

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	10	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.400	Preferred Cover Depth (m)	0.450
CV	1.000	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)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
RE1	0.009	5.00	51.350	100	1170.665	-576.976	0.550	50.800
SW01	0.008	5.00	51.500	1200	1172.740	-589.548	0.829	50.671
RE2	0.010	5.00	51.300	100	1184.835	-572.556	0.550	50.750
SW02	0.010	5.00	51.150	1200	1187.242	-586.455	0.865	50.285
SW03			51.100	1200	1190.661	-578.888	1.274	49.826
SW04	0.014	5.00	50.600	450	1212.872	-576.007	0.550	50.050
TANK1			51.000	1200	1188.694	-563.834	1.325	49.675
SW05	0.050	5.00	50.850	1200	1187.557	-559.141	1.423	49.427
TANK2			50.800	1200	1203.908	-553.750	1.600	49.200
SW06	0.009	5.00	51.200	450	1178.529	-563.683	0.550	50.650
RE3	0.009	5.00	51.200	100	1169.484	-545.954	0.550	50.650
SW07	0.008	5.00	51.150	1200	1179.484	-544.090	0.671	50.479
TANK3			49.950	1200	1232.205	-547.692	0.870	49.080
SW11	0.015	5.00	50.450	450	1212.548	-556.520	0.600	49.850
OUTFALL			50.000	1200	1234.703	-547.776	1.228	48.772
SW12	0.008	5.00	50.650	225	1199.893	-533.384	0.550	50.100
CP1	0.021	5.00	50.500	1200	1200.926	-545.167	0.600	49.900
SW13		5.00	50.200	450	1218.565	-528.646	0.550	49.650
CP2	0.020	5.00	50.200	1200	1221.348	-541.267	0.768	49.432
SW14	0.016	5.00	50.200	1200	1222.538	-546.772	0.913	49.287
SW15			50.400	1200	1212.237	-548.758	1.217	49.183
SW16			50.400	1200	1205.742	-552.878	1.250	49.150

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	RE1	SW01	12.742	0.600	50.800	50.671	0.129	99.0	100	5.27	50.0
2.000	RE2	SW02	14.106	0.600	50.750	50.335	0.415	34.0	100	5.18	50.0
1.001	SW01	SW02	14.828	0.600	50.671	50.523	0.148	100.0	100	5.60	50.0
3.000	SW04	SW03	22.397	0.600	50.050	49.826	0.224	100.0	150	5.37	50.0
1.002	SW02	SW03	8.304	0.600	50.285	50.202	0.083	100.0	150	5.73	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	0.773	6.1	1.8	0.450	0.729	0.009	0.0	37	0.671
2.000	1.327	10.4	2.0	0.450	0.715	0.010	0.0	29	1.016
1.001	0.769	6.0	3.4	0.729	0.527	0.017	0.0	54	0.790
3.000	1.005	17.8	2.8	0.400	1.124	0.014	0.0	40	0.734
1.002	1.005	17.8	7.4	0.715	0.748	0.037	0.0	67	0.957

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)
1.003	SW03	TANK1	15.182	0.600	49.826	49.675	0.151	100.5	150	5.99	50.0
4.000	RE3	SW07	10.172	0.600	50.650	50.479	0.171	59.5	100	5.17	50.0
4.001	SW07	SW05	17.079	0.600	50.479	49.477	1.002	17.0	100	5.32	50.0
1.004	TANK1	SW05	4.829	0.600	49.675	49.427	0.248	19.5	150	6.02	50.0
5.000	SW06	SW05	10.106	0.600	50.650	49.552	1.098	9.2	100	5.07	50.0
1.005	SW05	TANK2	17.217	0.600	49.427	49.200	0.227	75.8	225	6.21	49.5
8.000	SW11	SW16	7.719	0.600	49.850	49.150	0.700	11.0	150	5.04	50.0
1.006	TANK2	SW16	2.031	0.600	49.200	49.150	0.050	40.6	225	6.23	49.5
6.000	SW12	CP1	11.828	0.600	50.100	49.900	0.200	59.1	100	5.20	50.0
6.001	CP1	TANK2	9.086	0.600	49.900	49.200	0.700	13.0	100	5.27	50.0
7.000	SW13	CP2	12.924	0.600	49.650	49.432	0.218	59.3	100	5.21	50.0
7.001	CP2	SW14	5.632	0.600	49.432	49.337	0.095	59.3	100	5.31	50.0
7.002	SW14	SW15	10.491	0.600	49.287	49.183	0.104	100.9	150	5.48	50.0
7.003	SW15	SW16	7.692	0.600	49.183	49.150	0.033	233.1	150	5.68	50.0
1.008	TANK3	OUTFALL	2.499	0.600	49.080	49.072	0.008	300.0	300	6.84	47.3
1.007	SW16	TANK3	26.966	0.600	49.150	49.080	0.070	385.2	300	6.79	47.4

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)
1.003	1.002	17.7	10.1	1.124	1.175	0.051	0.0	81	1.034
4.000	1.000	7.9	1.8	0.450	0.571	0.009	0.0	32	0.809
4.001	1.880	14.8	3.4	0.571	1.273	0.017	0.0	32	1.523
1.004	2.293	40.5	10.1	1.175	1.273	0.051	0.0	51	1.916
5.000	2.563	20.1	1.8	0.450	1.198	0.009	0.0	20	1.569
1.005	1.503	59.8	25.0	1.198	1.375	0.127	0.0	102	1.438
8.000	3.051	53.9	3.0	0.450	1.100	0.015	0.0	24	1.637
1.006	2.058	81.8	30.7	1.375	1.025	0.156	0.0	95	1.915
6.000	1.003	7.9	1.6	0.450	0.500	0.008	0.0	31	0.790
6.001	2.156	16.9	5.8	0.500	1.500	0.029	0.0	40	1.952
7.000	1.002	7.9	0.0	0.450	0.668	0.000	0.0	0	0.000
7.001	1.002	7.9	4.0	0.668	0.763	0.020	0.0	50	1.005
7.002	1.000	17.7	7.2	0.763	1.067	0.036	0.0	67	0.949
7.003	0.654	11.6	7.2	1.067	1.100	0.036	0.0	85	0.687
1.008	0.902	63.8	38.9	0.570	0.628	0.207	0.0	170	0.946
1.007	0.795	56.2	39.0	0.950	0.570	0.207	0.0	184	0.856

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	12.742	99.0	100	Circular	51.350	50.800	0.450	51.500	50.671	0.729
2.000	14.106	34.0	100	Circular	51.300	50.750	0.450	51.150	50.335	0.715
1.001	14.828	100.0	100	Circular	51.500	50.671	0.729	51.150	50.523	0.527
3.000	22.397	100.0	150	Circular	50.600	50.050	0.400	51.100	49.826	1.124

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	RE1	100	Manhole	Adoptable	SW01	1200	Manhole	Adoptable
2.000	RE2	100	Manhole	Adoptable	SW02	1200	Manhole	Adoptable
1.001	SW01	1200	Manhole	Adoptable	SW02	1200	Manhole	Adoptable
3.000	SW04	450	Manhole	Adoptable	SW03	1200	Manhole	Adoptable

Pipeline Schedule

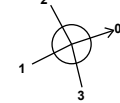
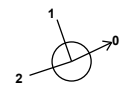
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.002	8.304	100.0	150	Circular	51.150	50.285	0.715	51.100	50.202	0.748
1.003	15.182	100.5	150	Circular	51.100	49.826	1.124	51.000	49.675	1.175
4.000	10.172	59.5	100	Circular	51.200	50.650	0.450	51.150	50.479	0.571
4.001	17.079	17.0	100	Circular	51.150	50.479	0.571	50.850	49.477	1.273
1.004	4.829	19.5	150	Circular	51.000	49.675	1.175	50.850	49.427	1.273
5.000	10.106	9.2	100	Circular	51.200	50.650	0.450	50.850	49.552	1.198
1.005	17.217	75.8	225	Circular	50.850	49.427	1.198	50.800	49.200	1.375
8.000	7.719	11.0	150	Circular	50.450	49.850	0.450	50.400	49.150	1.100
1.006	2.031	40.6	225	Circular	50.800	49.200	1.375	50.400	49.150	1.025
6.000	11.828	59.1	100	Circular	50.650	50.100	0.450	50.500	49.900	0.500
6.001	9.086	13.0	100	Circular	50.500	49.900	0.500	50.800	49.200	1.500
7.000	12.924	59.3	100	Circular	50.200	49.650	0.450	50.200	49.432	0.668
7.001	5.632	59.3	100	Circular	50.200	49.432	0.668	50.200	49.337	0.763
7.002	10.491	100.9	150	Circular	50.200	49.287	0.763	50.400	49.183	1.067
7.003	7.692	233.1	150	Circular	50.400	49.183	1.067	50.400	49.150	1.100
1.008	2.499	300.0	300	Circular	49.950	49.080	0.570	50.000	49.072	0.628
1.007	26.966	385.2	300	Circular	50.400	49.150	0.950	49.950	49.080	0.570

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.002	SW02	1200	Manhole	Adoptable	SW03	1200	Manhole	Adoptable
1.003	SW03	1200	Manhole	Adoptable	TANK1	1200	Manhole	Adoptable
4.000	RE3	100	Manhole	Adoptable	SW07	1200	Manhole	Adoptable
4.001	SW07	1200	Manhole	Adoptable	SW05	1200	Manhole	Adoptable
1.004	TANK1	1200	Manhole	Adoptable	SW05	1200	Manhole	Adoptable
5.000	SW06	450	Manhole	Adoptable	SW05	1200	Manhole	Adoptable
1.005	SW05	1200	Manhole	Adoptable	TANK2	1200	Manhole	Adoptable
8.000	SW11	450	Manhole	Adoptable	SW16	1200	Manhole	Adoptable
1.006	TANK2	1200	Manhole	Adoptable	SW16	1200	Manhole	Adoptable
6.000	SW12	225	Manhole	Adoptable	CP1	1200	Manhole	Adoptable
6.001	CP1	1200	Manhole	Adoptable	TANK2	1200	Manhole	Adoptable
7.000	SW13	450	Manhole	Adoptable	CP2	1200	Manhole	Adoptable
7.001	CP2	1200	Manhole	Adoptable	SW14	1200	Manhole	Adoptable
7.002	SW14	1200	Manhole	Adoptable	SW15	1200	Manhole	Adoptable
7.003	SW15	1200	Manhole	Adoptable	SW16	1200	Manhole	Adoptable
1.008	TANK3	1200	Manhole	Adoptable	OUTFALL	1200	Manhole	Adoptable
1.007	SW16	1200	Manhole	Adoptable	TANK3	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
RE1	1170.665	-576.976	51.350	0.550	100				
SW01	1172.740	-589.548	51.500	0.829	1200	0	1.000	50.800	100
						1	1.000	50.671	100
						0	1.001	50.671	100

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
RE2	1184.835	-572.556	51.300	0.550	100		0	2.000	50.750	100
SW02	1187.242	-586.455	51.150	0.865	1200		1	2.000	50.335	100
							2	1.001	50.523	100
							0	1.002	50.285	150
SW03	1190.661	-578.888	51.100	1.274	1200		1	3.000	49.826	150
							2	1.002	50.202	150
							0	1.003	49.826	150
SW04	1212.872	-576.007	50.600	0.550	450		0	3.000	50.050	150
TANK1	1188.694	-563.834	51.000	1.325	1200		1	1.003	49.675	150
SW05	1187.557	-559.141	50.850	1.423	1200		0	1.004	49.675	150
							1	5.000	49.552	100
							2	4.001	49.477	100
							3	1.004	49.427	150
TANK2	1203.908	-553.750	50.800	1.600	1200		0	1.005	49.427	225
							1	6.001	49.200	100
							2	1.005	49.200	225
SW06	1178.529	-563.683	51.200	0.550	450		0	1.006	49.200	225
							0	5.000	50.650	100
RE3	1169.484	-545.954	51.200	0.550	100		0	4.000	50.650	100
SW07	1179.484	-544.090	51.150	0.671	1200		1	4.000	50.479	100
TANK3	1232.205	-547.692	49.950	0.870	1200		0	4.001	50.479	100
							1	1.007	49.080	300
SW11	1212.548	-556.520	50.450	0.600	450		0	1.008	49.080	300
							0	8.000	49.850	150
OUTFALL	1234.703	-547.776	50.000	1.228	1200		1	1.008	49.072	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SW12	1199.893	-533.384	50.650	0.550	225		0	6.000	50.100	100
CP1	1200.926	-545.167	50.500	0.600	1200		1	6.000	49.900	100
							0	6.001	49.900	100
SW13	1218.565	-528.646	50.200	0.550	450		0	7.000	49.650	100
CP2	1221.348	-541.267	50.200	0.768	1200		1	7.000	49.432	100
							0	7.001	49.432	100
SW14	1222.538	-546.772	50.200	0.913	1200		1	7.001	49.337	100
							0	7.002	49.287	150
SW15	1212.237	-548.758	50.400	1.217	1200		1	7.002	49.183	150
							0	7.003	49.183	150
SW16	1205.742	-552.878	50.400	1.250	1200		1	8.000	49.150	150
							2	7.003	49.150	150
							3	1.006	49.150	225
							0	1.007	49.150	300

Simulation Settings

Rainfall Methodology	FEH-13	Analysis Speed	Detailed	Starting Level (m)
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s) x
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume x
Winter CV	1.000	Additional Storage (m³/ha)	0.0	

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 OUTFALL Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	49.072	Product Number	CTL-SHE-0047-1000-0928-1000
Design Depth (m)	0.928	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.0	Min Node Diameter (mm)	1200

Node TANK1 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	49.675	Product Number	CTL-SHE-0044-1000-1300-1000
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.0	Min Node Diameter (mm)	1200

Node TANK2 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	49.200	Product Number	CTL-SHE-0043-1000-1400-1000
Design Depth (m)	1.400	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	1.0	Min Node Diameter (mm)	1200

Node TANK1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.675
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	65.0	65.0	0.800	65.0	87.9	0.801	0.0	87.9

Node TANK2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.200
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	92.0	92.0	0.800	92.0	119.2	0.801	0.0	119.2

Node TANK3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.080
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	64.0	0.0	0.400	64.0	0.0	0.401	0.0	0.0

Node CP1 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	49.900	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	6.600	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node CP2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	49.432	Slope (1:X)	500.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	8.000	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	11	50.826	0.026	0.9	0.0002	0.0000	OK
15 minute summer	SW01	11	50.708	0.037	1.7	0.0418	0.0000	OK
15 minute summer	RE2	10	50.771	0.021	1.0	0.0002	0.0000	OK
15 minute summer	SW02	11	50.333	0.048	3.6	0.0539	0.0000	OK
15 minute summer	SW03	10	49.896	0.070	4.9	0.0794	0.0000	OK
15 minute summer	SW04	10	50.078	0.028	1.4	0.0045	0.0000	OK
240 minute summer	TANK1	160	49.749	0.074	2.0	4.6308	0.0000	OK
15 minute summer	SW05	10	49.492	0.065	7.6	0.0733	0.0000	OK
360 minute winter	TANK2	336	49.368	0.168	2.7	14.8350	0.0000	OK
15 minute summer	SW06	11	50.665	0.015	0.9	0.0023	0.0000	OK
15 minute summer	RE3	10	50.673	0.023	0.9	0.0002	0.0000	OK
15 minute summer	SW07	11	50.502	0.023	1.7	0.0264	0.0000	OK
360 minute winter	TANK3	344	49.194	0.114	1.6	7.0688	0.0000	OK
15 minute summer	SW11	10	49.867	0.017	1.5	0.0027	0.0000	OK
360 minute winter	OUTFALL	344	49.194	0.122	0.8	0.1381	0.0000	OK
15 minute summer	SW12	10	50.122	0.022	0.8	0.0009	0.0000	OK
15 minute summer	CP1	12	49.927	0.027	2.9	0.3593	0.0000	OK
15 minute summer	SW13	1	49.650	0.000	0.0	0.0000	0.0000	OK
15 minute summer	CP2	13	49.458	0.026	2.0	0.4247	0.0000	OK
15 minute summer	SW14	11	49.325	0.038	2.4	0.0429	0.0000	OK
15 minute summer	SW15	12	49.231	0.048	2.4	0.0540	0.0000	OK
15 minute summer	SW16	11	49.211	0.061	3.8	0.0691	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	RE1	1.000	SW01	0.9	0.448	0.148	0.0270	22.0
15 minute summer	SW01	1.001	SW02	1.7	0.652	0.280	0.0384	
15 minute summer	RE2	2.000	SW02	1.0	0.826	0.094	0.0167	
15 minute summer	SW02	1.002	SW03	3.6	0.764	0.200	0.0386	
15 minute summer	SW03	1.003	TANK1	5.2	1.336	0.293	0.0648	
15 minute summer	SW04	3.000	SW03	1.4	0.408	0.077	0.1161	
240 minute summer	TANK1	1.004	SW05	0.6	0.603	0.014	0.0091	
15 minute summer	SW05	1.005	TANK2	7.7	1.533	0.128	0.0954	
360 minute winter	TANK2	1.006	SW16	0.7	0.417	0.008	0.0067	
15 minute summer	SW06	5.000	SW05	0.9	1.279	0.045	0.0071	
15 minute summer	RE3	4.000	SW07	0.9	0.654	0.115	0.0140	
15 minute summer	SW07	4.001	SW05	1.7	1.241	0.115	0.0234	
360 minute winter	TANK3	1.008	OUTFALL	0.8	0.128	0.013	0.0644	
15 minute summer	SW11	8.000	SW16	1.5	0.929	0.028	0.0302	
360 minute winter	OUTFALL	Hydro-Brake®		0.8				
15 minute summer	SW12	6.000	CP1	0.8	0.614	0.102	0.0172	
15 minute summer	CP1	6.001	TANK2	2.6	1.592	0.153	0.0196	
15 minute summer	SW13	7.000	CP2	0.0	0.000	0.000	0.0107	
15 minute summer	CP2	7.001	SW14	1.1	0.692	0.141	0.0091	
15 minute summer	SW14	7.002	SW15	2.4	0.593	0.137	0.0434	
15 minute summer	SW15	7.003	SW16	2.4	0.420	0.206	0.0443	
15 minute summer	SW16	1.007	TANK3	4.0	0.849	0.071	0.1465	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.43%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	11	50.869	0.069	4.1	0.0006	0.0000	OK
15 minute summer	SW01	11	50.825	0.154	7.8	0.1742	0.0000	SURCHARGED
15 minute summer	RE2	10	50.796	0.046	4.6	0.0004	0.0000	OK
15 minute summer	SW02	11	50.410	0.125	16.0	0.1411	0.0000	OK
15 minute summer	SW03	11	50.096	0.270	22.1	0.3052	0.0000	SURCHARGED
15 minute summer	SW04	11	50.116	0.066	6.5	0.0105	0.0000	OK
180 minute winter	TANK1	176	49.942	0.267	5.1	16.8170	0.0000	SURCHARGED
600 minute summer	SW05	615	49.841	0.414	5.0	0.4677	0.0000	SURCHARGED
600 minute summer	TANK2	615	49.841	0.641	6.5	56.7095	0.0000	SURCHARGED
15 minute summer	SW06	10	50.682	0.032	4.1	0.0050	0.0000	OK
15 minute summer	RE3	10	50.704	0.054	4.1	0.0004	0.0000	OK
15 minute summer	SW07	10	50.531	0.052	7.8	0.0583	0.0000	OK
480 minute winter	TANK3	472	49.399	0.319	2.7	19.7611	0.0000	SURCHARGED
15 minute summer	SW11	10	49.886	0.036	6.9	0.0058	0.0000	OK
480 minute winter	OUTFALL	472	49.399	0.327	0.9	0.3699	0.0000	OK
15 minute summer	SW12	10	50.149	0.049	3.7	0.0019	0.0000	OK
15 minute summer	CP1	11	49.964	0.064	13.4	1.1352	0.0000	OK
15 minute summer	SW13	1	49.650	0.000	0.0	0.0000	0.0000	OK
15 minute summer	CP2	12	49.506	0.074	9.2	1.6285	0.0000	OK
480 minute winter	SW14	472	49.399	0.112	1.7	0.1268	0.0000	OK
480 minute winter	SW15	472	49.399	0.216	1.7	0.2444	0.0000	SURCHARGED
480 minute winter	SW16	472	49.399	0.249	5.2	0.2817	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	RE1	1.000	SW01	4.1	0.610	0.669	0.0868	
15 minute summer	SW01	1.001	SW02	7.1	0.914	1.178	0.1108	
15 minute summer	RE2	2.000	SW02	4.6	1.131	0.439	0.0687	
15 minute summer	SW02	1.002	SW03	16.0	1.078	0.900	0.1229	
15 minute summer	SW03	1.003	TANK1	21.8	1.537	1.232	0.2410	
15 minute summer	SW04	3.000	SW03	6.5	0.530	0.363	0.2805	
180 minute winter	TANK1	1.004	SW05	0.7	0.228	0.018	0.0531	
600 minute summer	SW05	1.005	TANK2	4.8	0.635	0.081	0.6847	
600 minute summer	TANK2	1.006	SW16	1.5	0.298	0.018	0.0766	
15 minute summer	SW06	5.000	SW05	4.1	1.967	0.203	0.0210	
15 minute summer	RE3	4.000	SW07	4.1	0.977	0.520	0.0425	
15 minute summer	SW07	4.001	SW05	7.7	1.588	0.524	0.0960	
480 minute winter	TANK3	1.008	OUTFALL	0.9	0.127	0.014	0.1760	
15 minute summer	SW11	8.000	SW16	6.9	1.207	0.128	0.0708	
480 minute winter	OUTFALL	Hydro-Brake®		0.9				30.4
15 minute summer	SW12	6.000	CP1	3.7	0.863	0.466	0.0524	
15 minute summer	CP1	6.001	TANK2	12.4	1.878	0.729	0.0594	
15 minute summer	SW13	7.000	CP2	0.0	0.000	0.000	0.0403	
15 minute summer	CP2	7.001	SW14	6.2	1.047	0.783	0.0332	
480 minute winter	SW14	7.002	SW15	1.7	0.524	0.096	0.1664	
480 minute winter	SW15	7.003	SW16	1.7	0.365	0.148	0.1354	
480 minute winter	SW16	1.007	TANK3	2.7	0.391	0.049	1.7926	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RE1	12	51.309	0.509	7.3	0.0041	0.0000	FLOOD RISK
15 minute summer	SW01	12	51.182	0.511	11.7	0.5785	0.0000	SURCHARGED
15 minute summer	RE2	12	50.876	0.126	8.1	0.0010	0.0000	SURCHARGED
15 minute summer	SW02	12	50.667	0.382	25.5	0.4324	0.0000	SURCHARGED
15 minute summer	SW03	12	50.462	0.636	33.6	0.7192	0.0000	SURCHARGED
15 minute summer	SW04	12	50.535	0.485	11.4	0.0771	0.0000	FLOOD RISK
960 minute summer	TANK1	975	50.403	0.728	3.3	45.7773	0.0000	SURCHARGED
360 minute winter	SW05	344	50.476	1.049	8.4	1.1863	0.0000	SURCHARGED
360 minute winter	TANK2	344	50.476	1.276	11.1	71.4068	0.0000	SURCHARGED
15 minute summer	SW06	10	50.692	0.042	7.3	0.0066	0.0000	OK
15 minute summer	RE3	10	50.733	0.083	7.3	0.0007	0.0000	OK
15 minute summer	SW07	11	50.558	0.079	13.7	0.0895	0.0000	OK
720 minute winter	TANK3	705	49.891	0.811	3.2	25.2679	0.0000	FLOOD RISK
15 minute summer	SW11	10	49.899	0.049	12.2	0.0077	0.0000	OK
720 minute winter	OUTFALL	705	49.891	0.819	1.0	0.9265	0.0000	OK
360 minute winter	SW12	344	50.476	0.376	0.8	0.0151	0.0000	FLOOD RISK
360 minute winter	CP1	344	50.476	0.576	3.9	9.3749	0.0000	FLOOD RISK
720 minute winter	SW13	705	49.891	0.241	0.0	0.0383	0.0000	SURCHARGED
720 minute winter	CP2	705	49.891	0.459	1.9	11.0926	0.0000	SURCHARGED
720 minute winter	SW14	705	49.891	0.604	2.0	0.6836	0.0000	SURCHARGED
720 minute winter	SW15	705	49.891	0.708	2.0	0.8011	0.0000	SURCHARGED
720 minute winter	SW16	705	49.891	0.741	5.1	0.8384	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 summer	RE1	1.000	SW01	5.5	0.701	0.904	0.0997	
15 minute summer	SW01	1.001	SW02	10.7	1.362	1.766	0.1160	
15 minute summer	RE2	2.000	SW02	7.9	1.112	0.760	0.1104	
15 minute summer	SW02	1.002	SW03	23.7	1.349	1.337	0.1462	
15 minute summer	SW03	1.003	TANK1	33.4	1.897	1.886	0.2673	
15 minute summer	SW04	3.000	SW03	9.9	0.621	0.558	0.3943	
960 minute summer	TANK1	1.004	SW05	0.7	0.404	0.017	0.0850	
360 minute winter	SW05	1.005	TANK2	8.1	0.872	0.136	0.6847	
360 minute winter	TANK2	1.006	SW16	3.0	0.254	0.036	0.0808	
15 minute summer	SW06	5.000	SW05	7.3	1.916	0.362	0.0551	
15 minute summer	RE3	4.000	SW07	7.2	1.078	0.921	0.0686	
15 minute summer	SW07	4.001	SW05	13.5	1.770	0.915	0.1236	
720 minute winter	TANK3	1.008	OUTFALL	1.0	0.113	0.015	0.1760	
15 minute summer	SW11	8.000	SW16	12.2	1.246	0.226	0.0866	
720 minute winter	OUTFALL	Hydro-Brake®		0.9				44.1
360 minute winter	SW12	6.000	CP1	0.8	0.539	0.102	0.0925	
360 minute winter	CP1	6.001	TANK2	3.0	1.091	0.176	0.0711	
720 minute winter	SW13	7.000	CP2	0.0	-0.009	-0.006	0.1011	
720 minute winter	CP2	7.001	SW14	1.1	0.684	0.145	0.0441	
720 minute winter	SW14	7.002	SW15	2.0	0.475	0.111	0.1847	
720 minute winter	SW15	7.003	SW16	1.9	0.291	0.166	0.1354	
720 minute winter	SW16	1.007	TANK3	3.2	0.385	0.058	1.8989	