Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	1	Connection Type	Level Inverts
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.071	5.00	60.500	1200	381057.551	387002.953	1.695
S2		5.00	60.500	1200	381067.305	386996.832	1.750
S3	0.007	5.00	61.150	600	381056.909	386991.347	1.350
S4	0.014	5.00	61.150	1200	381065.343	386988.683	2.456
S5	0.006	5.00	61.100	1200	381078.227	386984.866	2.518
S6	0.026	5.00	61.100	600	381051.538	386973.369	1.350
S7			61.100	1200	381072.208	386966.834	2.676
S8			61.000	1200	381071.596	386963.960	2.600
S9			60.400	1200	381085.675	386960.395	2.121

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	381057.551	387002.953	60.500	1.695	1200				
S2	381067.305	386996.832	60.500	1.750	1200	0	1.000	58.750	150
S3	381056.909	386991.347	61.150	1.350	600	0	2.000	59.800	150
S4	381065.343	386988.683	61.150	2.456	1200	1 2 0	2.000 1.000 1.001	59.726 58.694 58.694	150 150 150
S5	381078.227	386984.866	61.100	2.518	1200	1 0	1.001 1.002	58.582 58.582	150 150
S6	381051.538	386973.369	61.100	1.350	600	0	3.000	59.750	150
S7	381072.208	386966.834	61.100	2.676	1200	1 2 0	3.000 1.002 1.003	59.569 58.424 58.424	150 150 150

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
S8	381071.596	386963.960	61.000	2.600	1200		1	1.003	58.400	150
							0	1.004	58.400	150
S9	381085.675	386960.395	60.400	2.121	1200		1	1.004	58.279	150

Node S7 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	58.424	Product Number	CTL-SHE-0097-5000-1600-5000
Design Depth (m)	1.600	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node S2 Tank Storage Structure

Invert Level (m)	58.750	Analyse flow through structure	✓	Main Channel Slope (1:X)	200.0
Time to half empty (mins)	92	Main Channel Length (m)	11.000	Main Channel n	0.030

Inlets

S1

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	48.0	0.800	48.0	0.801	0.0

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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 winter	S1	10	58.817	0.012	6.5	0.0000	0.0000	OK
15 minute winter	S2	13	58.807	0.057	6.2	1.6749	0.0000	OK
15 minute winter	S3	10	59.821	0.021	0.7	0.0083	0.0000	OK
30 minute winter	S4	23	58.802	0.108	5.0	0.1344	0.0000	OK
30 minute winter	S5	23	58.797	0.215	5.2	0.2536	0.0000	SURCHARGED
15 minute winter	S6	10	59.788	0.038	2.3	0.0254	0.0000	OK
30 minute winter	S7	23	58.786	0.362	5.1	0.4091	0.0000	SURCHARGED
30 minute winter	S8	24	58.457	0.057	4.6	0.0641	0.0000	OK
30 minute winter	S9	24	58.334	0.055	4.6	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S1	Tank	S2	6.2	0.079	0.001	
15 minute winter	S2	1.000	S4	4.3	0.635	0.296	0.0766
15 minute winter	S3	2.000	S4	0.7	0.447	0.041	0.0132
15 minute winter	S4	1.001	S5	5.0	0.710	0.312	0.2053
30 minute summer	S5	1.002	S7	4.0	0.253	0.249	0.3347
15 minute winter	S6	3.000	S7	2.2	0.642	0.138	0.0756
30 minute winter	S7	1.003	S8	4.6	0.715	0.285	0.0190
30 minute winter	S8	1.004	S9	4.6	0.777	0.285	0.0863

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Results for 2 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
30 minute winter	S1	25	58.848	0.043	7.4	0.0000	0.0000	OK
30 minute winter	S2	24	58.848	0.098	7.4	3.5546	0.0000	OK
15 minute winter	S3	11	59.826	0.026	1.0	0.0102	0.0000	OK
30 minute winter	S4	24	58.846	0.152	6.6	0.1886	0.0000	SURCHARGED
30 minute winter	S5	23	58.842	0.260	6.4	0.3064	0.0000	SURCHARGED
15 minute winter	S6	10	59.798	0.048	3.5	0.0317	0.0000	OK
15 minute summer	S7	12	58.846	0.422	6.9	0.4768	0.0000	SURCHARGED
15 minute winter	S8	12	58.457	0.057	4.7	0.0647	0.0000	OK
15 minute winter	S9	12	58.334	0.055	4.7	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S1	Tank	S2	9.4	0.083	0.002	
15 minute winter	S2	1.000	S4	5.3	0.578	0.369	0.1221
15 minute winter	S3	2.000	S4	1.0	0.504	0.062	0.0175
15 minute winter	S4	1.001	S5	6.4	0.728	0.397	0.2364
15 minute winter	S5	1.002	S7	4.5	0.258	0.278	0.3347
15 minute winter	S6	3.000	S7	3.4	0.721	0.210	0.1024
15 minute winter	S7	1.003	S8	4.7	0.718	0.290	0.0192
15 minute winter	S8	1.004	S9	4.7	0.780	0.290	0.0874

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Results for 30 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
60 minute winter	S1	50	59.110	0.305	12.8	0.0000	0.0000	OK
60 minute winter	S2	50	59.110	0.360	8.7	16.9748	0.0000	SURCHARGED
15 minute winter	S3	10	59.842	0.042	2.6	0.0165	0.0000	OK
60 minute winter	S4	50	59.108	0.414	6.5	0.5137	0.0000	SURCHARGED
60 minute winter	S5	48	59.102	0.520	5.7	0.6133	0.0000	SURCHARGED
15 minute winter	S6	10	59.832	0.082	9.0	0.0545	0.0000	OK
60 minute winter	S7	47	59.093	0.669	5.6	0.7571	0.0000	SURCHARGED
15 minute summer	S8	30	58.457	0.057	4.7	0.0649	0.0000	OK
15 minute summer	S9	30	58.334	0.055	4.7	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S1	Tank	S2	17.3	0.097	0.003	
15 minute summer	S2	1.000	S4	-11.3	-0.643	-0.780	0.1476
15 minute winter	S3	2.000	S4	2.6	0.655	0.158	0.0345
15 minute summer	S4	1.001	S5	8.5	0.757	0.525	0.2366
30 minute winter	S5	1.002	S7	4.6	0.272	0.285	0.3347
15 minute winter	S6	3.000	S7	8.8	0.920	0.543	0.2076
15 minute summer	S7	1.003	S8	4.7	0.719	0.291	0.0193
15 minute summer	S8	1.004	S9	4.7	0.781	0.291	0.0876

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Results for 100 year +45% CC +10% Q 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
60 minute winter	S1	60	60.358	1.553	26.2	0.0000	0.0000	OK
60 minute winter	S2	60	60.356	1.606	20.0	43.3742	0.0000	FLOOD RISK
60 minute winter	S3	60	60.354	0.554	2.7	0.2178	0.0000	SURCHARGED
60 minute winter	S4	60	60.354	1.660	13.8	2.0619	0.0000	SURCHARGED
60 minute winter	S5	60	60.346	1.764	7.7	2.0815	0.0000	SURCHARGED
60 minute winter	S6	60	60.334	0.584	9.5	0.3882	0.0000	SURCHARGED
60 minute winter	S7	60	60.333	1.909	11.0	2.1589	0.0000	SURCHARGED
60 minute winter	S8	60	58.462	0.062	5.3	0.0696	0.0000	OK
60 minute winter	S9	60	58.338	0.059	5.3	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	S1	Tank	S2	23.1	0.115	0.004	
15 minute winter	S2	1.000	S4	-25.0	-1.419	-1.729	0.1476
15 minute winter	S3	2.000	S4	5.1	0.788	0.317	0.0577
15 minute winter	S4	1.001	S5	-13.6	-0.775	-0.843	0.2366
15 minute winter	S5	1.002	S7	-11.2	-0.635	-0.690	0.3347
15 minute winter	S6	3.000	S7	17.5	1.036	1.082	0.3572
60 minute winter	S7	1.003	S8	5.3	0.741	0.330	0.0212
60 minute winter	S8	1.004	S9	5.3	0.807	0.330	0.0962

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