Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.026	5.00	62.850	450	509416.309	113985.669	0.825
2			62.850	450	509399.800	113998.490	1.127
3	0.120	5.00	62.550	1200	509393.830	113990.139	1.125
4	0.127	5.00	63.000	600	509384.608	114013.420	1.400
5			62.500	1200	509362.790	114013.821	1.305
6	0.018	5.00	61.800	1200	509352.130	114013.820	1.600
7	0.072	5.00	59.800	1200	509340.714	113998.264	1.800
8	0.017	5.00	59.850	450	509336.691	113993.263	0.750
9	0.012	5.00	59.850	450	509356.401	113977.847	1.171
10	0.058	5.00	59.600	1200	509374.489	113979.168	1.050
11			59.600	1200	509373.650	113972.665	1.900
12	0.122	5.00	59.550	1200	509376.110	113962.431	2.018
13	0.033	5.00	59.850	450	509329.984	113977.920	0.750
14	0.022	5.00	59.850	450	509361.533	113953.561	1.420
15			59.500	1200	509364.119	113946.945	2.099
16			59.000	1350	509345.423	113947.349	1.724
Tank			58.300	1350	509336.700	113949.469	1.800
18	0.028	5.00	59.500	1200	509330.816	114033.611	1.300
19	0.008	5.00	57.700	1200	509317.575	114016.751	1.300
20	0.037	5.00	57.000	1200	509310.823	114011.453	1.425
22	0.109	5.00	56.500	1200	509294.619	113998.228	1.200
21			56.750	1200	509297.442	114012.477	1.325

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	1	2	20.903	0.600	62.025	61.723	0.302	69.2	225	5.22	50.0
1.001	2	3	10.265	0.600	61.723	61.575	0.148	69.4	225	5.33	50.0
1.002	3	5	39.043	0.600	61.425	61.195	0.230	169.8	375	5.80	50.0
2.000	4	5	21.822	0.600	61.600	61.270	0.330	66.1	300	5.19	50.0
1.003	5	6	10.660	0.600	61.270	60.200	1.070	10.0	150	5.85	50.0
1.004	6	7	19.295	0.600	60.200	58.000	2.200	8.8	225	5.93	50.0
1.005	7	11	41.714	0.600	58.000	57.700	0.300	139.0	225	6.56	50.0
3.000	8	9	25.023	0.600	59.100	58.679	0.421	59.4	150	5.32	50.0
3.001	9	11	18.011	0.600	58.679	57.700	0.979	18.4	150	5.45	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)
1.000	1.574	62.6	4.7	0.600	0.902	0.026	0.0
1.001	1.572	62.5	4.7	0.902	0.750	0.026	0.0
1.002	1.387	153.2	26.5	0.750	0.930	0.146	0.0
2.000	1.936	136.8	23.0	1.100	0.930	0.127	0.0
1.003	3.210	56.7	49.5	1.080	1.450	0.274	0.0
1.004	4.444	176.7	52.7	1.375	1.575	0.292	0.0
1.005	1.107	88.0	65.7	1.575	1.675	0.364	0.0
3.000	1.307	23.1	3.2	0.600	1.021	0.017	0.0
3.001	2.359	41.7	5.4	1.021	1.750	0.030	0.0

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

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)
4.000	10	11	6.557	0.600	58.550	58.484	0.066	100.0	100	5.14	50.0
1.006	11	12	10.526	0.600	57.700	57.532	0.168	62.7	300	6.64	50.0
1.007	12	15	19.586	0.600	57.532	57.401	0.131	150.0	300	6.90	50.0
5.000	13	14	39.859	0.600	59.100	58.430	0.670	59.5	150	5.51	50.0
5.001	14	15	7.103	0.600	58.430	57.951	0.479	14.8	150	5.55	50.0
1.008	15	16	18.700	0.600	57.401	57.276	0.125	150.0	300	7.14	50.0
1.009	16	Tank	8.977	0.600	57.276	56.500	0.776	11.6	300	7.17	50.0
6.000	18	19	21.438	0.600	58.200	56.400	1.800	11.9	150	5.12	50.0
6.001	19	20	8.582	0.600	56.400	55.650	0.750	11.4	150	5.17	50.0
6.002	20	21	13.420	0.600	55.575	55.425	0.150	89.5	225	5.33	50.0
6.003	21	22	14.526	0.600	55.425	55.300	0.125	116.2	225	5.53	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)
4.000	0.769	6.0	10.5	0.950	1.016	0.058	0.0
1.006	1.989	140.6	81.6	1.600	1.718	0.451	0.0
1.007	1.281	90.6	103.7	1.718	1.799	0.574	0.0
5.000	1.306	23.1	6.0	0.600	1.270	0.033	0.0
5.001	2.629	46.5	9.9	1.270	1.399	0.055	0.0
1.008	1.281	90.6	113.6	1.799	1.424	0.628	0.0
1.009	4.647	328.5	113.6	1.424	1.500	0.628	0.0
6.000	2.935	51.9	5.1	1.150	1.150	0.028	0.0
6.001	2.995	52.9	6.6	1.150	1.200	0.037	0.0
6.002	1.383	55.0	13.3	1.200	1.100	0.074	0.0
6.003	1.212	48.2	13.3	1.100	0.975	0.074	0.0

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	20.903	69.2	225	Circular	62.850	62.025	0.600	62.850	61.723	0.902
1.001	10.265	69.4	225	Circular	62.850	61.723	0.902	62.550	61.575	0.750
1.002	39.043	169.8	375	Circular	62.550	61.425	0.750	62.500	61.195	0.930
2.000	21.822	66.1	300	Circular	63.000	61.600	1.100	62.500	61.270	0.930
1.003	10.660	10.0	150	Circular	62.500	61.270	1.080	61.800	60.200	1.450
1.004	19.295	8.8	225	Circular	61.800	60.200	1.375	59.800	58.000	1.575
1.005	41.714	139.0	225	Double	59.800	58.000	1.575	59.600	57.700	1.675

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	450	Manhole	Private	2	450	Manhole	Private
1.001	2	450	Manhole	Private	3	1200	Manhole	Private
1.002	3	1200	Manhole	Private	5	1200	Manhole	Private
2.000	4	600	Manhole	Private	5	1200	Manhole	Private
1.003	5	1200	Manhole	Private	6	1200	Manhole	Private
1.004	6	1200	Manhole	Private	7	1200	Manhole	Private
1.005	7	1200	Manhole	Private	11	1200	Manhole	Private

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

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	25.023	59.4	150	Circular	59.850	59.100	0.600	59.850	58.679	1.021
3.001	18.011	18.4	150	Circular	59.850	58.679	1.021	59.600	57.700	1.750
4.000	6.557	100.0	100	Circular	59.600	58.550	0.950	59.600	58.484	1.016
1.006	10.526	62.7	300	Circular	59.600	57.700	1.600	59.550	57.532	1.718
1.007	19.586	150.0	300	Circular	59.550	57.532	1.718	59.500	57.401	1.799
5.000	39.859	59.5	150	Circular	59.850	59.100	0.600	59.850	58.430	1.270
5.001	7.103	14.8	150	Circular	59.850	58.430	1.270	59.500	57.951	1.399
1.008	18.700	150.0	300	Circular	59.500	57.401	1.799	59.000	57.276	1.424
1.009	8.977	11.6	300	Circular	59.000	57.276	1.424	58.300	56.500	1.500
6.000	21.438	11.9	150	Circular	59.500	58.200	1.150	57.700	56.400	1.150
6.001	8.582	11.4	150	Circular	57.700	56.400	1.150	57.000	55.650	1.200
6.002	13.420	89.5	225	Circular	57.000	55.575	1.200	56.750	55.425	1.100
6.003	14.526	116.2	225	Circular	56.750	55.425	1.100	56.500	55.300	0.975

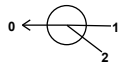
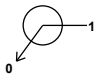
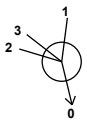
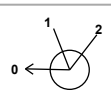
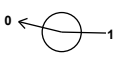
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
3.000	8	450	Manhole	Private	9	450	Manhole	Private
3.001	9	450	Manhole	Private	11	1200	Manhole	Private
4.000	10	1200	Manhole	Private	11	1200	Manhole	Private
1.006	11	1200	Manhole	Private	12	1200	Manhole	Private
1.007	12	1200	Manhole	Private	15	1200	Manhole	Private
5.000	13	450	Manhole	Private	14	450	Manhole	Private
5.001	14	450	Manhole	Private	15	1200	Manhole	Private
1.008	15	1200	Manhole	Private	16	1350	Manhole	Private
1.009	16	1350	Manhole	Private	Tank	1350	Manhole	Private
6.000	18	1200	Manhole	Private	19	1200	Manhole	Private
6.001	19	1200	Manhole	Private	20	1200	Manhole	Private
6.002	20	1200	Manhole	Private	21	1200	Manhole	Private
6.003	21	1200	Manhole	Private	22	1200	Manhole	Private

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	509416.309	113985.669	62.850	0.825	450				
						0	1.000	62.025	225
2	509399.800	113998.490	62.850	1.127	450	1	1.000	61.723	225
									
						0	1.001	61.723	225
3	509393.830	113990.139	62.550	1.125	1200	1	1.001	61.575	225
									
						0	1.002	61.425	375

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
4	509384.608	114013.420	63.000	1.400	600				
						0	2.000	61.600	300
5	509362.790	114013.821	62.500	1.305	1200		1	2.000	61.270	300
							2	1.002	61.195	375
							0	1.003	61.270	150
6	509352.130	114013.820	61.800	1.600	1200		1	1.003	60.200	150
										
							0	1.004	60.200	225
7	509340.714	113998.264	59.800	1.800	1200		1	1.004	58.000	225
										
							0	1.005	58.000	225
8	509336.691	113993.263	59.850	0.750	450				
						0	3.000	59.100	150
9	509356.401	113977.847	59.850	1.171	450		1	3.000	58.679	150
										
						0	3.001	58.679	150
10	509374.489	113979.168	59.600	1.050	1200				
						0	4.000	58.550	100
11	509373.650	113972.665	59.600	1.900	1200		1	4.000	58.484	100
							2	3.001	57.700	150
							3	1.005	57.700	225
							0	1.006	57.700	300
12	509376.110	113962.431	59.550	2.018	1200		1	1.006	57.532	300
										
						0	1.007	57.532	300
13	509329.984	113977.920	59.850	0.750	450				
						0	5.000	59.100	150
14	509361.533	113953.561	59.850	1.420	450		1	5.000	58.430	150
										
						0	5.001	58.430	150
15	509364.119	113946.945	59.500	2.099	1200		1	5.001	57.951	150
							2	1.007	57.401	300
							0	1.008	57.401	300
16	509345.423	113947.349	59.000	1.724	1350		1	1.008	57.276	300
										
						0	1.009	57.276	300

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
Tank	509336.700	113949.469	58.300	1.800	1350	1	1.009	56.500	300
18	509330.816	114033.611	59.500	1.300	1200	0	6.000	58.200	150
19	509317.575	114016.751	57.700	1.300	1200	1	6.000	56.400	150
						0	6.001	56.400	150
20	509310.823	114011.453	57.000	1.425	1200	1	6.001	55.650	150
						0	6.002	55.575	225
22	509294.619	113998.228	56.500	1.200	1200	1	6.003	55.300	225
21	509297.442	114012.477	56.750	1.325	1200	1	6.002	55.425	225
						0	6.003	55.425	225

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Additional Storage (m³/ha)	0.0
Summer CV	1.000	Skip Steady State	x	Check Discharge Rate(s)	x
Winter CV	1.000	Drain Down Time (mins)	240	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 %)
5	0	0	0
30	20	0	0
100	40	0	0

Node 5 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.09000	Invert Level (m)	61.700	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.09000	Time to half empty (mins)	12	Depth (m)	0.650
Safety Factor	3.0	Width (m)	15.000	Inf Depth (m)	
Porosity	0.35	Length (m)	54.000		

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Node 10 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.09000	Invert Level (m)	59.120	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.09000	Time to half empty (mins)	7	Depth (m)	0.350
Safety Factor	3.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.35	Length (m)	34.000		

Node Tank Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.09000	Invert Level (m)	56.500	Depth (m)	1.200
Side Inf Coefficient (m/hr)	0.09000	Time to half empty (mins)	487	Inf Depth (m)	
Safety Factor	1.5	Pit Width (m)	8.500	Number Required	1
Porosity	0.95	Pit Length (m)	40.000		

Node 22 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.09000	Invert Level (m)	55.920	Slope (1:X)	35.0
Side Inf Coefficient (m/hr)	0.09000	Time to half empty (mins)	17	Depth (m)	0.450
Safety Factor	1.5	Width (m)	15.000	Inf Depth (m)	
Porosity	0.35	Length (m)	43.000		

Node 21 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.09000	Invert Level (m)	56.200	Slope (1:X)	35.0
Side Inf Coefficient (m/hr)	0.09000	Time to half empty (mins)	36	Depth (m)	0.450
Safety Factor	1.5	Width (m)	22.000	Inf Depth (m)	
Porosity	0.35	Length (m)	22.000		

Node 11 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.02520	Invert Level (m)	57.700	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.02520	Time to half empty (mins)	19	Inf Depth (m)	
Safety Factor	3.0	Pit Width (m)	3.000	Number Required	1
Porosity	0.95	Pit Length (m)	36.000		

Node 22 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.09000	Invert Level (m)	55.300	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.09000	Time to half empty (mins)	322	Inf Depth (m)	
Safety Factor	1.5	Pit Width (m)	6.000	Number Required	1
Porosity	0.95	Pit Length (m)	17.000		

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
5 year 15 minute summer	182.098	51.528
5 year 15 minute winter	127.788	51.528
5 year 30 minute summer	118.977	33.666
5 year 30 minute winter	83.492	33.666
5 year 60 minute summer	80.570	21.292

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
5 year 60 minute winter	53.529	21.292
5 year 120 minute summer	51.268	13.549
5 year 120 minute winter	34.061	13.549
5 year 180 minute summer	40.036	10.303
5 year 180 minute winter	26.024	10.303
5 year 240 minute summer	31.983	8.452
5 year 240 minute winter	21.249	8.452
5 year 360 minute summer	24.727	6.363
5 year 360 minute winter	16.073	6.363
5 year 480 minute summer	19.634	5.189
5 year 480 minute winter	13.044	5.189
5 year 600 minute summer	16.167	4.422
5 year 600 minute winter	11.046	4.422
5 year 720 minute summer	14.465	3.877
5 year 720 minute winter	9.722	3.877
5 year 960 minute summer	11.936	3.143
5 year 960 minute winter	7.907	3.143
5 year 1440 minute summer	8.708	2.334
5 year 1440 minute winter	5.853	2.334
5 year 2160 minute summer	6.287	1.737
5 year 2160 minute winter	4.332	1.737
5 year 2880 minute summer	5.285	1.416
5 year 2880 minute winter	3.552	1.416
5 year 4320 minute summer	4.111	1.075
5 year 4320 minute winter	2.707	1.075
5 year 5760 minute summer	3.494	0.895
5 year 5760 minute winter	2.262	0.895
5 year 7200 minute summer	3.079	0.786
5 year 7200 minute winter	1.987	0.786
5 year 8640 minute summer	2.790	0.712
5 year 8640 minute winter	1.801	0.712
5 year 10080 minute summer	2.583	0.659
5 year 10080 minute winter	1.667	0.659
30 year +20% CC 15 minute summer	352.261	99.678
30 year +20% CC 15 minute winter	247.201	99.678
30 year +20% CC 30 minute summer	234.740	66.423
30 year +20% CC 30 minute winter	164.730	66.423
30 year +20% CC 60 minute summer	159.463	42.141
30 year +20% CC 60 minute winter	105.944	42.141
30 year +20% CC 120 minute summer	95.019	25.111
30 year +20% CC 120 minute winter	63.128	25.111
30 year +20% CC 180 minute summer	72.058	18.543
30 year +20% CC 180 minute winter	46.840	18.543
30 year +20% CC 240 minute summer	56.561	14.947
30 year +20% CC 240 minute winter	37.577	14.947
30 year +20% CC 360 minute summer	42.811	11.017
30 year +20% CC 360 minute winter	27.828	11.017
30 year +20% CC 480 minute summer	33.568	8.871
30 year +20% CC 480 minute winter	22.302	8.871
30 year +20% CC 600 minute summer	27.414	7.498
30 year +20% CC 600 minute winter	18.731	7.498
30 year +20% CC 720 minute summer	24.387	6.536

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year +20% CC 720 minute winter	16.390	6.536
30 year +20% CC 960 minute summer	19.983	5.262
30 year +20% CC 960 minute winter	13.237	5.262
30 year +20% CC 1440 minute summer	14.479	3.881
30 year +20% CC 1440 minute winter	9.731	3.881
30 year +20% CC 2160 minute summer	10.380	2.869
30 year +20% CC 2160 minute winter	7.152	2.869
30 year +20% CC 2880 minute summer	8.674	2.325
30 year +20% CC 2880 minute winter	5.829	2.325
30 year +20% CC 4320 minute summer	6.670	1.744
30 year +20% CC 4320 minute winter	4.392	1.744
30 year +20% CC 5760 minute summer	5.613	1.437
30 year +20% CC 5760 minute winter	3.633	1.437
30 year +20% CC 7200 minute summer	4.898	1.250
30 year +20% CC 7200 minute winter	3.161	1.250
30 year +20% CC 8640 minute summer	4.401	1.123
30 year +20% CC 8640 minute winter	2.841	1.123
30 year +20% CC 10080 minute summer	4.044	1.032
30 year +20% CC 10080 minute winter	2.610	1.032
100 year +40% CC 15 minute summer	521.511	147.570
100 year +40% CC 15 minute winter	365.972	147.570
100 year +40% CC 30 minute summer	348.947	98.740
100 year +40% CC 30 minute winter	244.875	98.740
100 year +40% CC 60 minute summer	238.203	62.950
100 year +40% CC 60 minute winter	158.256	62.950
100 year +40% CC 120 minute summer	139.062	36.750
100 year +40% CC 120 minute winter	92.390	36.750
100 year +40% CC 180 minute summer	104.429	26.873
100 year +40% CC 180 minute winter	67.882	26.873
100 year +40% CC 240 minute summer	81.531	21.546
100 year +40% CC 240 minute winter	54.167	21.546
100 year +40% CC 360 minute summer	61.455	15.814
100 year +40% CC 360 minute winter	39.947	15.814
100 year +40% CC 480 minute summer	48.084	12.707
100 year +40% CC 480 minute winter	31.946	12.707
100 year +40% CC 600 minute summer	39.228	10.730
100 year +40% CC 600 minute winter	26.803	10.730
100 year +40% CC 720 minute summer	34.882	9.349
100 year +40% CC 720 minute winter	23.443	9.349
100 year +40% CC 960 minute summer	28.591	7.529
100 year +40% CC 960 minute winter	18.939	7.529
100 year +40% CC 1440 minute summer	20.751	5.561
100 year +40% CC 1440 minute winter	13.946	5.561
100 year +40% CC 2160 minute summer	14.882	4.113
100 year +40% CC 2160 minute winter	10.254	4.113
100 year +40% CC 2880 minute summer	12.406	3.325
100 year +40% CC 2880 minute winter	8.338	3.325
100 year +40% CC 4320 minute summer	9.433	2.466
100 year +40% CC 4320 minute winter	6.212	2.466
100 year +40% CC 5760 minute summer	7.848	2.009
100 year +40% CC 5760 minute winter	5.079	2.009
100 year +40% CC 7200 minute summer	6.773	1.728

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +40% CC 7200 minute winter	4.371	1.728
100 year +40% CC 8640 minute summer	6.026	1.537
100 year +40% CC 8640 minute winter	3.889	1.537
100 year +40% CC 10080 minute summer	5.489	1.400
100 year +40% CC 10080 minute winter	3.542	1.400

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Results for 5 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	62.079	0.054	7.8	0.0086	0.0000	OK
15 minute summer	2	10	61.779	0.056	7.7	0.0089	0.0000	OK
15 minute summer	3	12	61.766	0.341	43.3	0.3854	0.0000	OK
15 minute summer	4	12	61.763	0.163	37.9	0.0461	0.0000	OK
15 minute summer	5	12	61.761	0.566	74.5	1.6319	0.0000	SURCHARGED
15 minute summer	6	11	60.288	0.088	58.1	0.0999	0.0000	OK
15 minute summer	7	11	58.173	0.173	78.6	0.1953	0.0000	OK
15 minute summer	8	10	59.149	0.049	5.2	0.0079	0.0000	OK
15 minute summer	9	10	58.726	0.047	8.8	0.0074	0.0000	OK
15 minute summer	10	11	59.136	0.586	17.2	0.7064	0.0000	SURCHARGED
30 minute summer	11	22	57.910	0.210	97.4	21.8311	0.0000	OK
30 minute summer	12	20	57.863	0.331	92.3	0.3748	0.0000	SURCHARGED
15 minute summer	13	10	59.169	0.069	9.8	0.0110	0.0000	OK
15 minute summer	14	10	58.497	0.067	16.1	0.0106	0.0000	OK
30 minute summer	15	19	57.685	0.284	104.5	0.3215	0.0000	OK
15 minute summer	16	10	57.450	0.174	104.0	0.2491	0.0000	OK
240 minute summer	Tank	208	56.922	0.422	52.4	136.9037	0.0000	OK
15 minute summer	18	10	58.241	0.041	8.5	0.0464	0.0000	OK
15 minute summer	19	10	56.449	0.049	10.9	0.0551	0.0000	OK
240 minute summer	20	192	55.692	0.117	6.5	0.1328	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	1	1.000	2	7.7	1.048	0.124	0.1569
15 minute summer	2	1.001	3	7.6	0.997	0.122	0.2172
15 minute summer	3	1.002	5	39.0	0.663	0.254	4.2074
15 minute summer	4	2.000	5	37.7	1.159	0.276	1.1942
15 minute summer	5	1.003	6	53.6	3.517	0.945	0.1513
15 minute summer	5	Infiltration		0.8			
15 minute summer	6	1.004	7	58.1	2.776	0.329	0.4549
15 minute summer	7	1.005	11	78.5	1.516	0.892	2.7346
15 minute summer	8	3.000	9	5.2	1.061	0.223	0.1215
15 minute summer	9	3.001	11	8.7	1.595	0.209	0.2001
15 minute summer	10	4.000	11	15.6	1.998	2.590	0.0508
15 minute summer	10	Infiltration		0.1			
30 minute summer	11	1.006	12	79.4	1.312	0.565	0.6485
30 minute summer	11	Infiltration		0.3			
30 minute summer	12	1.007	15	92.9	1.332	1.026	1.3657
15 minute summer	13	5.000	14	9.7	1.249	0.420	0.3095
15 minute summer	14	5.001	15	15.9	2.242	0.343	0.0505
30 minute summer	15	1.008	16	104.3	2.045	1.151	0.9707
15 minute summer	16	1.009	Tank	105.0	4.512	0.320	0.2652
240 minute summer	Tank	Infiltration		6.3			
15 minute summer	18	6.000	19	8.5	1.912	0.163	0.0950
15 minute summer	19	6.001	20	10.8	2.262	0.204	0.0409
240 minute summer	20	6.002	21	6.5	0.828	0.118	0.4074

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Results for 5 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	22	192	55.692	0.392	15.7	38.4630	0.0000	OK
240 minute summer	21	192	55.692	0.267	6.5	0.3024	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
240 minute summer	22	Infiltration		0.0			
240 minute summer	22	Infiltration		2.0			
240 minute summer	21	6.003	22	6.0	0.684	0.124	0.5777
240 minute summer	21	Infiltration		0.0			

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Results for 30 year +20% CC Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	62.100	0.075	15.1	0.0119	0.0000	OK
15 minute summer	2	12	62.010	0.287	15.0	0.0456	0.0000	SURCHARGED
15 minute summer	3	12	62.003	0.578	79.7	0.6533	0.0000	SURCHARGED
15 minute summer	4	11	62.035	0.435	73.2	0.1232	0.0000	SURCHARGED
30 minute summer	5	22	61.981	0.786	141.9	21.5965	0.0000	SURCHARGED
15 minute summer	6	11	60.295	0.095	67.0	0.1080	0.0000	OK
30 minute summer	7	19	58.520	0.520	104.0	0.5883	0.0000	SURCHARGED
15 minute summer	8	10	59.172	0.072	10.1	0.0114	0.0000	OK
15 minute summer	9	10	58.745	0.066	17.0	0.0106	0.0000	OK
15 minute summer	10	13	59.258	0.708	33.3	4.1519	0.0000	SURCHARGED
30 minute summer	11	23	58.178	0.478	134.2	49.5543	0.0000	SURCHARGED
30 minute summer	12	21	58.079	0.547	109.5	0.6184	0.0000	SURCHARGED
15 minute summer	13	10	59.206	0.106	19.0	0.0169	0.0000	OK
15 minute summer	14	10	58.534	0.104	31.2	0.0166	0.0000	OK
30 minute summer	15	20	57.843	0.442	126.1	0.5000	0.0000	SURCHARGED
15 minute summer	16	8	57.481	0.205	123.6	0.2931	0.0000	OK
240 minute winter	Tank	240	57.380	0.880	64.5	285.6561	0.0000	OK
15 minute summer	18	10	58.258	0.058	16.4	0.0656	0.0000	OK
15 minute summer	19	10	56.466	0.066	20.9	0.0751	0.0000	OK
180 minute winter	20	172	56.062	0.487	9.4	0.5512	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	1	1.000	2	15.0	1.151	0.240	0.5356
15 minute summer	2	1.001	3	13.8	1.089	0.220	0.4083
15 minute summer	3	1.002	5	82.0	0.743	0.535	4.3063
15 minute summer	4	2.000	5	72.5	1.118	0.530	1.5367
30 minute summer	5	1.003	6	57.9	3.612	1.021	0.1563
30 minute summer	5	Infiltration		3.7			
15 minute summer	6	1.004	7	67.0	2.885	0.379	0.5383
30 minute summer	7	1.005	11	101.7	1.397	1.156	3.3180
15 minute summer	8	3.000	9	10.0	1.263	0.433	0.1982
15 minute summer	9	3.001	11	16.9	1.714	0.405	0.2264
15 minute summer	10	4.000	11	17.3	2.208	2.861	0.0508
15 minute summer	10	Infiltration		1.2			
30 minute summer	11	1.006	12	99.4	1.412	0.707	0.7412
30 minute summer	11	Infiltration		0.3			
30 minute summer	12	1.007	15	109.7	1.558	1.211	1.3792
15 minute summer	13	5.000	14	18.8	1.424	0.814	0.5263
15 minute summer	14	5.001	15	30.9	2.570	0.665	0.0853
30 minute summer	15	1.008	16	126.2	2.105	1.394	0.9914
15 minute summer	16	1.009	Tank	124.1	4.534	0.378	0.4309
240 minute winter	Tank	Infiltration		7.1			
15 minute summer	18	6.000	19	16.3	2.367	0.315	0.1479
15 minute summer	19	6.001	20	20.9	2.392	0.394	0.0827
180 minute winter	20	6.002	21	8.8	0.827	0.161	0.5337

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Results for 30 year +20% CC Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	22	172	56.062	0.762	22.5	75.3985	0.0000	OK
180 minute winter	21	172	56.062	0.637	8.8	0.7207	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
180 minute winter	22	Infiltration		1.3			
180 minute winter	22	Infiltration		2.3			
180 minute winter	21	6.003	22	8.6	0.795	0.179	0.5777
180 minute winter	21	Infiltration		0.0			

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	11	62.258	0.233	22.4	0.0370	0.0000	SURCHARGED
15 minute summer	2	11	62.215	0.492	20.8	0.0782	0.0000	SURCHARGED
15 minute summer	3	11	62.193	0.768	117.8	0.8684	0.0000	SURCHARGED
15 minute summer	4	11	62.280	0.680	108.4	0.1923	0.0000	SURCHARGED
30 minute summer	5	23	62.127	0.932	207.2	49.0120	0.0000	SURCHARGED
15 minute summer	6	11	60.304	0.104	74.3	0.1178	0.0000	OK
30 minute summer	7	19	58.956	0.956	129.7	1.0808	0.0000	SURCHARGED
15 minute summer	8	10	59.191	0.091	14.9	0.0145	0.0000	OK
15 minute summer	9	11	58.768	0.089	25.2	0.0142	0.0000	OK
30 minute summer	10	22	59.334	0.784	45.3	8.9065	0.0000	FLOOD RISK
30 minute summer	11	24	58.438	0.738	166.8	76.5064	0.0000	SURCHARGED
30 minute summer	12	21	58.323	0.791	127.2	0.8942	0.0000	SURCHARGED
15 minute summer	13	11	59.634	0.534	28.2	0.0848	0.0000	FLOOD RISK
15 minute summer	14	11	58.685	0.255	43.1	0.0405	0.0000	SURCHARGED
360 minute winter	15	352	58.223	0.822	68.5	0.9301	0.0000	SURCHARGED
360 minute winter	16	352	58.222	0.946	68.5	1.3540	0.0000	SURCHARGED
360 minute winter	Tank	352	58.221	1.721	68.3	390.2249	0.0000	OK
15 minute summer	18	10	58.272	0.072	24.2	0.0814	0.0000	OK
15 minute summer	19	11	56.510	0.110	31.0	0.1241	0.0000	OK
180 minute winter	20	132	56.481	0.906	13.7	1.0251	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute summer	1	1.000	2	20.8	1.126	0.333	0.8313
15 minute summer	2	1.001	3	19.1	1.063	0.305	0.4083
15 minute summer	3	1.002	5	115.9	1.051	0.756	4.3063
15 minute summer	4	2.000	5	106.9	1.518	0.781	1.5367
30 minute summer	5	1.003	6	60.8	3.753	1.071	0.1633
30 minute summer	5	Infiltration		5.6			
15 minute summer	6	1.004	7	74.2	2.843	0.420	0.5569
30 minute summer	7	1.005	11	126.1	1.586	1.433	3.3180
15 minute summer	8	3.000	9	14.8	1.370	0.641	0.2718
15 minute summer	9	3.001	11	24.6	1.879	0.591	0.2570
30 minute summer	10	4.000	11	18.2	2.327	3.016	0.0508
30 minute summer	10	Infiltration		1.9			
30 minute summer	11	1.006	12	116.7	1.657	0.830	0.7412
30 minute summer	11	Infiltration		0.4			
30 minute summer	12	1.007	15	127.5	1.811	1.408	1.3792
15 minute summer	13	5.000	14	25.6	1.455	1.110	0.7017
15 minute summer	14	5.001	15	42.6	2.637	0.916	0.1131
360 minute winter	15	1.008	16	68.5	1.945	0.756	1.3168
360 minute winter	16	1.009	Tank	68.3	2.767	0.208	0.6322
360 minute winter	Tank	Infiltration		7.6			
15 minute summer	18	6.000	19	24.1	2.565	0.465	0.2348
15 minute summer	19	6.001	20	30.0	2.396	0.567	0.1348
180 minute winter	20	6.002	21	13.3	0.836	0.241	0.5337

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	22	132	56.480	1.180	33.1	89.4952	0.0000	OK
180 minute winter	21	132	56.480	1.055	13.3	8.7778	0.0000	FLOOD RISK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
180 minute winter	22	Infiltration		5.3			
180 minute winter	22	Infiltration		2.3			
180 minute winter	21	6.003	22	12.9	0.868	0.268	0.5777
180 minute winter	21	Infiltration		3.8			

Flow+ v10.6.234 Copyright © 1988-2024 Causeway Technologies Ltd