

Design Settings

Rainfall Methodology FSR Return Period (years) 1 Additional Flow (%) 0 FSR Region England and Wales M5-60 (mm) 20.000 Ratio-R 0.400 CV 0.750 Time of Entry (mins) 5.00	Maximum Time of Concentration (mins) 240.00 Maximum Rainfall (mm/hr) 50.0 Minimum Velocity (m/s) 1.00 Connection Type Level Soffits Minimum Backdrop Height (m) 1.000 Preferred Cover Depth (m) 0.300 Include Intermediate Ground ✓ Enforce best practice design rules ✓
---	---

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.038	5.00	71.447	1350	566327.323	221496.422	1.647
S2			70.492	1350	566339.407	221525.851	1.492
S3	0.051	5.00	70.363	1200	566364.897	221516.223	1.913
S4			70.027	1200	566388.354	221503.243	2.092
S5	0.048	5.00	69.692	1200	566400.059	221489.297	2.127
S23	0.032	5.00	68.997	1350	566413.695	221462.603	1.767
S6	0.128	5.00	69.201	1350	566408.543	221472.368	2.021
S7	0.040	5.00	69.699	1350	566372.932	221455.227	2.919
S24	0.006	5.00	72.029	1350	566279.516	221460.365	1.474
S25	0.045	5.00	71.691	1200	566298.782	221471.876	1.726
S26	0.039	5.00	71.221	1350	566312.621	221474.399	1.651
S29	0.007	5.00	71.156	1350	566322.033	221478.925	1.556
S27	0.030	5.00	71.000	1350	566322.117	221470.563	1.685
S28	0.036	5.00	70.773	1200	566325.019	221458.743	1.723
S8	0.056	5.00	70.440	1350	566335.319	221437.124	4.065
S9	0.061	5.00	69.881	1350	566344.777	221413.419	3.761
S30		5.00	70.228	1200	566315.200	221414.863	1.979
S31	0.053	5.00	70.072	1200	566313.492	221397.534	1.997
S32	0.026	5.00	69.710	1200	566338.172	221393.585	2.235
S33		5.00	69.140	1200	566374.453	221387.535	1.827
S34	0.056	5.00	69.600	1200	566351.731	221391.324	2.575
S10	0.019	5.00	69.444	1350	566346.653	221388.384	3.574
S35	0.037	5.00	69.112	1200	566310.421	221354.440	2.251
S11	0.125	5.00	68.879	1350	566344.022	221351.864	3.389
S36	0.014	5.00	71.694	1200	566264.591	221441.152	2.144
S37	0.058	5.00	71.358	1200	566258.182	221421.101	2.208
S38	0.016	5.00	71.050	1200	566259.617	221406.459	2.220
S39	0.016	5.00	70.502	1200	566271.661	221387.314	2.117
S40	0.179	5.00	70.059	1350	566270.824	221364.897	2.119
S42	0.171	5.00	69.468	1200	566217.928	221308.893	2.518
S41	0.214	5.00	68.958	1350	566266.571	221305.034	2.443
S12	0.083	5.00	68.050	1350	566339.862	221299.249	3.075
S13	0.085	5.00	67.720	1350	566342.974	221279.875	2.940
S43	0.027	5.00	68.117	1350	566353.502	221302.700	1.667
S44	0.077	5.00	67.549	1200	566367.598	221257.814	2.194
S14	0.031	5.00	67.239	1500	566352.736	221249.207	2.779
S15			66.300	1500	566355.796	221238.463	2.300
Swale 1			66.300	1500	566331.779	221231.293	2.320
S45	0.085	5.00	72.939	1350	566148.435	221414.011	1.684
S53	0.076	5.00	71.374	1200	566246.590	221406.259	1.754
S46	0.054	5.00	72.200	1200	566203.657	221409.650	2.870

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S47	0.188	5.00	70.880	1200	566199.710	221359.673	2.320
S54		5.00	71.318	1350	566132.247	221375.943	1.328
S55	0.099	5.00	70.297	1350	566128.877	221334.287	1.622
S56	0.087	5.00	69.819	1350	566127.400	221316.040	1.679
S48	0.083	5.00	69.844	1350	566195.835	221310.596	2.744
S57		5.00	69.380	1200	566126.284	221301.394	3.077
S58	0.022	5.00	69.080	1200	566129.547	221291.991	2.843
S59	0.018	5.00	68.760	1200	566135.227	221285.539	2.586
S60			68.468	1200	566133.433	221267.774	2.411
S61	0.050	5.00	68.015	1200	566160.395	221247.542	2.245
S49	0.034	5.00	67.587	1350	566190.615	221244.304	2.167
S50	0.080	5.00	67.423	1350	566238.281	221240.067	2.173
S51	0.097	5.00	67.297	1350	566284.369	221236.427	2.202
S52	0.077	5.00	67.221	1350	566311.923	221237.608	2.221
S16			66.300	1500	566315.040	221226.248	2.340
S17			66.300	1500	566300.961	221222.026	2.360
Detention Basin			66.240	1500	566251.396	221218.120	2.320
S18			66.240	1500	566203.831	221214.213	2.340
S19			66.300	1200	566192.474	221211.671	2.450
S20			64.000	1350	566157.365	221178.059	1.280
Outfall			64.000	1350	566150.804	221171.740	1.330

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	S1	S2	31.813	0.600	69.800	69.000	0.800	39.8	225	5.25	50.0
1.001	S2	S3	27.249	0.600	69.000	68.450	0.550	49.5	225	5.50	50.0
1.002	S3	S4	26.808	0.600	68.450	67.935	0.515	52.1	225	5.74	50.0
1.003	S4	S5	18.208	0.600	67.935	67.565	0.370	49.2	225	5.91	50.0
1.004	S5	S6	18.936	0.600	67.565	67.180	0.385	49.2	225	6.08	50.0
2.000	S23	S6	11.040	0.600	67.230	67.180	0.050	220.8	300	5.17	50.0
1.005	S6	S7	39.522	0.600	67.180	66.780	0.400	98.8	375	6.44	50.0
1.006	S7	S8	41.743	0.600	66.780	66.375	0.405	103.1	375	6.83	50.0
3.000	S24	S25	22.443	0.600	70.555	69.965	0.590	38.0	225	5.18	50.0
3.001	S25	S26	14.067	0.600	69.965	69.570	0.395	35.6	225	5.28	50.0
3.002	S26	S27	10.241	0.600	69.570	69.315	0.255	40.2	225	5.36	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	2.080	82.7	5.1	1.422	1.267	0.038	0.0	38	1.174
1.001	1.862	74.1	5.1	1.267	1.688	0.038	0.0	40	1.080
1.002	1.817	72.2	12.1	1.688	1.867	0.089	0.0	62	1.356
1.003	1.869	74.3	12.1	1.867	1.902	0.089	0.0	61	1.384
1.004	1.869	74.3	18.6	1.902	1.796	0.137	0.0	76	1.556
2.000	1.054	74.5	4.3	1.467	1.721	0.032	0.0	49	0.581
1.005	1.823	201.3	40.3	1.646	2.544	0.297	0.0	113	1.435
1.006	1.784	197.1	45.7	2.544	3.690	0.337	0.0	122	1.460
3.000	2.127	84.6	0.8	1.249	1.501	0.006	0.0	15	0.671
3.001	2.199	87.4	6.9	1.501	1.426	0.051	0.0	43	1.325
3.002	2.070	82.3	12.2	1.426	1.460	0.090	0.0	58	1.496

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	S29	S27	8.362	0.600	69.600	69.315	0.285	29.3	225	5.06	50.0
3.003	S27	S28	12.171	0.600	69.315	69.050	0.265	45.9	225	5.47	50.0
3.004	S28	S8	23.947	0.600	69.050	68.090	0.960	24.9	225	5.62	50.0
1.007	S8	S9	25.523	0.600	66.375	66.120	0.255	100.1	450	7.04	50.0
1.008	S9	S10	25.105	0.600	66.120	65.870	0.250	100.4	450	7.24	50.0
5.000	S30	S31	17.413	0.600	68.249	68.075	0.174	100.1	225	5.22	50.0
5.001	S31	S32	24.994	0.600	68.075	67.475	0.600	41.7	225	5.43	50.0
5.002	S32	S10	9.948	0.600	67.475	66.460	1.015	9.8	225	5.47	50.0
6.000	S33	S34	23.035	0.600	67.313	67.025	0.288	80.0	225	5.26	50.0
6.001	S34	S10	5.869	0.600	67.025	66.460	0.565	10.4	225	5.29	50.0
1.009	S10	S11	36.614	0.600	65.870	65.490	0.380	96.4	450	7.54	50.0
7.000	S35	S11	33.700	0.600	66.861	66.316	0.545	61.8	225	5.34	50.0
1.010	S11	S12	52.780	0.600	65.490	64.975	0.515	102.5	450	7.98	50.0
8.000	S36	S37	21.051	0.600	69.550	69.150	0.400	52.6	225	5.19	50.0
8.001	S37	S38	14.711	0.600	69.150	68.830	0.320	46.0	225	5.32	50.0
8.002	S38	S39	22.618	0.600	68.830	68.385	0.445	50.8	225	5.53	50.0
8.003	S39	S40	22.433	0.600	68.385	67.940	0.445	50.4	225	5.73	50.0
8.004	S40	S41	60.014	0.600	67.940	66.515	1.425	42.1	375	6.09	50.0
9.000	S42	S41	48.796	0.600	66.950	66.590	0.360	135.5	300	5.60	50.0
8.005	S41	S12	73.520	0.600	66.515	64.975	1.540	47.7	450	6.50	50.0
1.011	S12	S13	19.622	0.600	64.975	64.780	0.195	100.6	450	8.14	50.0
1.012	S13	S14	32.185	0.600	64.780	64.535	0.245	131.4	450	8.44	50.0
10.000	S43	S44	47.047	0.600	66.450	65.355	1.095	43.0	225	5.39	50.0
10.001	S44	S14	17.175	0.600	65.355	64.760	0.595	28.9	225	5.51	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)
4.000	2.424	96.4	0.9	1.331	1.460	0.007	0.0	15	0.765
3.003	1.935	76.9	17.2	1.460	1.498	0.127	0.0	73	1.572
3.004	2.630	104.6	22.1	1.498	2.125	0.163	0.0	70	2.096
1.007	2.032	323.1	75.4	3.615	3.311	0.556	0.0	147	1.670
1.008	2.028	322.6	83.6	3.311	3.124	0.617	0.0	155	1.712
5.000	1.307	52.0	0.0	1.754	1.772	0.000	0.0	0	0.000
5.001	2.032	80.8	7.2	1.772	2.010	0.053	0.0	45	1.269
5.002	4.204	167.1	10.7	2.010	2.759	0.079	0.0	38	2.379
6.000	1.463	58.2	0.0	1.602	2.350	0.000	0.0	0	0.000
6.001	4.083	162.3	7.6	2.350	2.759	0.056	0.0	33	2.111
1.009	2.071	329.4	104.5	3.124	2.939	0.771	0.0	174	1.847
7.000	1.666	66.2	5.0	2.026	2.338	0.037	0.0	42	0.990
1.010	2.008	319.3	126.4	2.939	2.625	0.933	0.0	196	1.895
8.000	1.807	71.8	1.9	1.919	1.983	0.014	0.0	25	0.783
8.001	1.934	76.9	9.8	1.983	1.995	0.072	0.0	54	1.338
8.002	1.839	73.1	11.9	1.995	1.892	0.088	0.0	61	1.362
8.003	1.846	73.4	14.1	1.892	1.894	0.104	0.0	66	1.430
8.004	2.798	309.1	38.4	1.744	2.068	0.283	0.0	88	1.926
9.000	1.348	95.3	23.2	2.218	2.068	0.171	0.0	100	1.119
8.005	2.948	468.8	90.5	1.993	2.625	0.668	0.0	133	2.301
1.011	2.026	322.3	228.2	2.625	2.490	1.684	0.0	281	2.191
1.012	1.772	281.8	239.7	2.490	2.254	1.769	0.0	320	1.978
10.000	2.001	79.6	3.7	1.442	1.969	0.027	0.0	33	1.031
10.001	2.444	97.2	14.1	1.969	2.254	0.104	0.0	58	1.752

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)
1.013	S14	S15	11.171	0.600	64.460	64.000	0.460	24.3	525	8.48	50.0
1.014	S15	Swale 1	25.064	0.600	64.000	63.980	0.020	1253.2	750	9.05	50.0
1.015	Swale 1	S16	17.483	0.600	63.980	63.960	0.020	874.2	750	9.38	50.0
11.000	S45	S46	55.394	0.600	71.255	69.330	1.925	28.8	225	5.38	50.0
12.000	S53	S46	43.067	0.600	69.620	69.330	0.290	148.5	225	5.67	50.0
11.001	S46	S47	50.133	0.600	69.330	68.560	0.770	65.1	225	6.19	50.0
11.002	S47	S48	49.230	0.600	68.560	67.100	1.460	33.7	300	6.49	50.0
13.000	S54	S55	41.792	0.600	69.990	68.675	1.315	31.8	225	5.30	50.0
13.001	S55	S56	18.307	0.600	68.675	68.215	0.460	39.8	225	5.45	50.0
13.002	S56	S48	68.650	0.600	68.140	67.540	0.600	114.4	300	6.22	50.0
11.003	S48	S49	66.497	0.600	67.100	65.570	1.530	43.5	375	6.89	50.0
14.000	S57	S58	9.953	0.600	66.303	66.237	0.066	150.8	225	5.16	50.0
14.001	S58	S59	8.596	0.600	66.237	66.174	0.063	136.4	225	5.28	50.0
14.002	S59	S60	17.855	0.600	66.174	66.057	0.117	152.6	225	5.57	50.0
14.003	S60	S61	33.709	0.600	66.057	65.845	0.212	159.0	225	6.11	50.0
14.004	S61	S49	30.393	0.600	65.770	65.570	0.200	152.0	300	6.51	50.0
11.004	S49	S50	47.853	0.600	65.420	65.250	0.170	281.5	450	7.55	50.0
11.005	S50	S51	46.232	0.600	65.250	65.095	0.155	298.3	450	8.21	50.0
11.006	S51	S52	27.579	0.600	65.095	65.000	0.095	290.3	450	8.60	50.0
11.007	S52	S16	11.779	0.600	65.000	64.960	0.040	294.5	450	8.81	50.0
1.016	S16	S17	14.698	0.600	63.960	63.940	0.020	734.9	750	9.62	50.0
1.017	S17	Detention Basin	49.719	0.600	63.940	63.920	0.020	2486.0	900	10.96	47.9
1.018	Detention Basin	S18	47.725	0.600	63.920	63.900	0.020	2386.3	900	12.22	45.1
1.019	S18	S19	11.639	0.600	63.900	63.850	0.050	232.8	900	12.32	44.9

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)
1.013	4.558	986.7	258.0	2.254	1.775	1.904	0.0	182	3.865
1.014	0.782	345.3	258.0	1.550	1.570	1.904	0.0	485	0.853
1.015	0.938	414.5	258.0	1.570	1.590	1.904	0.0	430	0.987
11.000	2.448	97.3	11.5	1.459	2.645	0.085	0.0	52	1.663
12.000	1.070	42.6	10.3	1.529	2.645	0.076	0.0	75	0.885
11.001	1.623	64.5	29.1	2.645	2.095	0.215	0.0	106	1.582
11.002	2.716	192.0	54.6	2.020	2.444	0.403	0.0	109	2.353
13.000	2.329	92.6	0.0	1.103	1.397	0.000	0.0	0	0.000
13.001	2.079	82.7	13.4	1.397	1.379	0.099	0.0	61	1.540
13.002	1.469	103.8	25.2	1.379	2.004	0.186	0.0	100	1.219
11.003	2.755	304.2	91.1	2.369	1.642	0.672	0.0	140	2.419
14.000	1.062	42.2	0.0	2.852	2.618	0.000	0.0	0	0.000
14.001	1.117	44.4	3.0	2.618	2.361	0.022	0.0	39	0.637
14.002	1.056	42.0	5.4	2.361	2.186	0.040	0.0	54	0.729
14.003	1.034	41.1	5.4	2.186	1.945	0.040	0.0	55	0.720
14.004	1.273	90.0	12.2	1.945	1.717	0.090	0.0	74	0.896
11.004	1.206	191.9	107.9	1.717	1.723	0.796	0.0	241	1.240
11.005	1.172	186.3	118.7	1.723	1.752	0.876	0.0	261	1.239
11.006	1.188	188.9	131.9	1.752	1.771	0.973	0.0	277	1.280
11.007	1.179	187.6	142.3	1.771	0.890	1.050	0.0	294	1.292
1.016	1.024	452.5	400.3	1.590	1.610	2.954	0.0	552	1.149
1.017	0.619	393.6	383.5	1.460	1.420	2.954	0.0	724	0.700
1.018	0.632	401.9	361.1	1.420	1.440	2.954	0.0	671	0.710
1.019	2.049	1303.5	359.5	1.440	1.550	2.954	0.0	321	1.764

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)
1.020	S19	S20	48.604	0.600	63.850	62.720	1.130	43.0	900	12.49	44.5
1.021	S20	Outfall	9.110	0.600	62.720	62.670	0.050	182.2	900	12.55	44.4

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)
1.020	4.784	3043.4	356.3	1.550	0.380	2.954	0.0	205	3.266
1.021	2.318	1474.5	355.5	0.380	0.430	2.954	0.0	298	1.924

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	31.813	39.8	225	Circular	71.447	69.800	1.422	70.492	69.000	1.267
1.001	27.249	49.5	225	Circular	70.492	69.000	1.267	70.363	68.450	1.688
1.002	26.808	52.1	225	Circular	70.363	68.450	1.688	70.027	67.935	1.867
1.003	18.208	49.2	225	Circular	70.027	67.935	1.867	69.692	67.565	1.902
1.004	18.936	49.2	225	Circular	69.692	67.565	1.902	69.201	67.180	1.796
2.000	11.040	220.8	300	Circular	68.997	67.230	1.467	69.201	67.180	1.721
1.005	39.522	98.8	375	Circular	69.201	67.180	1.646	69.699	66.780	2.544
1.006	41.743	103.1	375	Circular	69.699	66.780	2.544	70.440	66.375	3.690
3.000	22.443	38.0	225	Circular	72.029	70.555	1.249	71.691	69.965	1.501
3.001	14.067	35.6	225	Circular	71.691	69.965	1.501	71.221	69.570	1.426
3.002	10.241	40.2	225	Circular	71.221	69.570	1.426	71.000	69.315	1.460
4.000	8.362	29.3	225	Circular	71.156	69.600	1.331	71.000	69.315	1.460
3.003	12.171	45.9	225	Circular	71.000	69.315	1.460	70.773	69.050	1.498
3.004	23.947	24.9	225	Circular	70.773	69.050	1.498	70.440	68.090	2.125
1.007	25.523	100.1	450	Circular	70.440	66.375	3.615	69.881	66.120	3.311
1.008	25.105	100.4	450	Circular	69.881	66.120	3.311	69.444	65.870	3.124
5.000	17.413	100.1	225	Circular	70.228	68.249	1.754	70.072	68.075	1.772
5.001	24.994	41.7	225	Circular	70.072	68.075	1.772	69.710	67.475	2.010

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	1350	Manhole	Adoptable	S2	1350	Manhole	Adoptable
1.001	S2	1350	Manhole	Adoptable	S3	1200	Manhole	Adoptable
1.002	S3	1200	Manhole	Adoptable	S4	1200	Manhole	Adoptable
1.003	S4	1200	Manhole	Adoptable	S5	1200	Manhole	Adoptable
1.004	S5	1200	Manhole	Adoptable	S6	1350	Manhole	Adoptable
2.000	S23	1350	Manhole	Adoptable	S6	1350	Manhole	Adoptable
1.005	S6	1350	Manhole	Adoptable	S7	1350	Manhole	Adoptable
1.006	S7	1350	Manhole	Adoptable	S8	1350	Manhole	Adoptable
3.000	S24	1350	Manhole	Adoptable	S25	1200	Manhole	Adoptable
3.001	S25	1200	Manhole	Adoptable	S26	1350	Manhole	Adoptable
3.002	S26	1350	Manhole	Adoptable	S27	1350	Manhole	Adoptable
4.000	S29	1350	Manhole	Adoptable	S27	1350	Manhole	Adoptable
3.003	S27	1350	Manhole	Adoptable	S28	1200	Manhole	Adoptable
3.004	S28	1200	Manhole	Adoptable	S8	1350	Manhole	Adoptable
1.007	S8	1350	Manhole	Adoptable	S9	1350	Manhole	Adoptable
1.008	S9	1350	Manhole	Adoptable	S10	1350	Manhole	Adoptable
5.000	S30	1200	Manhole	Adoptable	S31	1200	Manhole	Adoptable
5.001	S31	1200	Manhole	Adoptable	S32	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)
5.002	9.948	9.8	225	Circular	69.710	67.475	2.010	69.444	66.460	2.759
6.000	23.035	80.0	225	Circular	69.140	67.313	1.602	69.600	67.025	2.350
6.001	5.869	10.4	225	Circular	69.600	67.025	2.350	69.444	66.460	2.759
1.009	36.614	96.4	450	Circular	69.444	65.870	3.124	68.879	65.490	2.939
7.000	33.700	61.8	225	Circular	69.112	66.861	2.026	68.879	66.316	2.338
1.010	52.780	102.5	450	Circular	68.879	65.490	2.939	68.050	64.975	2.625
8.000	21.051	52.6	225	Circular	71.694	69.550	1.919	71.358	69.150	1.983
8.001	14.711	46.0	225	Circular	71.358	69.150	1.983	71.050	68.830	1.995
8.002	22.618	50.8	225	Circular	71.050	68.830	1.995	70.502	68.385	1.892
8.003	22.433	50.4	225	Circular	70.502	68.385	1.892	70.059	67.940	1.894
8.004	60.014	42.1	375	Circular	70.059	67.940	1.744	68.958	66.515	2.068
9.000	48.796	135.5	300	Circular	69.468	66.950	2.218	68.958	66.590	2.068
8.005	73.520	47.7	450	Circular	68.958	66.515	1.993	68.050	64.975	2.625
1.011	19.622	100.6	450	Circular	68.050	64.975	2.625	67.720	64.780	2.490
1.012	32.185	131.4	450	Circular	67.720	64.780	2.490	67.239	64.535	2.254
10.000	47.047	43.0	225	Circular	68.117	66.450	1.442	67.549	65.355	1.969
10.001	17.175	28.9	225	Circular	67.549	65.355	1.969	67.239	64.760	2.254
1.013	11.171	24.3	525	Circular	67.239	64.460	2.254	66.300	64.000	1.775
1.014	25.064	1253.2	750	Circular	66.300	64.000	1.550	66.300	63.980	1.570
1.015	17.483	874.2	750	Circular	66.300	63.980	1.570	66.300	63.960	1.590
11.000	55.394	28.8	225	Circular	72.939	71.255	1.459	72.200	69.330	2.645
12.000	43.067	148.5	225	Circular	71.374	69.620	1.529	72.200	69.330	2.645
11.001	50.133	65.1	225	Circular	72.200	69.330	2.645	70.880	68.560	2.095
11.002	49.230	33.7	300	Circular	70.880	68.560	2.020	69.844	67.100	2.444
13.000	41.792	31.8	225	Circular	71.318	69.990	1.103	70.297	68.675	1.397

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.002	S32	1200	Manhole	Adoptable	S10	1350	Manhole	Adoptable
6.000	S33	1200	Manhole	Adoptable	S34	1200	Manhole	Adoptable
6.001	S34	1200	Manhole	Adoptable	S10	1350	Manhole	Adoptable
1.009	S10	1350	Manhole	Adoptable	S11	1350	Manhole	Adoptable
7.000	S35	1200	Manhole	Adoptable	S11	1350	Manhole	Adoptable
1.010	S11	1350	Manhole	Adoptable	S12	1350	Manhole	Adoptable
8.000	S36	1200	Manhole	Adoptable	S37	1200	Manhole	Adoptable
8.001	S37	1200	Manhole	Adoptable	S38	1200	Manhole	Adoptable
8.002	S38	1200	Manhole	Adoptable	S39	1200	Manhole	Adoptable
8.003	S39	1200	Manhole	Adoptable	S40	1350	Manhole	Adoptable
8.004	S40	1350	Manhole	Adoptable	S41	1350	Manhole	Adoptable
9.000	S42	1200	Manhole	Adoptable	S41	1350	Manhole	Adoptable
8.005	S41	1350	Manhole	Adoptable	S12	1350	Manhole	Adoptable
1.011	S12	1350	Manhole	Adoptable	S13	1350	Manhole	Adoptable
1.012	S13	1350	Manhole	Adoptable	S14	1500	Manhole	Adoptable
10.000	S43	1350	Manhole	Adoptable	S44	1200	Manhole	Adoptable
10.001	S44	1200	Manhole	Adoptable	S14	1500	Manhole	Adoptable
1.013	S14	1500	Manhole	Adoptable	S15	1500	Manhole	Adoptable
1.014	S15	1500	Manhole	Adoptable	Swale 1	1500	Manhole	Adoptable
1.015	Swale 1	1500	Manhole	Adoptable	S16	1500	Manhole	Adoptable
11.000	S45	1350	Manhole	Adoptable	S46	1200	Manhole	Adoptable
12.000	S53	1200	Manhole	Adoptable	S46	1200	Manhole	Adoptable
11.001	S46	1200	Manhole	Adoptable	S47	1200	Manhole	Adoptable
11.002	S47	1200	Manhole	Adoptable	S48	1350	Manhole	Adoptable
13.000	S54	1350	Manhole	Adoptable	S55	1350	Manhole	Adoptable

Pipeline Schedule

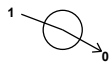


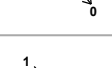
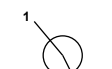
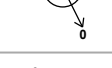

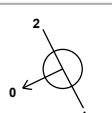
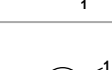





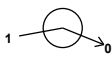
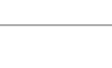
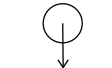
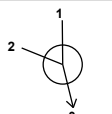
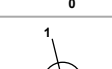

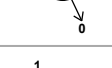
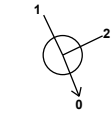

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
13.001	18.307	39.8	225	Circular	70.297	68.675	1.397	69.819	68.215	1.379
13.002	68.650	114.4	300	Circular	69.819	68.140	1.379	69.844	67.540	2.004
11.003	66.497	43.5	375	Circular	69.844	67.100	2.369	67.587	65.570	1.642
14.000	9.953	150.8	225	Circular	69.380	66.303	2.852	69.080	66.237	2.618
14.001	8.596	136.4	225	Circular	69.080	66.237	2.618	68.760	66.174	2.361
14.002	17.855	152.6	225	Circular	68.760	66.174	2.361	68.468	66.057	2.186
14.003	33.709	159.0	225	Circular	68.468	66.057	2.186	68.015	65.845	1.945
14.004	30.393	152.0	300	Circular	68.015	65.770	1.945	67.587	65.570	1.717
11.004	47.853	281.5	450	Circular	67.587	65.420	1.717	67.423	65.250	1.723
11.005	46.232	298.3	450	Circular	67.423	65.250	1.723	67.297	65.095	1.752
11.006	27.579	290.3	450	Circular	67.297	65.095	1.752	67.221	65.000	1.771
11.007	11.779	294.5	450	Circular	67.221	65.000	1.771	66.300	64.960	0.890
1.016	14.698	734.9	750	Circular	66.300	63.960	1.590	66.300	63.940	1.610
1.017	49.719	2486.0	900	Circular	66.300	63.940	1.460	66.240	63.920	1.420
1.018	47.725	2386.3	900	Circular	66.240	63.920	1.420	66.240	63.900	1.440
1.019	11.639	232.8	900	Circular	66.240	63.900	1.440	66.300	63.850	1.550
1.020	48.604	43.0	900	Circular	66.300	63.850	1.550	64.000	62.720	0.380
1.021	9.110	182.2	900	Circular	64.000	62.720	0.380	64.000	62.670	0.430

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
13.001	S55	1350	Manhole	Adoptable	S56	1350	Manhole	Adoptable
13.002	S56	1350	Manhole	Adoptable	S48	1350	Manhole	Adoptable
11.003	S48	1350	Manhole	Adoptable	S49	1350	Manhole	Adoptable
14.000	S57	1200	Manhole	Adoptable	S58	1200	Manhole	Adoptable
14.001	S58	1200	Manhole	Adoptable	S59	1200	Manhole	Adoptable
14.002	S59	1200	Manhole	Adoptable	S60	1200	Manhole	Adoptable
14.003	S60	1200	Manhole	Adoptable	S61	1200	Manhole	Adoptable
14.004	S61	1200	Manhole	Adoptable	S49	1350	Manhole	Adoptable
11.004	S49	1350	Manhole	Adoptable	S50	1350	Manhole	Adoptable
11.005	S50	1350	Manhole	Adoptable	S51	1350	Manhole	Adoptable
11.006	S51	1350	Manhole	Adoptable	S52	1350	Manhole	Adoptable
11.007	S52	1350	Manhole	Adoptable	S16	1500	Manhole	Adoptable
1.016	S16	1500	Manhole	Adoptable	S17	1500	Manhole	Adoptable
1.017	S17	1500	Manhole	Adoptable	Detention Basin	1500	Manhole	Adoptable
1.018	Detention Basin	1500	Manhole	Adoptable	S18	1500	Manhole	Adoptable
1.019	S18	1500	Manhole	Adoptable	S19	1200	Manhole	Adoptable
1.020	S19	1200	Manhole	Adoptable	S20	1350	Manhole	Adoptable
1.021	S20	1350	Manhole	Adoptable	Outfall	1350	Manhole	Adoptable




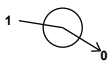


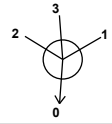

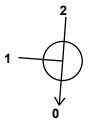




Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	566327.323	221496.422	71.447	1.647	1350				
						0	1.000	69.800	225
S2	566339.407	221525.851	70.492	1.492	1350				
						1	1.000	69.000	225
						0	1.001	69.000	225

























Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S3	566364.897	221516.223	70.363	1.913	1200	 1	1.001	68.450	225
						 0	1.002	68.450	225
S4	566388.354	221503.243	70.027	2.092	1200	 1	1.002	67.935	225
						 0	1.003	67.935	225
S5	566400.059	221489.297	69.692	2.127	1200	 1	1.003	67.565	225
						 0	1.004	67.565	225
S23	566413.695	221462.603	68.997	1.767	1350	 0	2.000	67.230	300
S6	566408.543	221472.368	69.201	2.021	1350	 2 1	1.004	67.180	225
						 0	1.005	67.180	375
S7	566372.932	221455.227	69.699	2.919	1350	 1	1.005	66.780	375
						 0	1.006	66.780	375
S24	566279.516	221460.365	72.029	1.474	1350	 0	3.000	70.555	225
S25	566298.782	221471.876	71.691	1.726	1200	 1	3.000	69.965	225
						 0	3.001	69.965	225
S26	566312.621	221474.399	71.221	1.651	1350	 1	3.001	69.570	225
						 0	3.002	69.570	225
S29	566322.033	221478.925	71.156	1.556	1350	 0	4.000	69.600	225
S27	566322.117	221470.563	71.000	1.685	1350	 2 1	3.002	69.315	225
						 0	3.003	69.315	225
S28	566325.019	221458.743	70.773	1.723	1200	 1	3.003	69.050	225
						 0	3.004	69.050	225
S8	566335.319	221437.124	70.440	4.065	1350	 2 1	1.006	66.375	375
						 0	1.007	66.375	450

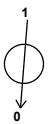



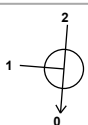




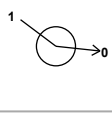
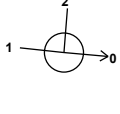
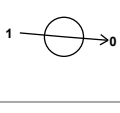
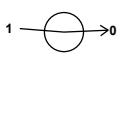
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S9	566344.777	221413.419	69.881	3.761	1350		1 0	1.007 1.008	66.120 66.120	450 450
S30	566315.200	221414.863	70.228	1.979	1200		0	5.000	68.249	225
S31	566313.492	221397.534	70.072	1.997	1200		1 0	5.000 5.001	68.075 68.075	225 225
S32	566338.172	221393.585	69.710	2.235	1200		1 0	5.001 5.002	67.475 67.475	225 225
S33	566374.453	221387.535	69.140	1.827	1200		0	6.000	67.313	225
S34	566351.731	221391.324	69.600	2.575	1200		1 0	6.000 6.001	67.025 67.025	225 225
S10	566346.653	221388.384	69.444	3.574	1350		1 2 3 0	6.001 5.002 1.008 1.009	66.460 66.460 65.870 65.870	225 225 450 450
S35	566310.421	221354.440	69.112	2.251	1200		0	7.000	66.861	225
S11	566344.022	221351.864	68.879	3.389	1350		1 2 0	7.000 1.009 1.010	66.316 65.490 65.490	225 450 450
S36	566264.591	221441.152	71.694	2.144	1200		0	8.000	69.550	225
S37	566258.182	221421.101	71.358	2.208	1200		1 0	8.000 8.001	69.150 69.150	225 225
S38	566259.617	221406.459	71.050	2.220	1200		1 0	8.001 8.002	68.830 68.830	225 225
S39	566271.661	221387.314	70.502	2.117	1200		1 0	8.002 8.003	68.385 68.385	225 225

















Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S40	566270.824	221364.897	70.059	2.119	1350	 1	8.003	67.940	225
						 0	8.004	67.940	375
S42	566217.928	221308.893	69.468	2.518	1200	 0	9.000	66.950	300
S41	566266.571	221305.034	68.958	2.443	1350	 2	9.000	66.590	300
						 1	8.004	66.515	375
S12	566339.862	221299.249	68.050	3.075	1350	 2	8.005	64.975	450
						 1	1.010	64.975	450
S13	566342.974	221279.875	67.720	2.940	1350	 1	1.011	64.975	450
						 0	1.012	64.780	450
S43	566353.502	221302.700	68.117	1.667	1350	 0	10.000	66.450	225
S44	566367.598	221257.814	67.549	2.194	1200	 1	10.000	65.355	225
						 0	10.001	65.355	225
S14	566352.736	221249.207	67.239	2.779	1500	 2	10.001	64.760	225
						 1	1.012	64.535	450
S15	566355.796	221238.463	66.300	2.300	1500	 0	1.013	64.460	525
						 1	1.013	64.000	525
Swale 1	566331.779	221231.293	66.300	2.320	1500	 0	1.014	64.000	750
						 1	1.014	63.980	750
S45	566148.435	221414.011	72.939	1.684	1350	 0	11.000	71.255	225
						 0	12.000	69.620	225
S53	566246.590	221406.259	71.374	1.754	1200	 0	12.000	69.330	225
						 0	11.000	69.330	225
S46	566203.657	221409.650	72.200	2.870	1200	 2	11.001	69.330	225
						 0			

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S47	566199.710	221359.673	70.880	2.320	1200		1 11.001	68.560	225
							0 11.002	68.560	300
S54	566132.247	221375.943	71.318	1.328	1350		0 13.000	69.990	225
S55	566128.877	221334.287	70.297	1.622	1350		1 13.000	68.675	225
							0 13.001	68.675	225
S56	566127.400	221316.040	69.819	1.679	1350		1 13.001	68.215	225
							0 13.002	68.140	300
S48	566195.835	221310.596	69.844	2.744	1350		1 13.002	67.540	300
							2 11.002	67.100	300
							0 11.003	67.100	375
S57	566126.284	221301.394	69.380	3.077	1200		0 14.000	66.303	225
S58	566129.547	221291.991	69.080	2.843	1200		1 14.000	66.237	225
							0 14.001	66.237	225
S59	566135.227	221285.539	68.760	2.586	1200		1 14.001	66.174	225
							0 14.002	66.174	225
S60	566133.433	221267.774	68.468	2.411	1200		1 14.002	66.057	225
							0 14.003	66.057	225
S61	566160.395	221247.542	68.015	2.245	1200		1 14.003	65.845	225
							0 14.004	65.770	300
S49	566190.615	221244.304	67.587	2.167	1350		1 14.004	65.570	300
							2 11.003	65.570	375
							0 11.004	65.420	450
S50	566238.281	221240.067	67.423	2.173	1350		1 11.004	65.250	450
							0 11.005	65.250	450
S51	566284.369	221236.427	67.297	2.202	1350		1 11.005	65.095	450
							0 11.006	65.095	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S52	566311.923	221237.608	67.221	2.221	1350		1	11.006	65.000	450
S16	566315.040	221226.248	66.300	2.340	1500		0	11.007	65.000	450
							1	11.007	64.960	450
							2	1.015	63.960	750
S17	566300.961	221222.026	66.300	2.360	1500		0	1.016	63.960	750
							1	1.016	63.940	750
Detention Basin	566251.396	221218.120	66.240	2.320	1500		0	1.017	63.940	900
							1	1.017	63.920	900
S18	566203.831	221214.213	66.240	2.340	1500		0	1.018	63.920	900
							1	1.018	63.900	900
S19	566192.474	221211.671	66.300	2.450	1200		0	1.019	63.900	900
							1	1.019	63.850	900
S20	566157.365	221178.059	64.000	1.280	1350		0	1.020	63.850	900
							1	1.020	62.720	900
Outfall	566150.804	221171.740	64.000	1.330	1350		0	1.021	62.720	900
							1	1.021	62.670	900

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	20.000	Drain Down Time (mins)	2160
Ratio-R	0.400	Additional Storage (m ³ /ha)	0.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

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	40	0	0
100	40	0	0

Node S19 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	x
Invert Level (m)	63.850	Product Number	CTL-CHE-0133-1210-2100-1210
Design Depth (m)	2.100	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	12.1	Min Node Diameter (mm)	1200

Node S1 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	70.700	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	8.320		

Node S5 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.520	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	1	Depth (m)	0.450
Safety Factor	2.0	Width (m)	10.000	Inf Depth (m)	
Porosity	0.30	Length (m)	12.730		

Node S11 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.030	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	1	Depth (m)	0.450
Safety Factor	2.0	Width (m)	6.260	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S12 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	67.200	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	5	Depth (m)	0.450
Safety Factor	2.0	Width (m)	5.760	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S15 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	65.500
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	630

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	144.0	0.0	0.800	895.0	0.0

Node S15 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	64.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	232.5	0.0	1.500	232.5	0.0	1.501	0.0	0.0

Node S18 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	64.940
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	1455

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	899.0	0.0	1.300	1900.0	0.0

Node S18 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	63.900
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	225.0	0.0	1.040	225.0	0.0	1.041	0.0	0.0

Node S23 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	67.230
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	8

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	60.0	0.0	0.800	60.0	0.0	0.801	0.0	0.0

Node S23 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	67.850	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	3	Depth (m)	0.450
Safety Factor	2.0	Width (m)	9.390	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S24 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	71.100	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	6.050	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S31 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	69.500	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	16.940	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S34 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.550	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	6.380	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S35 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.020	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	2	Depth (m)	0.450
Safety Factor	2.0	Width (m)	12.760	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S37 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	70.245	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	6.170	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S40 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	69.015	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	9.570	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S41 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.070	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	2	Depth (m)	0.450
Safety Factor	2.0	Width (m)	22.251	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S44 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	65.900	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	150	Depth (m)	0.450
Safety Factor	2.0	Width (m)	27.370	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S45 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	71.930	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	29.520	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S47 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	69.760	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	28.700	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S48 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.785	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	9.580	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S49 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	65.420
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	22

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	130.0	0.0	0.400	130.0	0.0	0.401	0.0	0.0

Node S49 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	66.355	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	4	Depth (m)	0.450
Safety Factor	2.0	Width (m)	6.380	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S50 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	65.250
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	335

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	130.0	0.0	0.400	130.0	0.0	0.401	0.0	0.0

Node S50 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	66.145	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	4	Depth (m)	0.450
Safety Factor	2.0	Width (m)	25.800	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S51 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	65.920	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	135	Depth (m)	0.450
Safety Factor	2.0	Width (m)	20.815	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S52 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	65.750	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	390	Depth (m)	0.450
Safety Factor	2.0	Width (m)	20.875	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S53 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	70.245	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	4	Depth (m)	0.450
Safety Factor	2.0	Width (m)	22.780	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Node S55 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	69.410	Slope (1:X)	100.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Depth (m)	0.450
Safety Factor	2.0	Width (m)	31.330	Inf Depth (m)	
Porosity	0.30	Length (m)	10.000		

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	10	69.839	0.039	5.4	0.0556	0.0000	OK
15 minute winter	S2	11	69.040	0.040	5.3	0.0577	0.0000	OK
15 minute winter	S3	11	68.514	0.064	12.3	0.0723	0.0000	OK
15 minute winter	S4	11	67.997	0.062	12.2	0.0697	0.0000	OK
15 minute winter	S5	11	67.642	0.077	18.6	0.0869	0.0000	OK
30 minute winter	S23	21	67.274	0.044	5.5	2.5751	0.0000	OK
15 minute winter	S6	11	67.283	0.103	36.1	0.1476	0.0000	OK
15 minute winter	S7	11	66.891	0.111	38.1	0.1585	0.0000	OK
15 minute winter	S24	11	70.571	0.016	0.8	0.0223	0.0000	OK
15 minute winter	S25	10	70.008	0.043	7.1	0.0486	0.0000	OK
15 minute winter	S26	10	69.630	0.060	12.5	0.0865	0.0000	OK
15 minute winter	S29	10	69.616	0.016	1.0	0.0230	0.0000	OK
15 minute winter	S27	10	69.393	0.078	17.6	0.1110	0.0000	OK
15 minute winter	S28	10	69.123	0.073	22.5	0.0823	0.0000	OK
15 minute winter	S8	11	66.523	0.148	68.0	0.2112	0.0000	OK
15 minute winter	S9	11	66.278	0.158	76.4	0.2258	0.0000	OK
15 minute summer	S30	1	68.249	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S31	10	68.123	0.048	7.5	0.0540	0.0000	OK
15 minute winter	S32	10	67.516	0.041	11.1	0.0460	0.0000	OK
15 minute summer	S33	1	67.313	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S34	10	67.061	0.036	7.9	0.0402	0.0000	OK
15 minute winter	S10	11	66.044	0.174	97.0	0.2490	0.0000	OK
15 minute winter	S35	10	66.903	0.042	5.2	0.0480	0.0000	OK
15 minute winter	S11	11	65.675	0.185	118.5	0.2652	0.0000	OK
15 minute winter	S36	10	69.576	0.026	2.0	0.0290	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S1	1.000	S2	5.3	1.143	0.064	0.1478	
15 minute winter	S2	1.001	S3	5.2	0.750	0.070	0.1917	
15 minute winter	S3	1.002	S4	12.2	1.349	0.169	0.2422	
15 minute winter	S4	1.003	S5	12.2	1.184	0.165	0.1889	
15 minute winter	S5	1.004	S6	18.7	1.265	0.252	0.2811	
30 minute winter	S23	2.000	S6	3.4	0.364	0.046	0.1309	
15 minute winter	S6	1.005	S7	32.8	1.270	0.163	1.0226	
15 minute winter	S7	1.006	S8	38.4	1.142	0.195	1.4066	
15 minute winter	S24	3.000	S25	0.8	0.269	0.009	0.0725	
15 minute winter	S25	3.001	S26	7.0	1.023	0.080	0.0973	
15 minute winter	S26	3.002	S27	12.4	1.206	0.151	0.1058	
15 minute winter	S29	4.000	S27	1.0	0.163	0.010	0.0558	
15 minute winter	S27	3.003	S28	17.4	1.501	0.226	0.1413	
15 minute winter	S28	3.004	S8	22.3	2.059	0.213	0.2592	
15 minute winter	S8	1.007	S9	68.3	1.442	0.211	1.2086	
15 minute winter	S9	1.008	S10	76.3	1.443	0.237	1.3315	
15 minute summer	S30	5.000	S31	0.0	0.000	0.000	0.0516	
15 minute winter	S31	5.001	S32	7.4	1.341	0.091	0.1376	
15 minute winter	S32	5.002	S10	11.0	2.321	0.066	0.0470	
15 minute summer	S33	6.000	S34	0.0	0.000	0.000	0.0445	
15 minute winter	S34	6.001	S10	7.8	2.036	0.048	0.0226	
15 minute winter	S10	1.009	S11	96.9	1.642	0.294	2.1616	
15 minute winter	S35	7.000	S11	5.0	0.984	0.076	0.1726	
15 minute winter	S11	1.010	S12	117.3	1.286	0.367	4.7945	
15 minute winter	S36	8.000	S37	2.0	0.405	0.027	0.1067	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S37	10	69.206	0.056	10.2	0.0631	0.0000	OK
15 minute winter	S38	10	68.893	0.063	12.3	0.0714	0.0000	OK
15 minute winter	S39	11	68.452	0.067	14.5	0.0758	0.0000	OK
15 minute winter	S40	10	68.028	0.088	39.3	0.1266	0.0000	OK
15 minute winter	S42	10	67.053	0.103	24.1	0.1162	0.0000	OK
15 minute winter	S41	11	66.647	0.132	91.8	0.1895	0.0000	OK
15 minute winter	S12	12	65.295	0.320	219.4	0.4584	0.0000	OK
15 minute winter	S13	12	65.112	0.332	223.1	0.4751	0.0000	OK
15 minute winter	S43	10	66.483	0.033	3.8	0.0472	0.0000	OK
15 minute winter	S44	10	65.415	0.060	14.6	0.0684	0.0000	OK
480 minute winter	S14	416	65.065	0.605	33.1	1.0683	0.0000	SURCHARGED
360 minute winter	S15	328	65.063	1.063	38.8	76.0277	0.0000	SURCHARGED
360 minute winter	Swale 1	336	65.092	1.112	42.6	1.9655	0.0000	SURCHARGED
15 minute winter	S45	10	71.308	0.053	12.0	0.0755	0.0000	OK
15 minute winter	S53	10	69.695	0.075	10.7	0.0853	0.0000	OK
15 minute winter	S46	11	69.438	0.108	29.9	0.1221	0.0000	OK
15 minute winter	S47	11	68.668	0.108	54.5	0.1227	0.0000	OK
15 minute summer	S54	1	69.990	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S55	10	68.739	0.064	14.0	0.0918	0.0000	OK
15 minute winter	S56	11	68.242	0.102	25.9	0.1455	0.0000	OK
15 minute winter	S48	11	67.243	0.143	90.8	0.2043	0.0000	OK
15 minute summer	S57	1	66.303	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S58	10	66.277	0.040	3.1	0.0449	0.0000	OK
15 minute winter	S59	10	66.230	0.056	5.5	0.0637	0.0000	OK
15 minute winter	S60	11	66.112	0.055	5.5	0.0627	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S37	8.001	S38	10.0	1.200	0.131	0.1232	
15 minute winter	S38	8.002	S39	12.2	1.285	0.166	0.2140	
15 minute winter	S39	8.003	S40	14.3	1.179	0.195	0.2733	
15 minute winter	S40	8.004	S41	38.6	1.440	0.125	1.6369	
15 minute winter	S42	9.000	S41	23.4	1.118	0.245	1.0199	
15 minute winter	S41	8.005	S12	91.2	1.271	0.194	5.8462	
15 minute winter	S12	1.011	S13	213.7	1.737	0.663	2.4142	
15 minute winter	S13	1.012	S14	225.3	1.905	0.799	3.8022	
15 minute winter	S43	10.000	S44	3.7	0.624	0.047	0.2862	
15 minute winter	S44	10.001	S14	14.3	1.713	0.147	0.1431	
480 minute winter	S14	1.013	S15	32.8	1.415	0.033	2.4133	
360 minute winter	S15	1.014	Swale 1	42.6	0.323	0.123	11.0312	
360 minute winter	Swale 1	1.015	S16	38.1	0.316	0.092	7.6946	
15 minute winter	S45	11.000	S46	11.8	0.962	0.121	0.7129	
15 minute winter	S53	12.000	S46	10.5	0.701	0.246	0.6531	
15 minute winter	S46	11.001	S47	29.3	1.551	0.454	0.9461	
15 minute winter	S47	11.002	S48	54.5	1.974	0.284	1.3782	
15 minute summer	S54	13.000	S55	0.0	0.000	0.000	0.1880	
15 minute winter	S55	13.001	S56	13.6	1.508	0.165	0.1657	
15 minute winter	S56	13.002	S48	25.3	1.218	0.243	1.4246	
15 minute winter	S48	11.003	S49	90.3	2.399	0.297	2.5033	
15 minute summer	S57	14.000	S58	0.0	0.000	0.000	0.0228	
15 minute winter	S58	14.001	S59	3.0	0.492	0.068	0.0536	
15 minute winter	S59	14.002	S60	5.5	0.733	0.130	0.1362	
15 minute winter	S60	14.003	S61	5.3	0.713	0.130	0.2521	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S61	11	65.845	0.075	11.9	0.0851	0.0000	OK
15 minute winter	S49	14	65.614	0.194	106.7	24.2326	0.0000	OK
30 minute winter	S50	26	65.421	0.171	74.2	21.3395	0.0000	OK
30 minute winter	S51	26	65.276	0.181	57.1	0.2583	0.0000	OK
30 minute winter	S52	26	65.187	0.187	59.1	0.2671	0.0000	OK
360 minute winter	S16	336	65.109	1.149	58.0	2.0301	0.0000	SURCHARGED
360 minute winter	S17	336	65.108	1.168	58.5	2.0643	0.0000	SURCHARGED
360 minute winter	Detention Basin	336	65.087	1.167	58.5	2.0626	0.0000	SURCHARGED
360 minute winter	S18	352	65.059	1.159	60.3	184.7944	0.0000	SURCHARGED
360 minute winter	S19	352	65.059	1.209	63.5	1.3670	0.0000	SURCHARGED
60 minute winter	S20	578	62.777	0.057	10.6	0.0811	0.0000	OK
960 minute winter	Outfall	390	62.723	0.053	10.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S61	14.004	S49	11.9	0.883	0.133	0.4111	
15 minute winter	S49	11.004	S50	71.5	1.582	0.372	2.4624	
30 minute winter	S50	11.005	S51	54.5	0.951	0.292	2.6479	
30 minute winter	S51	11.006	S52	57.0	0.939	0.302	1.6754	
30 minute winter	S52	11.007	S16	59.0	1.022	0.315	0.6807	
360 minute winter	S16	1.016	S17	58.5	0.328	0.129	6.4689	
360 minute winter	S17	1.017	Detention Basin	58.5	0.272	0.149	31.5106	
360 minute winter	Detention Basin	1.018	S18	57.5	0.364	0.143	30.2469	
360 minute winter	S18	1.019	S19	63.5	0.272	0.049	7.3765	
360 minute winter	S19	Hydro-Brake®	S20	10.6				
60 minute winter	S20	1.021	Outfall	10.5	0.683	0.007	0.1426	317.1

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	10	69.873	0.073	18.4	0.1043	0.0000	OK
15 minute winter	S2	10	69.075	0.075	18.2	0.1072	0.0000	OK
15 minute winter	S3	10	68.580	0.130	42.6	0.1468	0.0000	OK
15 minute winter	S4	12	68.079	0.144	42.0	0.1632	0.0000	OK
15 minute winter	S5	12	67.999	0.434	64.5	0.4913	0.0000	SURCHARGED
15 minute winter	S23	14	67.730	0.500	130.4	29.2163	0.0000	SURCHARGED
15 minute winter	S6	13	67.755	0.575	125.5	0.8232	0.0000	SURCHARGED
15 minute winter	S7	12	67.757	0.977	129.4	1.3975	0.0000	SURCHARGED
15 minute winter	S24	10	70.583	0.028	2.9	0.0404	0.0000	OK
15 minute winter	S25	10	70.046	0.081	24.6	0.0919	0.0000	OK
15 minute winter	S26	10	69.701	0.131	43.3	0.1868	0.0000	OK
15 minute winter	S29	10	69.629	0.029	3.4	0.0412	0.0000	OK
15 minute winter	S27	10	69.488	0.173	60.8	0.2474	0.0000	OK
15 minute winter	S28	10	69.205	0.155	77.5	0.1758	0.0000	OK
15 minute winter	S8	12	67.757	1.382	197.5	1.9783	0.0000	SURCHARGED
15 minute winter	S9	12	67.737	1.617	216.6	2.3135	0.0000	SURCHARGED
15 minute summer	S30	1	68.249	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S31	10	68.167	0.092	25.7	0.1042	0.0000	OK
15 minute winter	S32	12	67.760	0.285	38.3	0.3221	0.0000	SURCHARGED
15 minute winter	S33	12	67.677	0.364	25.7	0.4115	0.0000	SURCHARGED
15 minute winter	S34	12	67.701	0.676	41.7	0.7650	0.0000	SURCHARGED
15 minute winter	S10	12	67.697	1.827	207.7	2.6142	0.0000	SURCHARGED
15 minute winter	S35	12	67.618	0.757	17.9	0.8559	0.0000	SURCHARGED
15 minute winter	S11	12	67.572	2.082	249.9	2.9794	0.0000	SURCHARGED
15 minute winter	S36	10	69.596	0.046	6.8	0.0524	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S1	1.000	S2	18.2	1.607	0.220	0.3607	
15 minute winter	S2	1.001	S3	17.9	1.027	0.242	0.4804	
15 minute winter	S3	1.002	S4	42.0	1.804	0.581	0.6327	
15 minute winter	S4	1.003	S5	41.3	1.440	0.556	0.6069	
15 minute winter	S5	1.004	S6	63.5	1.800	0.855	0.7531	
15 minute winter	S23	2.000	S6	-118.3	-1.680	-1.588	0.7774	
15 minute winter	S6	1.005	S7	127.2	1.582	0.632	4.3592	
15 minute winter	S7	1.006	S8	155.0	1.604	0.787	4.6041	
15 minute winter	S24	3.000	S25	2.8	0.382	0.034	0.1771	
15 minute winter	S25	3.001	S26	24.4	1.330	0.279	0.2587	
15 minute winter	S26	3.002	S27	42.9	1.506	0.521	0.2899	
15 minute winter	S29	4.000	S27	3.4	0.198	0.035	0.1492	
15 minute winter	S27	3.003	S28	60.1	1.937	0.781	0.3773	
15 minute winter	S28	3.004	S8	76.6	2.762	0.733	0.6663	
15 minute winter	S8	1.007	S9	188.8	1.606	0.584	4.0440	
15 minute winter	S9	1.008	S10	192.2	1.570	0.596	3.9777	
15 minute summer	S30	5.000	S31	0.0	0.000	0.000	0.1294	
15 minute winter	S31	5.001	S32	25.7	1.855	0.318	0.6476	
15 minute winter	S32	5.002	S10	37.4	3.111	0.224	0.3956	
15 minute winter	S33	6.000	S34	-25.7	-0.692	-0.441	0.9161	
15 minute winter	S34	6.001	S10	22.4	2.720	0.138	0.2334	
15 minute winter	S10	1.009	S11	210.2	1.708	0.638	5.8012	
15 minute winter	S35	7.000	S11	19.5	1.263	0.294	1.3403	
15 minute winter	S11	1.010	S12	236.2	1.491	0.740	8.3626	
15 minute winter	S36	8.000	S37	6.7	0.538	0.094	0.2708	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S37	10	69.263	0.113	34.8	0.1273	0.0000	OK
15 minute winter	S38	10	68.958	0.128	42.2	0.1445	0.0000	OK
15 minute winter	S39	10	68.526	0.141	49.4	0.1599	0.0000	OK
15 minute winter	S40	12	68.117	0.177	135.5	0.2533	0.0000	OK
15 minute winter	S42	12	68.029	1.079	82.8	1.2201	0.0000	SURCHARGED
15 minute winter	S41	12	67.835	1.320	314.5	1.8896	0.0000	SURCHARGED
15 minute winter	S12	12	67.261	2.286	524.3	3.5950	0.0000	SURCHARGED
30 minute winter	S13	21	66.487	1.707	473.6	2.4421	0.0000	SURCHARGED
15 minute winter	S43	10	66.511	0.061	13.1	0.0873	0.0000	OK
720 minute winter	S44	705	65.778	0.423	4.0	0.4789	0.0000	SURCHARGED
720 minute winter	S14	705	65.778	1.318	71.5	2.3297	0.0000	SURCHARGED
720 minute winter	S15	705	65.778	1.778	104.6	184.3470	0.0000	SURCHARGED
720 minute winter	Swale 1	705	65.778	1.798	66.5	3.1778	0.0000	SURCHARGED
15 minute winter	S45	10	71.356	0.101	41.2	0.1446	0.0000	OK
15 minute winter	S53	12	70.292	0.672	36.8	1.5238	0.0000	SURCHARGED
15 minute winter	S46	11	70.187	0.857	98.3	0.9691	0.0000	SURCHARGED
15 minute winter	S47	11	68.781	0.221	169.0	0.2495	0.0000	OK
15 minute summer	S54	1	69.990	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S55	10	68.805	0.130	47.9	0.1864	0.0000	OK
15 minute winter	S56	11	68.358	0.218	89.5	0.3115	0.0000	OK
15 minute winter	S48	11	67.420	0.320	294.8	0.4575	0.0000	OK
30 minute winter	S57	23	66.335	0.032	2.8	0.0363	0.0000	OK
30 minute winter	S58	22	66.370	0.133	10.2	0.1503	0.0000	OK
30 minute winter	S59	22	66.332	0.158	16.2	0.1786	0.0000	OK
30 minute winter	S60	22	66.307	0.250	31.7	0.2828	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S37	8.001	S38	34.5	1.599	0.448	0.3170	
15 minute winter	S38	8.002	S39	41.7	1.685	0.571	0.5599	
15 minute winter	S39	8.003	S40	49.0	1.677	0.668	0.6562	
15 minute winter	S40	8.004	S41	134.1	1.887	0.434	4.8440	
15 minute winter	S42	9.000	S41	76.8	1.408	0.806	3.4362	
15 minute winter	S41	8.005	S12	267.3	1.687	0.570	11.6488	
15 minute winter	S12	1.011	S13	515.6	3.255	1.600	3.1090	
30 minute winter	S13	1.012	S14	470.3	2.968	1.669	5.0995	
15 minute winter	S43	10.000	S44	12.9	0.871	0.162	1.0184	
720 minute winter	S44	10.001	S14	4.0	0.942	0.041	0.6831	
720 minute winter	S14	1.013	S15	104.6	1.365	0.106	2.4133	
720 minute winter	S15	1.014	Swale 1	66.5	0.359	0.193	11.0312	
720 minute winter	Swale 1	1.015	S16	66.4	0.342	0.160	7.6946	
15 minute winter	S45	11.000	S46	40.8	1.235	0.419	1.5799	
15 minute winter	S53	12.000	S46	32.9	0.875	0.772	1.7128	
15 minute winter	S46	11.001	S47	84.4	2.124	1.308	1.9885	
15 minute winter	S47	11.002	S48	169.4	2.538	0.882	3.1005	
15 minute summer	S54	13.000	S55	0.0	0.000	0.000	0.4806	
15 minute winter	S55	13.001	S56	47.4	1.969	0.573	0.4547	
15 minute winter	S56	13.002	S48	87.6	1.639	0.844	3.6678	
15 minute winter	S48	11.003	S49	293.7	3.066	0.966	6.7536	
30 minute winter	S57	14.000	S58	-2.8	-0.261	-0.067	0.1245	
30 minute winter	S58	14.001	S59	13.0	0.627	0.293	0.2328	
30 minute winter	S59	14.002	S60	14.8	0.924	0.354	0.6208	
30 minute winter	S60	14.003	S61	23.7	0.943	0.577	1.3406	

Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
30 minute winter	S61	22	66.338	0.568	33.2	0.6425	0.0000	SURCHARGED
30 minute winter	S49	21	66.280	0.860	282.2	50.6919	0.0000	SURCHARGED
30 minute winter	S50	22	66.035	0.785	282.9	50.5856	0.0000	SURCHARGED
720 minute winter	S51	705	65.778	0.683	36.4	0.9780	0.0000	SURCHARGED
720 minute winter	S52	705	65.778	0.778	38.0	1.3695	0.0000	SURCHARGED
720 minute winter	S16	705	65.778	1.818	102.5	3.2131	0.0000	SURCHARGED
720 minute winter	S17	705	65.778	1.838	101.9	3.2484	0.0000	SURCHARGED
720 minute winter	Detention Basin	705	65.778	1.858	101.5	3.2838	0.0000	SURCHARGED
720 minute winter	S18	705	65.778	1.878	101.3	1098.3230	0.0000	SURCHARGED
720 minute winter	S19	735	65.791	1.941	50.2	2.1955	0.0000	SURCHARGED
720 minute winter	S20	690	62.779	0.059	11.6	0.0846	0.0000	OK
720 minute winter	Outfall	705	62.726	0.056	11.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
30 minute winter	S61	14.004	S49	39.4	1.009	0.438	2.1403	
30 minute winter	S49	11.004	S50	257.7	1.656	1.343	7.5820	
30 minute winter	S50	11.005	S51	230.2	1.453	1.235	7.3252	
720 minute winter	S51	11.006	S52	35.0	0.754	0.186	4.3697	
720 minute winter	S52	11.007	S16	37.7	0.808	0.201	1.8663	
720 minute winter	S16	1.016	S17	101.9	0.362	0.225	6.4689	
720 minute winter	S17	1.017	Detention Basin	101.5	0.294	0.258	31.5106	
720 minute winter	Detention Basin	1.018	S18	101.3	0.639	0.252	30.2469	
720 minute winter	S18	1.019	S19	50.2	0.234	0.039	7.3765	
720 minute winter	S19	Hydro-Brake®	S20	11.6				
720 minute winter	S20	1.021	Outfall	11.6	0.693	0.008	0.1526	1736.5

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S1	10	69.884	0.084	23.9	0.1203	0.0000	OK
15 minute winter	S2	10	69.086	0.086	23.7	0.1234	0.0000	OK
15 minute winter	S3	12	68.962	0.512	55.4	0.5789	0.0000	SURCHARGED
15 minute winter	S4	12	68.731	0.796	53.9	0.8998	0.0000	SURCHARGED
15 minute winter	S5	13	68.586	1.021	75.0	1.8202	0.0000	SURCHARGED
15 minute winter	S23	15	68.283	1.053	210.3	57.9241	0.0000	SURCHARGED
15 minute winter	S6	12	68.284	1.104	197.0	1.5791	0.0000	SURCHARGED
15 minute winter	S7	12	68.307	1.527	157.0	2.1858	0.0000	SURCHARGED
15 minute winter	S24	10	70.587	0.032	3.8	0.0461	0.0000	OK
15 minute winter	S25	10	70.060	0.095	32.0	0.1076	0.0000	OK
15 minute winter	S26	11	69.750	0.180	56.3	0.2570	0.0000	OK
15 minute winter	S29	10	69.633	0.033	4.4	0.0466	0.0000	OK
15 minute winter	S27	11	69.615	0.300	77.2	0.4300	0.0000	SURCHARGED
15 minute winter	S28	11	69.249	0.199	98.4	0.2246	0.0000	OK
15 minute winter	S8	12	68.316	1.941	200.8	2.7780	0.0000	SURCHARGED
15 minute winter	S9	12	68.289	2.169	214.6	3.1040	0.0000	SURCHARGED
15 minute winter	S30	12	68.360	0.111	4.7	0.1257	0.0000	OK
15 minute winter	S31	13	68.351	0.276	33.3	0.3122	0.0000	SURCHARGED
15 minute winter	S32	12	68.296	0.821	49.3	0.9280	0.0000	SURCHARGED
15 minute winter	S33	12	68.284	0.971	17.5	1.0985	0.0000	SURCHARGED
15 minute winter	S34	12	68.275	1.250	50.6	1.4140	0.0000	SURCHARGED
15 minute winter	S10	12	68.246	2.376	226.6	3.3996	0.0000	SURCHARGED
15 minute winter	S35	13	68.111	1.250	23.3	3.0169	0.0000	SURCHARGED
15 minute winter	S11	12	68.100	2.610	271.0	4.1942	0.0000	SURCHARGED
15 minute winter	S36	10	69.603	0.053	8.8	0.0596	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S1	1.000	S2	23.7	1.723	0.286	0.4374	
15 minute winter	S2	1.001	S3	23.3	1.085	0.315	0.7309	
15 minute winter	S3	1.002	S4	53.9	1.842	0.746	1.0662	
15 minute winter	S4	1.003	S5	46.6	1.394	0.627	0.7242	
15 minute winter	S5	1.004	S6	70.8	1.820	0.952	0.7531	
15 minute winter	S23	2.000	S6	-191.4	-2.718	-2.569	0.7774	
15 minute winter	S6	1.005	S7	156.3	1.764	0.777	4.3592	
15 minute winter	S7	1.006	S8	184.2	1.841	0.935	4.6041	
15 minute winter	S24	3.000	S25	3.8	0.413	0.044	0.2180	
15 minute winter	S25	3.001	S26	31.8	1.341	0.364	0.3460	
15 minute winter	S26	3.002	S27	54.6	1.508	0.663	0.3777	
15 minute winter	S29	4.000	S27	4.4	0.200	0.045	0.1810	
15 minute winter	S27	3.003	S28	77.1	1.968	1.002	0.4679	
15 minute winter	S28	3.004	S8	98.8	2.822	0.945	0.8597	
15 minute winter	S8	1.007	S9	205.5	1.652	0.636	4.0440	
15 minute winter	S9	1.008	S10	208.9	1.705	0.647	3.9777	
15 minute winter	S30	5.000	S31	-4.7	-0.140	-0.091	0.5164	
15 minute winter	S31	5.001	S32	33.1	1.845	0.409	0.9940	
15 minute winter	S32	5.002	S10	41.9	2.925	0.251	0.3956	
15 minute winter	S33	6.000	S34	-17.5	-0.439	-0.300	0.9161	
15 minute winter	S34	6.001	S10	32.5	2.578	0.200	0.2334	
15 minute winter	S10	1.009	S11	215.1	1.805	0.653	5.8012	
15 minute winter	S35	7.000	S11	29.1	1.364	0.439	1.3403	
15 minute winter	S11	1.010	S12	265.6	1.676	0.832	8.3626	
15 minute winter	S36	8.000	S37	8.7	0.566	0.121	0.3339	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	S37	10	69.284	0.134	45.2	0.1517	0.0000	OK
15 minute winter	S38	12	69.174	0.344	54.8	0.3886	0.0000	SURCHARGED
15 minute winter	S39	12	68.947	0.562	64.4	0.6360	0.0000	SURCHARGED
15 minute winter	S40	12	68.633	0.693	171.9	0.9919	0.0000	SURCHARGED
15 minute winter	S42	11	68.666	1.716	107.5	1.9404	0.0000	SURCHARGED
15 minute winter	S41	13	68.323	1.808	383.8	16.1692	0.0000	SURCHARGED
15 minute winter	S12	13	67.759	2.784	604.1	10.9101	0.0000	FLOOD RISK
30 minute winter	S13	20	67.004	2.224	527.9	3.1827	0.0000	SURCHARGED
15 minute winter	S43	10	66.520	0.070	17.0	0.0999	0.0000	OK
960 minute winter	S44	930	66.012	0.657	4.1	5.8440	0.0000	SURCHARGED
960 minute winter	S14	930	66.012	1.552	73.1	2.7425	0.0000	SURCHARGED
960 minute winter	S15	930	66.012	2.012	73.0	305.0396	0.0000	FLOOD RISK
960 minute winter	Swale 1	930	66.012	2.032	66.2	3.5905	0.0000	FLOOD RISK
15 minute winter	S45	10	71.386	0.131	53.4	0.1879	0.0000	OK
15 minute winter	S53	13	70.452	0.832	64.3	11.6524	0.0000	SURCHARGED
15 minute winter	S46	11	70.438	1.108	112.0	1.2529	0.0000	SURCHARGED
15 minute winter	S47	11	69.600	1.040	189.3	1.1763	0.0000	SURCHARGED
15 minute summer	S54	1	69.990	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S55	12	68.998	0.323	62.2	0.4628	0.0000	SURCHARGED
15 minute winter	S56	12	68.756	0.616	115.9	0.8822	0.0000	SURCHARGED
15 minute winter	S48	11	68.209	1.109	335.1	1.5871	0.0000	SURCHARGED
30 minute winter	S57	20	66.868	0.565	19.4	0.6394	0.0000	SURCHARGED
30 minute winter	S58	20	66.839	0.602	29.9	0.6810	0.0000	SURCHARGED
30 minute winter	S59	22	66.837	0.663	21.1	0.7504	0.0000	SURCHARGED
30 minute winter	S60	22	66.823	0.766	20.4	0.8665	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	S37	8.001	S38	44.7	1.667	0.582	0.4645	
15 minute winter	S38	8.002	S39	54.3	1.721	0.742	0.8995	
15 minute winter	S39	8.003	S40	59.4	1.713	0.809	0.8922	
15 minute winter	S40	8.004	S41	156.7	1.906	0.507	6.6194	
15 minute winter	S42	9.000	S41	100.5	1.435	1.054	3.4362	
15 minute winter	S41	8.005	S12	305.4	1.928	0.651	11.6488	
15 minute winter	S12	1.011	S13	542.3	3.423	1.683	3.1090	
30 minute winter	S13	1.012	S14	527.2	3.328	1.871	5.0995	
15 minute winter	S43	10.000	S44	16.8	0.884	0.211	1.1510	
960 minute winter	S44	10.001	S14	3.9	0.874	0.040	0.6831	
960 minute winter	S14	1.013	S15	73.0	1.359	0.074	2.4133	
960 minute winter	S15	1.014	Swale 1	66.2	0.352	0.192	11.0312	
960 minute winter	Swale 1	1.015	S16	66.1	0.337	0.159	7.6946	
15 minute winter	S45	11.000	S46	51.6	1.443	0.530	1.7674	
15 minute winter	S53	12.000	S46	53.4	1.342	1.254	1.7128	
15 minute winter	S46	11.001	S47	81.9	2.058	1.268	1.9938	
15 minute winter	S47	11.002	S48	183.8	2.636	0.957	3.4667	
15 minute summer	S54	13.000	S55	0.0	0.000	0.000	0.6199	
15 minute winter	S55	13.001	S56	61.2	1.990	0.741	0.7281	
15 minute winter	S56	13.002	S48	103.1	1.623	0.993	4.8343	
15 minute winter	S48	11.003	S49	322.8	3.021	1.061	7.3344	
30 minute winter	S57	14.000	S58	-19.4	-0.489	-0.459	0.3958	
30 minute winter	S58	14.001	S59	-19.8	0.658	-0.447	0.3419	
30 minute winter	S59	14.002	S60	19.0	0.982	0.451	0.7101	
30 minute winter	S60	14.003	S61	-20.4	1.026	-0.495	1.3406	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.48%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
30 minute winter	S61	22	66.805	1.035	42.5	1.1706	0.0000	SURCHARGED
30 minute winter	S49	22	66.783	1.363	315.0	58.6529	0.0000	SURCHARGED
30 minute winter	S50	24	66.379	1.129	313.9	65.2880	0.0000	SURCHARGED
960 minute winter	S51	930	66.012	0.917	32.3	3.9618	0.0000	SURCHARGED
960 minute winter	S52	930	66.012	1.012	34.2	14.7283	0.0000	SURCHARGED
960 minute winter	S16	930	66.012	2.052	95.3	3.6258	0.0000	FLOOD RISK
960 minute winter	S17	930	66.012	2.072	95.1	3.6610	0.0000	FLOOD RISK
960 minute winter	Detention Basin	930	66.012	2.092	95.0	3.6963	0.0000	FLOOD RISK
960 minute winter	S18	930	66.012	2.112	94.9	1480.3340	0.0000	FLOOD RISK
960 minute winter	S19	945	66.028	2.178	27.1	2.4628	0.0000	FLOOD RISK
960 minute winter	S20	960	62.781	0.061	12.3	0.0869	0.0000	OK
960 minute winter	Outfall	930	62.727	0.057	12.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
30 minute winter	S61	14.004	S49	45.5	1.022	0.506	2.1403	
30 minute winter	S49	11.004	S50	285.7	1.805	1.489	7.5820	
30 minute winter	S50	11.005	S51	265.5	1.676	1.425	7.3252	
960 minute winter	S51	11.006	S52	31.5	0.704	0.167	4.3697	
960 minute winter	S52	11.007	S16	33.2	0.766	0.177	1.8663	
960 minute winter	S16	1.016	S17	95.1	0.363	0.210	6.4689	
960 minute winter	S17	1.017	Detention Basin	95.0	0.307	0.241	31.5106	
960 minute winter	Detention Basin	1.018	S18	94.9	0.384	0.236	30.2469	
960 minute winter	S18	1.019	S19	-60.0	-0.211	-0.046	7.3765	
960 minute winter	S19	Hydro-Brake®	S20	12.3				
960 minute winter	S20	1.021	Outfall	12.3	0.706	0.008	0.1589	2018.9