

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	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	x
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)
SW02	0.043	5.00	28.390	1200	530210.905	118763.056	1.220
SWMS(a)	0.095	5.00	28.540	1200	530176.325	118764.707	1.840
SWMS			28.830	1200	530169.153	118761.816	2.230
OUTFALL			29.000	1200	530164.907	118764.141	2.500
RE-S1	0.035	5.00	28.600	225	530223.468	118722.440	0.825
600IC-S2	0.035	5.00	28.600	600	530199.607	118723.918	1.065
600IC-S3			28.600	600	530175.746	118725.397	1.305
600IC-S4			28.600	600	530174.011	118738.157	1.750
600IC-S5			28.600	600	530171.190	118753.420	1.825
600IC-S6	0.035	5.00	28.600	600	530224.900	118755.577	1.125
600IC-S7	0.035	5.00	28.600	600	530205.492	118756.783	1.725
1200MH-S8			28.600	1200	530177.328	118758.525	1.865

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)
EX1.000	SW02	SWMS(a)	34.619	0.600	27.170	26.700	0.470	73.7	225	5.38	50.0
EX1.001	SWMS(a)	SWMS	7.733	0.600	26.700	26.600	0.100	77.3	300	5.45	50.0
EX1.002	SWMS	OUTFALL	4.841	0.600	26.600	26.500	0.100	48.4	300	6.30	50.0
1.000	RE-S1	600IC-S2	23.907	0.600	27.775	27.535	0.240	99.6	225	5.30	50.0
1.001	600IC-S2	600IC-S3	23.907	0.600	27.535	27.295	0.240	99.6	225	5.61	50.0
1.002	600IC-S3	600IC-S4	12.877	0.600	27.295	26.850	0.445	28.9	225	5.70	50.0
1.003	600IC-S4	600IC-S5	15.522	0.600	26.850	26.775	0.075	207.0	225	5.98	50.0
1.004	600IC-S5	1200MH-S8	7.983	0.600	26.775	26.735	0.040	199.6	225	6.13	50.0
2.000	600IC-S6	600IC-S7	19.445	0.600	27.475	26.875	0.600	32.4	225	5.14	50.0
2.001	600IC-S7	1200MH-S8	28.218	0.600	26.875	26.735	0.140	201.6	225	5.65	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)
EX1.000	1.525	60.6	7.8	0.995	1.615	0.043	0.0	54	1.054
EX1.001	1.789	126.5	24.9	1.540	1.930	0.138	0.0	90	1.402
EX1.002	2.265	160.1	50.2	1.930	2.200	0.278	0.0	115	2.012
1.000	1.310	52.1	6.3	0.600	0.840	0.035	0.0	52	0.888
1.001	1.310	52.1	12.6	0.840	1.080	0.070	0.0	75	1.083
1.002	2.441	97.1	12.6	1.080	1.525	0.070	0.0	55	1.705
1.003	0.905	36.0	12.6	1.525	1.600	0.070	0.0	92	0.827
1.004	0.922	36.6	12.6	1.600	1.640	0.070	0.0	91	0.838
2.000	2.306	91.7	6.3	0.900	1.500	0.035	0.0	40	1.338
2.001	0.917	36.5	12.6	1.500	1.640	0.070	0.0	91	0.834

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Unit A, Consort Way
Proposed SW Network Calcs A

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)
1.005	1200MH-S8	SWMS	8.813	0.600	26.735	26.675	0.060	146.9	225	6.26	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)
1.005	1.076	42.8	25.3	1.640	1.930	0.140	0.0	124	1.119

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	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 (m ³ /ha)	20.0		

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	45	0	0
30	45	0	0
100	45	0	0

Node 1200MH-S8 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	26.735	Product Number	CTL-SHE-0146-1000-0950-1000
Design Depth (m)	0.950	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	10.0	Min Node Diameter (mm)	1200

Node 600IC-S5 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	1.0	Invert Level (m)	26.775
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	62

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	50.0	50.0	0.800	50.0	70.1	0.801	0.0	70.1

Node 600IC-S7 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	1.0	Invert Level (m)	26.875
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	53

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	28.0	28.0	0.800	28.0	43.0	0.801	0.0	43.0

Results for 2 year +45% CC Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	SW02	10	27.236	0.066	11.6	0.1210	0.0000	OK
15 minute summer	SWMS(a)	10	26.827	0.127	37.0	0.2738	0.0000	OK
15 minute summer	SWMS	11	26.723	0.123	40.6	0.1394	0.0000	OK
15 minute summer	OUTFALL	11	26.602	0.102	40.7	0.0000	0.0000	OK
15 minute summer	RE-S1	10	27.839	0.064	9.4	0.0569	0.0000	OK
15 minute summer	600IC-S2	10	27.635	0.100	18.7	0.0936	0.0000	OK
15 minute summer	600IC-S3	11	27.361	0.066	18.5	0.0187	0.0000	OK
120 minute summer	600IC-S4	74	26.987	0.137	9.6	0.0387	0.0000	OK
120 minute summer	600IC-S5	74	26.986	0.211	8.9	10.0804	0.0000	OK
15 minute summer	600IC-S6	10	27.523	0.048	9.4	0.0438	0.0000	OK
120 minute summer	600IC-S7	74	26.987	0.112	9.6	3.0433	0.0000	OK
120 minute summer	1200MH-S8	74	26.985	0.250	9.7	0.2827	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	SW02	EX1.000	SWMS(a)	11.5	0.708	0.189	0.5652	
15 minute summer	SWMS(a)	EX1.001	SWMS	36.6	1.327	0.289	0.2130	
15 minute summer	SWMS	EX1.002	OUTFALL	40.7	1.683	0.254	0.1172	32.2
15 minute summer	RE-S1	1.000	600IC-S2	9.3	0.716	0.179	0.3134	
15 minute summer	600IC-S2	1.001	600IC-S3	18.5	1.396	0.355	0.3181	
15 minute summer	600IC-S3	1.002	600IC-S4	18.4	1.219	0.190	0.1966	
120 minute summer	600IC-S4	1.003	600IC-S5	8.9	0.687	0.247	0.4965	
120 minute summer	600IC-S5	1.004	1200MH-S8	5.3	0.156	0.143	0.3132	
15 minute summer	600IC-S6	2.000	600IC-S7	9.4	1.172	0.102	0.2180	
120 minute summer	600IC-S7	2.001	1200MH-S8	8.3	0.340	0.228	0.8379	
120 minute summer	1200MH-S8	1.005	SWMS	9.6	0.837	0.223	0.1006	

Results for 30 year +45% CC Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	SW02	10	27.278	0.108	28.9	0.1983	0.0000	OK
15 minute summer	SWMS(a)	10	26.939	0.239	92.4	0.5167	0.0000	OK
15 minute summer	SWMS	10	26.821	0.221	100.4	0.2499	0.0000	OK
15 minute summer	OUTFALL	11	26.670	0.170	99.9	0.0000	0.0000	OK
15 minute summer	RE-S1	10	27.880	0.105	23.5	0.0930	0.0000	OK
15 minute summer	600IC-S2	10	27.714	0.179	46.8	0.1684	0.0000	OK
15 minute summer	600IC-S3	11	27.415	0.120	46.2	0.0340	0.0000	OK
60 minute summer	600IC-S4	50	27.366	0.516	32.6	0.1461	0.0000	SURCHARGED
60 minute summer	600IC-S5	50	27.365	0.590	33.0	28.1713	0.0000	SURCHARGED
15 minute summer	600IC-S6	10	27.552	0.077	23.5	0.0698	0.0000	OK
60 minute summer	600IC-S7	50	27.366	0.491	32.6	13.4027	0.0000	SURCHARGED
60 minute summer	1200MH-S8	50	27.364	0.629	12.8	0.7108	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	SW02	EX1.000	SWMS(a)	28.6	0.872	0.472	1.0143	
15 minute summer	SWMS(a)	EX1.001	SWMS	91.5	1.580	0.724	0.4476	
15 minute summer	SWMS	EX1.002	OUTFALL	99.9	2.060	0.624	0.2340	80.6
15 minute summer	RE-S1	1.000	600IC-S2	23.3	0.885	0.448	0.6214	
15 minute summer	600IC-S2	1.001	600IC-S3	46.2	1.687	0.886	0.6556	
15 minute summer	600IC-S3	1.002	600IC-S4	46.1	1.483	0.475	0.3951	
60 minute summer	600IC-S4	1.003	600IC-S5	31.5	1.004	0.875	0.6173	
60 minute summer	600IC-S5	1.004	1200MH-S8	6.3	0.163	0.171	0.3175	
15 minute summer	600IC-S6	2.000	600IC-S7	23.4	1.377	0.255	0.4950	
60 minute summer	600IC-S7	2.001	1200MH-S8	12.8	0.442	0.350	1.1223	
60 minute summer	1200MH-S8	1.005	SWMS	10.0	0.847	0.234	0.1356	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	SW02	10	27.294	0.124	36.3	0.2272	0.0000	OK
15 minute summer	SWMS(a)	10	27.018	0.318	116.2	0.6881	0.0000	SURCHARGED
15 minute summer	SWMS	11	26.861	0.261	122.9	0.2951	0.0000	OK
15 minute summer	OUTFALL	11	26.695	0.195	123.4	0.0000	0.0000	OK
15 minute summer	RE-S1	11	27.895	0.120	29.5	0.1066	0.0000	OK
15 minute summer	600IC-S2	11	27.824	0.289	58.8	0.2717	0.0000	SURCHARGED
60 minute winter	600IC-S3	58	27.574	0.279	30.0	0.0790	0.0000	SURCHARGED
60 minute summer	600IC-S4	57	27.573	0.723	40.0	0.2046	0.0000	SURCHARGED
60 minute winter	600IC-S5	59	27.572	0.797	30.5	38.0608	0.0000	SURCHARGED
60 minute summer	600IC-S6	56	27.573	0.098	20.8	0.0888	0.0000	OK
60 minute summer	600IC-S7	56	27.573	0.698	41.6	19.0465	0.0000	SURCHARGED
60 minute summer	1200MH-S8	57	27.571	0.836	15.8	0.9450	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	SW02	EX1.000	SWMS(a)	36.0	1.026	0.593	1.0755	
15 minute summer	SWMS(a)	EX1.001	SWMS	114.0	1.649	0.901	0.5238	
15 minute summer	SWMS	EX1.002	OUTFALL	123.4	2.147	0.771	0.2748	101.4
15 minute summer	RE-S1	1.000	600IC-S2	29.3	0.909	0.563	0.7329	
15 minute summer	600IC-S2	1.001	600IC-S3	57.7	1.671	1.108	0.9488	
60 minute winter	600IC-S3	1.002	600IC-S4	30.0	1.115	0.309	0.5121	
60 minute summer	600IC-S4	1.003	600IC-S5	38.7	1.074	1.076	0.6173	
60 minute winter	600IC-S5	1.004	1200MH-S8	6.3	-0.185	0.171	0.3175	
60 minute summer	600IC-S6	2.000	600IC-S7	20.8	1.197	0.227	0.5483	
60 minute summer	600IC-S7	2.001	1200MH-S8	15.8	0.442	0.432	1.1223	
60 minute summer	1200MH-S8	1.005	SWMS	10.0	0.847	0.234	0.1645	

