0.600	0.550	0.005	0.0	30	0.786
3.000	1.557	27.5	6.0	0.600	0.671	0.015	0.0	48	1.252
1.005	1.515	241.0	24.7	3.535	3.590	0.070	0.0	96	0.988
3.004	0.890	62.9	15.4	3.685	3.740	0.040	0.0	100	0.738
1.006	1.852	294.6	38.5	3.590	2.700	0.110	0.0	109	1.294

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)
1.007	FCC	MHS13a	77.759	0.600	46.350	46.100	0.250	311.0	450	6.99	119.9

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)
1.007	1.147	182.4	35.8	2.700	2.950	0.110	0.0	134	0.897

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	48.354	326.0	375	Circular	50.328	48.412	1.541	50.200	48.264	1.561
2.000	11.478	112.6	150	Circular	50.830	49.600	1.080	50.950	49.498	1.302
2.002	19.973	100.0	225	Circular	50.950	49.365	1.360	50.200	49.165	0.810
3.002	19.362	31.2	300	Circular	50.827	48.057	2.470	50.934	47.436	3.198
3.003	1.783	1.9	300	Circular	50.934	47.436	3.198	50.500	46.515	3.685
1.004	2.039	24.0	450	Circular	50.742	46.600	3.692	50.500	46.515	3.535
3.001	12.285	19.5	150	Circular	50.900	50.079	0.671	50.827	49.450	1.227
4.001	6.710	19.9	225	Circular	50.750	49.975	0.550	50.934	49.638	1.071
1.001	4.973	300.0	375	Circular	50.200	48.264	1.561	50.300	48.247	1.678
1.002	40.389	300.0	375	Circular	50.300	48.247	1.678	50.740	48.112	2.253
1.003	5.740	300.0	375	Circular	50.740	48.112	2.253	50.742	48.093	2.274
2.001	5.682	98.0	150	Circular	50.950	49.498	1.302	50.950	49.440	1.360

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	MHS10	1500	Manhole	Private Existing Chamber	S1	1500	Manhole	Concrete Manhole Chamber
2.000	MHS25	475	Manhole	Private Existing Chamber	S4	450	Manhole	Plastic Inspection Chamber
2.002	S5	600	Manhole	Plastic Inspection Chamber	S1	1500	Manhole	Concrete Manhole Chamber
3.002	MHS20	1200	Manhole	Private Existing Chamber	MHS20c	1500	Manhole	Private Existing Chamber
3.003	MHS20c	1500	Manhole	Private Existing Chamber	Assumed Tank Manifold Connection1		Junction	
1.004	MHS11a	1500	Manhole	Private Existing Chamber	Assumed Tank Manifold Connection 2		Junction	
3.001	S6	475	Manhole	Private Existing Chamber	MHS20	1200	Manhole	Private Existing Chamber
4.001	S8	1200	Manhole	Adoptable	MHS20c	1500	Manhole	Private Existing Chamber
1.001	S1	1500	Manhole	Concrete Manhole Chamber	S2	1500	Manhole	Concrete Manhole Chamber
1.002	S2	1500	Manhole	Concrete Manhole Chamber	S3	1500	Manhole	Concrete Manhole Chamber
1.003	S3	1500	Manhole	Concrete Manhole Chamber	MHS11a	1500	Manhole	Private Existing Chamber
2.001	S4	450	Manhole	Plastic Inspection Chamber	S5	600	Manhole	Plastic Inspection Chamber

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	9.432	62.9	150	Circular	50.950	50.200	0.600	50.750	50.050	0.550
3.000	2.985	42.0	150	Circular	50.900	50.150	0.600	50.900	50.079	0.671
1.005	9.853	179.1	450	Circular	50.500	46.515	3.535	50.500	46.460	3.590
3.004	16.943	308.1	300	Circular	50.500	46.515	3.685	50.500	46.460	3.740
1.006	13.233	120.3	450	Circular	50.500	46.460	3.590	49.500	46.350	2.700
1.007	77.759	311.0	450	Circular	49.500	46.350	2.700	49.500	46.100	2.950

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.000	S7	450	Manhole	Adoptable	S8	1200	Manhole	Adoptable
3.000	MHS26	475	Manhole	Adoptable	S6	475	Manhole	Private Existing Chamber
1.005	Assumed Tank Manifold Connection 2		Junction		Tank 1	1350	Manhole	Private Existing Chamber
3.004	Assumed Tank Manifold Connection1		Junction		Tank 1	1350	Manhole	Private Existing Chamber
1.006	Tank 1	1350	Manhole	Private Existing Chamber	FCC	3000	Manhole	Private Existing Chamber
1.007	FCC	3000	Manhole	Private Existing Chamber	MHS13a	1350	Manhole	Private Existing Chamber

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
MHS10	386909.320	393382.350	50.328	1.916	1500				
						0	1.000	48.412	375
S5	386960.824	393391.035	50.950	1.585	600				
						1	2.001	49.440	150
						0	2.002	49.365	225
MHS11a	386995.935	393363.476	50.742	4.442	1500				
						1	1.003	48.093	375
						0	1.004	46.600	450
MHS20c	387002.298	393376.813	50.934	3.498	1500				
						1	4.001	49.638	225
						2	3.002	47.436	300
						0	3.003	47.436	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S4	386966.410	393392.073	50.950	1.452	450		1	2.000	49.498	150
							0	2.001	49.498	150
MHS20	387006.194	393395.779	50.827	2.770	1200		1	3.001	49.450	150
							0	3.002	48.057	300
S6	386994.282	393398.782	50.900	0.821	475		1	3.000	50.079	150
							0	3.001	50.079	150
MHS25	386968.687	393403.323	50.830	1.230	475		0	2.000	49.600	150
Assumed Tank Manifold Connection 2	386997.907	393362.959	50.500	3.985			1	1.004	46.515	450
							0	1.005	46.515	450
Assumed Tank Manifold Connection1	387001.987	393375.057	50.500	3.985			1	3.003	46.515	300
							0	3.004	46.515	300
S1	386956.452	393371.546	50.200	1.936	1500		1	2.002	49.165	225
							2	1.000	48.264	375
							0	1.001	48.264	375
S2	386955.366	393366.693	50.300	2.053	1500		1	1.001	48.247	375
							0	1.002	48.247	375
S3	386994.776	393357.854	50.740	2.628	1500		1	1.002	48.112	375
							0	1.003	48.112	375

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
MHS26	386995.013	393401.676	50.900	0.750	475		0	3.000	50.150	150
S7	386997.884	393387.763	50.950	0.750	450		0	4.000	50.200	150
S8	386995.819	393378.560	50.750	0.775	1200		1	4.000	50.050	150
Tank 1	387006.852	393358.827	50.500	4.040	1350		0	4.001	49.975	225
							1	3.004	46.460	300
							2	1.005	46.460	450
FCC	387004.185	393345.866	49.500	3.150	3000		0	1.006	46.460	450
MHS13a	387030.584	393272.725	49.500	3.400	1350		1	1.006	46.350	450
							0	1.007	46.350	450
MHS13a	387030.584	393272.725	49.500	3.400	1350		1	1.007	46.100	450

Simulation Settings

Rainfall Methodology	FSR	Summer CV	1.000	Additional Storage (m³/ha)	20.0	100 year (l/s)	11.2
Rainfall Events	Singular	Winter CV	1.000	Starting Level (m)		Check Discharge Volume	x
FSR Region	England and Wales	Analysis Speed	Normal	Check Discharge Rate(s)	✓		
M5-60 (mm)	17.000	Skip Steady State	x	1 year (l/s)	3.5		
Ratio-R	0.400	Drain Down Time (mins)	240	30 year (l/s)	8.7		

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 %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	45	0	0
30	0	0	0				

Pre-development Discharge Rate

Site Makeup	Brownfield	PIMP (%)	63	Betterment (%)	50	Q 100 year (l/s)	11.2
Brownfield Method	MRM	CV	1.000	Q 1 year (l/s)	3.5		
Contributing Area (ha)	0.119	Time of Concentration (mins)	15.00	Q 30 year (l/s)	8.7		

Node MHS11a Online Orifice Control

Flap Valve	x	Invert Level (m)	46.600	Design Flow (l/s)	2.0	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Depth (m)	4.200	Diameter (m)	0.021		

Node MHS20c Online Orifice Control

Flap Valve	x	Invert Level (m)	47.436	Design Flow (l/s)	3.0	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Depth (m)	3.500	Diameter (m)	0.027		

Node FCC Online Hydro-Brake® Control

Flap Valve	x	Design Flow (l/s)	50.0	Min Outlet Diameter (m)	0.300
Replaces Downstream Link	x	Objective	(HE) Minimise upstream storage	Min Node Diameter (mm)	3000
Invert Level (m)	46.350	Sump Available	✓		
Design Depth (m)	3.150	Product Number	CTL-SHE-0264-5000-3150-5000		

Node Tank 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	46.460
Side Inf Coefficient (m/hr)	0.00000	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	523.6	0.0	1.050	523.6	0.0	1.051	0.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.22%

Node Event		US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	MHS10		1	48.412	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S5		10	49.434	0.069	10.1	0.0721	0.0000	OK
120 minute summer	MHS11a		82	48.293	1.693	4.7	2.9921	0.0000	SURCHARGED
60 minute summer	MHS20c		42	48.055	0.619	4.1	1.0939	0.0000	SURCHARGED
15 minute summer	S4		1	49.498	0.000	0.0	0.0000	0.0000	OK
15 minute summer	MHS20		10	48.092	0.035	5.9	0.0399	0.0000	OK
15 minute summer	S6		10	50.119	0.040	5.9	0.0266	0.0000	OK
15 minute summer	MHS25		1	49.600	0.000	0.0	0.0000	0.0000	OK
15 minute summer	Assumed Tank Manifold Connection 2		14	46.551	0.036	1.2	0.0000	0.0000	OK
15 minute summer	Assumed Tank Manifold Connection1		14	46.569	0.054	1.1	0.0000	0.0000	OK
15 minute summer	S1		10	48.349	0.085	11.8	0.1592	0.0000	OK
15 minute summer	S2		11	48.327	0.080	11.1	0.1407	0.0000	OK
60 minute summer	S3		46	48.293	0.181	7.1	0.3193	0.0000	OK
15 minute summer	MHS26		10	50.183	0.033	2.5	0.0189	0.0000	OK
15 minute summer	S7		10	50.220	0.020	0.8	0.0058	0.0000	OK
15 minute summer	S8		10	49.989	0.014	0.8	0.0153	0.0000	OK
360 minute winter	Tank 1		280	46.481	0.021	1.8	10.8873	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 summer	MHS10	1.000 S1		0.0	0.000	0.000	0.4533	
15 minute summer	S5	2.002 S1		10.1	0.999	0.194	0.2019	
120 minute summer	MHS11a	Orifice Assumed Tank Manifold Connection 2		1.2				
60 minute summer	MHS20c	Orifice Assumed Tank Manifold Connection1		1.2				
15 minute summer	S4	2.001 S5		0.0	0.000	0.000	0.0000	
15 minute summer	MHS20	3.002 MHS20c		5.9	0.805	0.030	0.7232	
15 minute summer	S6	3.001 MHS20		5.9	1.601	0.146	0.0453	
15 minute summer	MHS25	2.000 S4		0.0	0.000	0.000	0.0000	
15 minute summer	Assumed Tank Manifold Connection 2	1.005 Tank 1		1.2	0.715	0.005	0.0294	
15 minute summer	Assumed Tank Manifold Connection1	3.004 Tank 1		1.4	0.662	0.022	0.0729	
15 minute summer	S1	1.001 S2		11.1	0.631	0.097	0.0888	
15 minute summer	S2	1.002 S3		11.3	0.658	0.099	0.7005	
60 minute summer	S3	1.003 MHS11a		7.0	0.587	0.061	0.3182	
15 minute summer	MHS26	3.000 S6		2.5	0.759	0.091	0.0099	
15 minute summer	S7	4.000 S8		0.8	0.593	0.036	0.0127	
15 minute summer	S8	4.001 MHS20c		0.8	0.831	0.007	0.0064	
360 minute winter	Tank 1	1.006 FCC		1.2	0.164	0.004	0.1040	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	FCC	288	46.412	0.062	1.2	0.4392	0.0000	OK
360 minute winter	MHS13a	288	46.122	0.022	1.2	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)
360 minute winter	FCC	1.007	MHS13a	1.2	0.352	0.006	0.2602	15.4

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.22%

Node Event		US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	MHS10		114	48.591	0.179	1.9	0.3155	0.0000	OK
15 minute summer	S5		10	49.480	0.115	24.6	0.1195	0.0000	OK
120 minute winter	MHS11a		108	48.591	1.991	4.6	3.5185	0.0000	SURCHARGED
60 minute summer	MHS20c		44	49.211	1.775	8.6	3.1372	0.0000	SURCHARGED
15 minute summer	S4		1	49.498	0.000	0.0	0.0000	0.0000	OK
60 minute summer	MHS20		44	49.212	1.155	8.9	1.3058	0.0000	SURCHARGED
15 minute summer	S6		10	50.145	0.066	14.4	0.0435	0.0000	OK
15 minute summer	MHS25		1	49.600	0.000	0.0	0.0000	0.0000	OK
15 minute winter	Assumed Tank Manifold Connection 2		11	46.556	0.041	1.3	0.0000	0.0000	OK
15 minute summer	Assumed Tank Manifold Connection1		14	46.602	0.087	1.8	0.0000	0.0000	OK
120 minute winter	S1		112	48.591	0.327	7.7	0.6121	0.0000	OK
120 minute winter	S2		112	48.591	0.344	6.3	0.6082	0.0000	OK
120 minute winter	S3		114	48.594	0.482	6.2	0.8515	0.0000	SURCHARGED
15 minute summer	MHS26		10	50.206	0.056	6.2	0.0323	0.0000	OK
15 minute summer	S7		10	50.232	0.032	2.1	0.0093	0.0000	OK
15 minute summer	S8		10	49.997	0.022	2.1	0.0244	0.0000	OK
360 minute summer	Tank 1		288	46.488	0.028	2.9	14.7963	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	MHS10	1.000 S1		-1.9	-0.080	-0.018	3.7161	
15 minute summer	S5	2.002 S1		24.6	1.255	0.474	0.3916	
120 minute winter	MHS11a	Orifice Assumed Tank Manifold Connection 2		1.3				
60 minute summer	MHS20c	Orifice Assumed Tank Manifold Connection1		2.0				
15 minute summer	S4	2.001 S5		0.0	0.000	0.000	0.0107	
60 minute summer	MHS20	3.002 MHS20c		7.4	0.767	0.037	1.3635	
15 minute summer	S6	3.001 MHS20		14.4	2.023	0.356	0.0875	
15 minute summer	MHS25	2.000 S4		0.0	0.000	0.000	0.0000	
15 minute winter	Assumed Tank Manifold Connection 2	1.005 Tank 1		1.3	0.728	0.006	0.0349	
15 minute summer	Assumed Tank Manifold Connection1	3.004 Tank 1		2.8	0.714	0.045	0.1447	
120 minute winter	S1	1.001 S2		6.3	0.547	0.055	0.5174	
120 minute winter	S2	1.002 S3		6.2	0.492	0.054	4.3672	
120 minute winter	S3	1.003 MHS11a		4.6	0.505	0.040	0.6331	
15 minute summer	MHS26	3.000 S6		6.2	0.928	0.225	0.0200	
15 minute summer	S7	4.000 S8		2.1	0.784	0.094	0.0253	
15 minute summer	S8	4.001 MHS20c		2.1	1.113	0.018	0.0126	
360 minute summer	Tank 1	1.006 FCC		2.3	0.196	0.008	0.1670	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	FCC	288	46.436	0.086	2.3	0.6095	0.0000	OK
360 minute summer	MHS13a	288	46.131	0.031	2.3	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)
360 minute summer	FCC	1.007	MHS13a	2.3	0.432	0.013	0.4111	38.3

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	MHS10	168	50.104	1.692	3.9	2.9902	0.0000	FLOOD RISK
180 minute winter	S5	168	50.105	0.740	9.4	0.7697	0.0000	SURCHARGED
180 minute winter	MHS11a	168	50.101	3.501	3.7	6.1865	0.0000	SURCHARGED
60 minute summer	MHS20c	48	50.628	3.192	12.0	5.6398	0.0000	SURCHARGED
180 minute winter	S4	168	50.106	0.608	1.7	0.0966	0.0000	SURCHARGED
60 minute summer	MHS20	48	50.628	2.571	17.0	2.9076	0.0000	FLOOD RISK
60 minute summer	S6	48	50.631	0.552	17.0	0.3663	0.0000	FLOOD RISK
180 minute winter	MHS25	168	50.104	0.504	0.6	0.0892	0.0000	SURCHARGED
15 minute winter	Assumed Tank Manifold Connection 2	10	46.557	0.042	1.4	0.0000	0.0000	OK
15 minute summer	Assumed Tank Manifold Connection1	13	46.624	0.109	2.5	0.0000	0.0000	OK
180 minute winter	S1	172	50.104	1.840	11.0	3.4404	0.0000	FLOOD RISK
180 minute winter	S2	168	50.104	1.857	6.5	3.2816	0.0000	FLOOD RISK
180 minute winter	S3	168	50.101	1.989	4.9	3.5149	0.0000	SURCHARGED
60 minute summer	MHS26	48	50.631	0.481	7.3	0.2774	0.0000	FLOOD RISK
60 minute summer	S7	48	50.628	0.428	2.4	0.1249	0.0000	SURCHARGED
60 minute summer	S8	48	50.628	0.653	4.3	0.7382	0.0000	FLOOD RISK
240 minute summer	Tank 1	224	46.495	0.035	4.3	18.5238	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)
180 minute winter	MHS10	1.000 S1		-3.9	-0.077	-0.035	5.3333	
180 minute winter	S5	2.002 S1		9.4	0.980	0.181	0.7943	
180 minute winter	MHS11a	Orifice Assumed Tank Manifold Connection 2		1.7				
60 minute summer	MHS20c	Orifice Assumed Tank Manifold Connection1		2.7				
180 minute winter	S4	2.001 S5		-1.7	-0.189	-0.094	0.1000	
60 minute summer	MHS20	3.002 MHS20c		9.6	0.872	0.048	1.3635	
60 minute summer	S6	3.001 MHS20		17.0	2.079	0.419	0.2163	
180 minute winter	MHS25	2.000 S4		-0.6	-0.041	-0.035	0.2021	
15 minute winter	Assumed Tank Manifold Connection 2	1.005 Tank 1		1.4	0.748	0.006	0.0372	
15 minute summer	Assumed Tank Manifold Connection1	3.004 Tank 1		4.2	0.801	0.066	0.1954	
180 minute winter	S1	1.001 S2		6.5	0.501	0.056	0.5485	
180 minute winter	S2	1.002 S3		4.9	0.427	0.042	4.4548	
180 minute winter	S3	1.003 MHS11a		3.7	0.444	0.032	0.6331	
60 minute summer	MHS26	3.000 S6		7.3	1.002	0.265	0.0526	
60 minute summer	S7	4.000 S8		2.4	0.814	0.107	0.1660	
60 minute summer	S8	4.001 MHS20c		2.4	1.156	0.020	0.2669	
240 minute summer	Tank 1	1.006 FCC		3.7	0.227	0.013	0.2352	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	FCC	228	46.460	0.110	3.7	0.7754	0.0000	OK
240 minute summer	MHS13a	228	46.141	0.041	3.7	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)
240 minute summer	FCC	1.007	MHS13a	3.7	0.487	0.020	0.5964	55.1