Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.380	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.041	5.00	45.518	1350	445277.297	404966.851	1.950
S2	0.089	5.00	44.685	1350	445310.101	404971.522	1.778
S3	0.113	5.00	44.176	1350	445336.687	404970.863	1.652
S4	0.095	5.00	43.650	1350	445365.237	404970.156	1.652
S5	0.062	5.00	43.147	1350	445396.281	404974.650	1.735
S6	0.063	5.00	42.688	1350	445416.448	404978.819	1.662
S7			42.459	1350	445429.096	404980.051	1.658
S8	0.025	5.00	42.192	1500	445442.865	404979.160	2.688
S9	0.040	5.00	41.934	1500	445456.819	404977.141	2.571
S10	0.040	5.00	43.952	1350	445569.748	404951.094	1.669
S11	0.057	5.00	43.733	1350	445552.305	404949.242	1.625
S12	0.041	5.00	43.585	1350	445541.005	404948.043	1.591
S13	0.070	5.00	42.713	1350	445512.593	404954.326	1.595
S14	0.061	5.00	41.791	1350	445493.438	404962.983	1.521
S15			41.577	1200	445477.843	404970.792	1.892
S16	0.048	5.00	41.716	1500	445467.906	404974.025	2.401
S17			41.772	1500	445463.044	404971.430	2.494
S18	0.075	5.00	41.713	1500	445460.250	404956.873	2.533
S19	0.080	5.00	41.337	1500	445457.160	404900.619	2.345
S20	0.132	5.00	43.884	1350	445397.051	404941.416	1.650
S21	0.080	5.00	43.295	1350	445392.618	404892.801	1.722
S22	0.090	5.00	42.655	1350	445413.250	404889.767	1.653
S23	0.077	5.00	41.223	1350	445442.854	404883.250	2.078
S24	0.044	5.00	40.688	1500	445453.111	404880.173	2.763
S25	0.190	5.00	41.470	1350	445607.584	404893.769	1.650
S26	0.096	5.00	42.711	1350	445544.872	404887.110	3.268
S27	0.057	5.00	42.244	1350	445526.530	404884.856	2.912
S28	0.023	5.00	41.358	1350	445507.222	404880.666	2.109
S29	0.141	5.00	40.446	1500	445485.727	404874.970	2.278
S30	0.023	5.00	40.274	1350	445475.141	404873.509	2.775
S31	0.068	5.00	40.348	1500	445464.429	404876.763	3.159
S32	0.139	5.00	38.708	1350	445571.606	404832.127	2.465
S33	0.025	5.00	38.521	1350	445563.816	404829.356	2.445
S34	0.130	5.00	37.711	1350	445532.481	404821.772	3.171
S35	0.115	5.00	36.606	1350	445492.336	404812.056	2.486
S36	0.094	5.00	36.565	1350	445475.943	404810.566	2.612
S37			36.692	1500	445464.628	404812.442	2.855
S38			37.135	1800	445446.557	404817.931	3.490
S39	0.072	5.00	38.328	1350	445391.851	404831.654	2.749
S40	0.036	5.00	37.868	1350	445421.179	404825.641	2.830
S41	0.027	5.00	37.288	1800	445441.173	404819.567	3.681

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S42	0.073	5.00	35.704	1800	445432.140	404789.831	2.304
S43			34.600	1000	445418.993	404791.495	1.600
S44	0.084	5.00	45.028	1350	445203.529	404914.932	1.575
S45	0.073	5.00	46.389	1200	445202.925	404942.470	1.985
S46	0.060	5.00	45.901	1200	445204.188	404932.760	2.626
S47	0.064	5.00	46.499	1350	445255.936	404973.820	1.425
S48	0.037	5.00	45.959	1200	445259.793	404946.886	1.921
S49	0.016	5.00	45.601	1350	445260.137	404936.652	2.812
S50			45.056	1350	445260.695	404928.625	2.559
S51	0.041	5.00	43.828	1350	445260.634	404911.328	1.959
S52	0.093	5.00	43.190	1350	445264.746	404899.632	1.772
S53	0.028	5.00	42.879	1350	445271.014	404894.638	1.752
S54	0.093	5.00	43.150	1350	445344.854	404896.454	1.499
S55	0.096	5.00	42.661	1350	445325.046	404896.374	1.620
S56	0.119	5.00	42.334	1350	445297.390	404894.703	1.650
S57			42.554	1350	445282.321	404892.906	2.187
S58	0.114	5.00	37.990	1350	445208.275	404845.069	1.567
S59	0.032	5.00	37.072	1350	445227.034	404834.099	1.975
S60			36.566	1500	445244.773	404829.153	2.085
S61	0.145	5.00	36.390	1500	445263.177	404828.490	2.125
S62	0.114	5.00	38.042	1350	445354.486	404835.190	2.888
S63	0.074	5.00	37.570	1350	445332.285	404835.760	2.760
S64			37.023	1350	445307.034	404834.471	2.507
S65	0.021	5.00	36.645	1500	445286.252	404832.028	2.453
S66			35.320	1500	445286.964	404821.007	2.232
S67			34.600	1000	445296.631	404814.541	1.600
S68		5.00	34.600	1000	445299.824	404801.943	1.600
S69			34.600	1800	445298.283	404797.187	1.700
S70			33.138	1800	445287.194	404789.442	1.425
S71			29.804	1350	445286.491	404705.877	1.425
S72			28.948	1000	445251.741	404687.110	1.701

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	33.135	0.600	43.568	42.907	0.661	50.1	450	5.19	50.0
1.001	S2	S3	26.594	0.600	42.907	42.524	0.383	69.4	450	5.37	50.0
1.002	S3	S4	28.558	0.600	42.524	41.998	0.526	54.3	450	5.55	50.0
1.003	S4	S5	31.368	0.600	41.998	41.412	0.586	53.5	450	5.73	50.0
1.004	S5	S6	20.594	0.600	41.412	41.026	0.386	53.4	450	5.86	50.0
1.005	S6	S7	12.709	0.600	41.026	40.801	0.225	56.5	450	5.93	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	2.876	457.5	5.6	1.500	1.328	0.041	0.0	34	0.995
1.001	2.442	388.4	17.6	1.328	1.202	0.130	0.0	65	1.263
1.002	2.763	439.5	32.9	1.202	1.202	0.243	0.0	82	1.649
1.003	2.783	442.6	45.8	1.202	1.285	0.338	0.0	97	1.828
1.004	2.788	443.4	54.2	1.285	1.212	0.400	0.0	105	1.913
1.005	2.709	430.8	62.7	1.212	1.208	0.463	0.0	115	1.952

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)
1.006	S7	S8	13.797	0.600	40.801	39.654	1.147	12.0	450	5.97	50.0
1.007	S8	S9	14.099	0.600	39.504	39.363	0.141	100.0	600	6.07	50.0
1.008	S9	S17	8.448	0.600	39.363	39.279	0.084	100.6	600	6.13	50.0
2.000	S10	S11	17.541	0.600	42.283	42.108	0.175	100.2	225	5.22	50.0
2.001	S11	S12	11.363	0.600	42.108	41.994	0.114	99.7	225	5.37	50.0
2.002	S12	S13	29.099	0.600	41.994	41.193	0.801	36.3	225	5.59	50.0
2.003	S13	S14	21.020	0.600	41.118	40.270	0.848	24.8	300	5.70	50.0
2.004	S14	S15	17.441	0.600	40.270	39.685	0.585	29.8	300	5.80	50.0
2.005	S15	S16	10.450	0.600	39.685	39.615	0.070	149.3	300	5.94	50.0
2.006	S16	S17	5.511	0.600	39.315	39.278	0.037	148.9	600	5.98	50.0
1.009	S17	S18	14.823	0.600	39.278	39.180	0.098	151.3	600	6.25	50.0
1.010	S18	S19	56.338	0.600	39.180	38.992	0.188	299.7	600	6.92	50.0
1.011	S19	S24	20.844	0.600	38.992	37.925	1.067	19.5	600	6.99	50.0
3.000	S20	S21	48.817	0.600	42.234	41.573	0.661	73.9	450	5.34	50.0
3.001	S21	S22	20.854	0.600	41.573	41.002	0.571	36.5	450	5.45	50.0
3.002	S22	S23	30.312	0.600	41.002	39.145	1.857	16.3	450	5.55	50.0
3.003	S23	S24	10.708	0.600	39.145	38.075	1.070	10.0	450	5.57	50.0
1.012	S24	S31	11.821	0.600	37.925	37.189	0.736	16.1	600	7.02	50.0
4.000	S25	S26	63.065	0.600	39.820	39.443	0.377	167.3	450	5.67	50.0
4.001	S26	S27	18.480	0.600	39.443	39.332	0.111	166.5	450	5.87	50.0
4.002	S27	S28	19.757	0.600	39.332	39.249	0.083	238.0	450	6.12	50.0
4.003	S28	S29	22.237	0.600	39.249	38.168	1.081	20.6	450	6.20	50.0
4.004	S29	S30	10.685	0.600	38.168	37.649	0.519	20.6	450	6.24	50.0
4.005	S30	S31	11.196	0.600	37.499	37.189	0.310	36.1	600	6.28	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)
1.006	5.886	936.1	62.7	1.208	2.088	0.463	0.0	78	3.407
1.007	2.435	688.5	66.1	2.088	1.971	0.488	0.0	124	1.565
1.008	2.428	686.5	71.6	1.971	1.893	0.528	0.0	129	1.597
2.000	1.306	51.9	5.4	1.444	1.400	0.040	0.0	49	0.850
2.001	1.309	52.1	13.1	1.400	1.366	0.097	0.0	77	1.096
2.002	2.177	86.6	18.7	1.366	1.295	0.138	0.0	71	1.746
2.003	3.170	224.1	28.2	1.295	1.221	0.208	0.0	71	2.187
2.004	2.890	204.3	36.5	1.221	1.592	0.269	0.0	85	2.201
2.005	1.284	90.8	36.5	1.592	1.801	0.269	0.0	132	1.216
2.006	1.993	563.4	43.0	1.801	1.894	0.317	0.0	110	1.198
1.009	1.977	559.1	114.5	1.894	1.933	0.845	0.0	183	1.571
1.010	1.401	396.2	124.7	1.933	1.745	0.920	0.0	231	1.248
1.011	5.526	1562.3	135.5	1.745	2.163	1.000	0.0	118	3.460
3.000	2.367	376.5	17.9	1.200	1.272	0.132	0.0	65	1.234
3.001	3.372	536.3	28.7	1.272	1.203	0.212	0.0	70	1.830
3.002	5.050	803.2	40.9	1.203	1.628	0.302	0.0	68	2.702
3.003	6.454	1026.4	51.4	1.628	2.163	0.379	0.0	67	3.428
1.012	6.095	1723.4	192.9	2.163	2.559	1.423	0.0	134	4.097
4.000	1.569	249.5	25.7	1.200	2.818	0.190	0.0	97	1.029
4.001	1.573	250.1	38.8	2.818	2.462	0.286	0.0	119	1.155
4.002	1.313	208.8	46.5	2.462	1.659	0.343	0.0	144	1.065
4.003	4.497	715.3	49.6	1.659	1.828	0.366	0.0	80	2.636
4.004	4.496	715.0	68.7	1.828	2.175	0.507	0.0	94	2.894
4.005	4.060	1148.0	71.8	2.175	2.559	0.530	0.0	100	2.316

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	S31	S38	61.486	0.600	37.189	33.795	3.394	18.1	600	7.20	50.0
5.000	S32	S33	8.269	0.600	36.243	36.076	0.167	49.5	450	5.05	50.0
5.001	S33	S34	32.239	0.600	36.076	34.840	1.236	26.1	450	5.18	50.0
5.002	S34	S35	41.305	0.600	34.540	34.120	0.420	98.3	750	5.43	50.0
5.003	S35	S36	16.460	0.600	34.120	33.953	0.167	98.6	750	5.52	50.0
5.004	S36	S37	11.469	0.600	33.953	33.837	0.116	98.9	750	5.59	50.0
5.005	S37	S38	18.886	0.600	33.837	33.645	0.192	98.4	750	5.70	50.0
1.014	S38	S41	5.627	0.600	33.645	33.607	0.038	148.1	750	7.24	50.0
6.000	S39	S40	29.939	0.600	35.579	35.038	0.541	55.3	300	5.24	50.0
6.001	S40	S41	20.896	0.600	35.038	34.057	0.981	21.3	300	5.34	50.0
1.015	S41	S42	31.078	0.600	33.607	33.400	0.207	150.1	750	7.47	50.0
1.016	S42	S43	13.252	0.600	33.400	33.000	0.400	33.1	750	7.51	50.0
7.000	S44	S46	17.841	0.600	43.453	43.275	0.178	100.2	300	5.19	50.0
8.000	S45	S46	9.792	0.600	44.404	43.425	0.979	10.0	150	5.05	50.0
7.001	S46	S49	56.084	0.600	43.275	42.939	0.336	166.9	300	5.96	50.0
9.000	S47	S48	27.209	0.600	45.074	44.038	1.036	26.3	225	5.18	50.0
9.001	S48	S49	10.239	0.600	44.038	43.014	1.024	10.0	225	5.22	50.0
7.002	S49	S50	8.047	0.600	42.789	42.497	0.292	27.6	450	5.99	50.0
7.003	S50	S51	17.297	0.600	42.497	41.869	0.628	27.5	450	6.07	50.0
7.004	S51	S52	12.397	0.600	41.869	41.418	0.451	27.5	450	6.12	50.0
7.005	S52	S53	8.015	0.600	41.418	41.127	0.291	27.5	450	6.16	50.0
7.006	S53	S57	11.439	0.600	41.127	40.367	0.760	15.1	450	6.19	50.0
10.000	S54	S55	19.808	0.600	41.651	41.041	0.610	32.5	300	5.12	50.0
10.001	S55	S56	27.706	0.600	41.041	40.684	0.357	77.6	300	5.38	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)
1.013	5.738	1622.5	273.9	2.559	2.740	2.021	0.0	166	4.328
5.000	2.894	460.3	18.8	2.015	1.995	0.139	0.0	61	1.448
5.001	3.993	635.0	22.2	1.995	2.421	0.164	0.0	57	1.911
5.002	2.822	1246.6	39.8	2.421	1.736	0.294	0.0	90	1.327
5.003	2.819	1245.2	55.4	1.736	1.862	0.409	0.0	106	1.457
5.004	2.814	1243.3	68.2	1.862	2.105	0.503	0.0	118	1.548
5.005	2.821	1246.5	68.2	2.105	2.740	0.503	0.0	117	1.546
1.014	2.297	1014.9	342.1	2.740	2.931	2.524	0.0	299	2.084
6.000	2.117	149.7	9.8	2.449	2.530	0.072	0.0	51	1.206
6.001	3.421	241.8	14.6	2.530	2.931	0.108	0.0	50	1.912
1.015	2.281	1007.8	360.4	2.931	1.554	2.659	0.0	309	2.099
1.016	4.871	2152.0	370.3	1.554	0.850	2.732	0.0	208	3.693
7.000	1.570	111.0	11.4	1.275	2.326	0.084	0.0	64	1.019
8.000	3.204	56.6	9.9	1.835	2.326	0.073	0.0	42	2.422
7.001	1.214	85.8	29.4	2.326	2.362	0.217	0.0	121	1.104
9.000	2.563	101.9	8.7	1.200	1.696	0.064	0.0	44	1.583
9.001	4.162	165.5	13.7	1.696	2.362	0.101	0.0	44	2.543
7.002	3.884	617.7	45.3	2.362	2.109	0.334	0.0	81	2.305
7.003	3.885	617.9	45.3	2.109	1.509	0.334	0.0	81	2.306
7.004	3.889	618.5	50.8	1.509	1.322	0.375	0.0	87	2.394
7.005	3.885	617.9	63.4	1.322	1.302	0.468	0.0	96	2.540
7.006	5.260	836.6	67.2	1.302	1.737	0.496	0.0	85	3.201
10.000	2.768	195.7	12.6	1.199	1.320	0.093	0.0	51	1.578
10.001	1.786	126.3	25.6	1.320	1.350	0.189	0.0	91	1.409

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)
10.002	S56	S57	15.176	0.600	40.684	40.517	0.167	90.9	300	5.53	50.0
7.007	S57	S65	61.005	0.600	40.367	34.267	6.100	10.0	450	6.35	50.0
11.000	S58	S59	21.731	0.600	36.423	35.247	1.176	18.5	300	5.10	50.0
11.001	S59	S60	18.416	0.600	35.097	34.556	0.541	34.0	450	5.19	50.0
11.002	S60	S61	18.416	0.600	34.481	34.265	0.216	85.3	525	5.31	50.0
11.003	S61	S65	23.345	0.600	34.265	34.192	0.073	319.8	525	5.63	50.0
12.000	S62	S63	22.208	0.600	35.154	34.810	0.344	64.6	300	5.19	50.0
12.001	S63	S64	25.283	0.600	34.810	34.516	0.294	86.0	300	5.44	50.0
12.002	S64	S65	20.925	0.600	34.516	34.417	0.099	211.4	300	5.76	50.0
7.008	S65	S66	11.044	0.600	34.192	33.313	0.879	12.6	525	6.38	50.0
7.009	S66	S67	11.630	0.600	33.088	33.000	0.088	132.2	750	6.46	50.0
1.018	S68	S69	4.999	0.600	33.000	32.900	0.100	50.0	825	5.02	50.0
1.019	S69	S70	13.527	0.600	32.900	31.713	1.187	11.4	300	5.07	50.0
1.020	S70	S71	83.568	0.600	31.713	28.379	3.334	25.1	225	5.60	50.0
1.021	S71	S72	39.494	0.600	28.379	27.247	1.132	34.9	225	5.90	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)
10.002	1.650	116.6	41.7	1.350	1.737	0.308	0.0	124	1.517
7.007	6.456	1026.8	109.0	1.737	1.928	0.804	0.0	98	4.268
11.000	3.674	259.7	15.4	1.267	1.525	0.114	0.0	49	2.039
11.001	3.493	555.6	19.8	1.525	1.560	0.146	0.0	58	1.687
11.002	2.427	525.3	19.8	1.560	1.600	0.146	0.0	68	1.187
11.003	1.247	269.9	39.4	1.600	1.928	0.291	0.0	135	0.901
12.000	1.960	138.5	15.4	2.588	2.460	0.114	0.0	67	1.306
12.001	1.696	119.9	25.5	2.460	2.207	0.188	0.0	93	1.356
12.002	1.077	76.2	25.5	2.207	1.928	0.188	0.0	119	0.973
7.008	6.342	1372.9	176.7	1.928	1.482	1.304	0.0	126	4.430
7.009	2.432	1074.6	176.7	1.482	0.850	1.304	0.0	204	1.822
1.018	4.204	2247.4	0.0	0.775	0.875	0.000	0.0	0	0.000
1.019	4.682	330.9	0.0	1.400	1.125	0.000	0.0	0	0.000
1.020	2.624	104.3	0.0	1.200	1.200	0.000	0.0	0	0.000
1.021	2.222	88.3	0.0	1.200	1.476	0.000	0.0	0	0.000

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	33.135	50.1	450	Circular	45.518	43.568	1.500	44.685	42.907	1.328
1.001	26.594	69.4	450	Circular	44.685	42.907	1.328	44.176	42.524	1.202
1.002	28.558	54.3	450	Circular	44.176	42.524	1.202	43.650	41.998	1.202
1.003	31.368	53.5	450	Circular	43.650	41.998	1.202	43.147	41.412	1.285
1.004	20.594	53.4	450	Circular	43.147	41.412	1.285	42.688	41.026	1.212

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	1350	Manhole	Adoptable
1.002	S3	1350	Manhole	Adoptable	S4	1350	Manhole	Adoptable
1.003	S4	1350	Manhole	Adoptable	S5	1350	Manhole	Adoptable
1.004	S5	1350	Manhole	Adoptable	S6	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)
1.005	12.709	56.5	450	Circular	42.688	41.026	1.212	42.459	40.801	1.208
1.006	13.797	12.0	450	Circular	42.459	40.801	1.208	42.192	39.654	2.088
1.007	14.099	100.0	600	Circular	42.192	39.504	2.088	41.934	39.363	1.971
1.008	8.448	100.6	600	Circular	41.934	39.363	1.971	41.772	39.279	1.893
2.000	17.541	100.2	225	Circular	43.952	42.283	1.444	43.733	42.108	1.400
2.001	11.363	99.7	225	Circular	43.733	42.108	1.400	43.585	41.994	1.366
2.002	29.099	36.3	225	Circular	43.585	41.994	1.366	42.713	41.193	1.295
2.003	21.020	24.8	300	Circular	42.713	41.118	1.295	41.791	40.270	1.221
2.004	17.441	29.8	300	Circular	41.791	40.270	1.221	41.577	39.685	1.592
2.005	10.450	149.3	300	Circular	41.577	39.685	1.592	41.716	39.615	1.801
2.006	5.511	148.9	600	Circular	41.716	39.315	1.801	41.772	39.278	1.894
1.009	14.823	151.3	600	Circular	41.772	39.278	1.894	41.713	39.180	1.933
1.010	56.338	299.7	600	Circular	41.713	39.180	1.933	41.337	38.992	1.745
1.011	20.844	19.5	600	Circular	41.337	38.992	1.745	40.688	37.925	2.163
3.000	48.817	73.9	450	Circular	43.884	42.234	1.200	43.295	41.573	1.272
3.001	20.854	36.5	450	Circular	43.295	41.573	1.272	42.655	41.002	1.203
3.002	30.312	16.3	450	Circular	42.655	41.002	1.203	41.223	39.145	1.628
3.003	10.708	10.0	450	Circular	41.223	39.145	1.628	40.688	38.075	2.163
1.012	11.821	16.1	600	Circular	40.688	37.925	2.163	40.348	37.189	2.559
4.000	63.065	167.3	450	Circular	41.470	39.820	1.200	42.711	39.443	2.818
4.001	18.480	166.5	450	Circular	42.711	39.443	2.818	42.244	39.332	2.462
4.002	19.757	238.0	450	Circular	42.244	39.332	2.462	41.358	39.249	1.659
4.003	22.237	20.6	450	Circular	41.358	39.249	1.659	40.446	38.168	1.828
4.004	10.685	20.6	450	Circular	40.446	38.168	1.828	40.274	37.649	2.175
4.005	11.196	36.1	600	Circular	40.274	37.499	2.175	40.348	37.189	2.559

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.005	S6	1350	Manhole	Adoptable	S7	1350	Manhole	Adoptable
1.006	S7	1350	Manhole	Adoptable	S8	1500	Manhole	Adoptable
1.007	S8	1500	Manhole	Adoptable	S9	1500	Manhole	Adoptable
1.008	S9	1500	Manhole	Adoptable	S17	1500	Manhole	Adoptable
2.000	S10	1350	Manhole	Adoptable	S11	1350	Manhole	Adoptable
2.001	S11	1350	Manhole	Adoptable	S12	1350	Manhole	Adoptable
2.002	S12	1350	Manhole	Adoptable	S13	1350	Manhole	Adoptable
2.003	S13	1350	Manhole	Adoptable	S14	1350	Manhole	Adoptable
2.004	S14	1350	Manhole	Adoptable	S15	1200	Manhole	Adoptable
2.005	S15	1200	Manhole	Adoptable	S16	1500	Manhole	Adoptable
2.006	S16	1500	Manhole	Adoptable	S17	1500	Manhole	Adoptable
1.009	S17	1500	Manhole	Adoptable	S18	1500	Manhole	Adoptable
1.010	S18	1500	Manhole	Adoptable	S19	1500	Manhole	Adoptable
1.011	S19	1500	Manhole	Adoptable	S24	1500	Manhole	Adoptable
3.000	S20	1350	Manhole	Adoptable	S21	1350	Manhole	Adoptable
3.001	S21	1350	Manhole	Adoptable	S22	1350	Manhole	Adoptable
3.002	S22	1350	Manhole	Adoptable	S23	1350	Manhole	Adoptable
3.003	S23	1350	Manhole	Adoptable	S24	1500	Manhole	Adoptable
1.012	S24	1500	Manhole	Adoptable	S31	1500	Manhole	Adoptable
4.000	S25	1350	Manhole	Adoptable	S26	1350	Manhole	Adoptable
4.001	S26	1350	Manhole	Adoptable	S27	1350	Manhole	Adoptable
4.002	S27	1350	Manhole	Adoptable	S28	1350	Manhole	Adoptable
4.003	S28	1350	Manhole	Adoptable	S29	1500	Manhole	Adoptable
4.004	S29	1500	Manhole	Adoptable	S30	1350	Manhole	Adoptable
4.005	S30	1350	Manhole	Adoptable	S31	1500	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.013	61.486	18.1	600	Circular	40.348	37.189	2.559	37.135	33.795	2.740
5.000	8.269	49.5	450	Circular	38.708	36.243	2.015	38.521	36.076	1.995
5.001	32.239	26.1	450	Circular	38.521	36.076	1.995	37.711	34.840	2.421
5.002	41.305	98.3	750	Circular	37.711	34.540	2.421	36.606	34.120	1.736
5.003	16.460	98.6	750	Circular	36.606	34.120	1.736	36.565	33.953	1.862
5.004	11.469	98.9	750	Circular	36.565	33.953	1.862	36.692	33.837	2.105
5.005	18.886	98.4	750	Circular	36.692	33.837	2.105	37.135	33.645	2.740
1.014	5.627	148.1	750	Circular	37.135	33.645	2.740	37.288	33.607	2.931
6.000	29.939	55.3	300	Circular	38.328	35.579	2.449	37.868	35.038	2.530
6.001	20.896	21.3	300	Circular	37.868	35.038	2.530	37.288	34.057	2.931
1.015	31.078	150.1	750	Circular	37.288	33.607	2.931	35.704	33.400	1.554
1.016	13.252	33.1	750	Circular	35.704	33.400	1.554	34.600	33.000	0.850
7.000	17.841	100.2	300	Circular	45.028	43.453	1.275	45.901	43.275	2.326
8.000	9.792	10.0	150	Circular	46.389	44.404	1.835	45.901	43.425	2.326
7.001	56.084	166.9	300	Circular	45.901	43.275	2.326	45.601	42.939	2.362
9.000	27.209	26.3	225	Circular	46.499	45.074	1.200	45.959	44.038	1.696
9.001	10.239	10.0	225	Circular	45.959	44.038	1.696	45.601	43.014	2.362
7.002	8.047	27.6	450	Circular	45.601	42.789	2.362	45.056	42.497	2.109
7.003	17.297	27.5	450	Circular	45.056	42.497	2.109	43.828	41.869	1.509
7.004	12.397	27.5	450	Circular	43.828	41.869	1.509	43.190	41.418	1.322
7.005	8.015	27.5	450	Circular	43.190	41.418	1.322	42.879	41.127	1.302
7.006	11.439	15.1	450	Circular	42.879	41.127	1.302	42.554	40.367	1.737
10.000	19.808	32.5	300	Circular	43.150	41.651	1.199	42.661	41.041	1.320
10.001	27.706	77.6	300	Circular	42.661	41.041	1.320	42.334	40.684	1.350
10.002	15.176	90.9	300	Circular	42.334	40.684	1.350	42.554	40.517	1.737

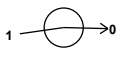
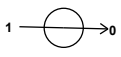
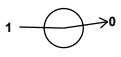
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.013	S31	1500	Manhole	Adoptable	S38	1800	Manhole	Adoptable
5.000	S32	1350	Manhole	Adoptable	S33	1350	Manhole	Adoptable
5.001	S33	1350	Manhole	Adoptable	S34	1350	Manhole	Adoptable
5.002	S34	1350	Manhole	Adoptable	S35	1350	Manhole	Adoptable
5.003	S35	1350	Manhole	Adoptable	S36	1350	Manhole	Adoptable
5.004	S36	1350	Manhole	Adoptable	S37	1500	Manhole	Adoptable
5.005	S37	1500	Manhole	Adoptable	S38	1800	Manhole	Adoptable
1.014	S38	1800	Manhole	Adoptable	S41	1800	Manhole	Adoptable
6.000	S39	1350	Manhole	Adoptable	S40	1350	Manhole	Adoptable
6.001	S40	1350	Manhole	Adoptable	S41	1800	Manhole	Adoptable
1.015	S41	1800	Manhole	Adoptable	S42	1800	Manhole	Adoptable
1.016	S42	1800	Manhole	Adoptable	S43	1000	Manhole	Adoptable
7.000	S44	1350	Manhole	Adoptable	S46	1200	Manhole	Adoptable
8.000	S45	1200	Manhole	Adoptable	S46	1200	Manhole	Adoptable
7.001	S46	1200	Manhole	Adoptable	S49	1350	Manhole	Adoptable
9.000	S47	1350	Manhole	Adoptable	S48	1200	Manhole	Adoptable
9.001	S48	1200	Manhole	Adoptable	S49	1350	Manhole	Adoptable
7.002	S49	1350	Manhole	Adoptable	S50	1350	Manhole	Adoptable
7.003	S50	1350	Manhole	Adoptable	S51	1350	Manhole	Adoptable
7.004	S51	1350	Manhole	Adoptable	S52	1350	Manhole	Adoptable
7.005	S52	1350	Manhole	Adoptable	S53	1350	Manhole	Adoptable
7.006	S53	1350	Manhole	Adoptable	S57	1350	Manhole	Adoptable
10.000	S54	1350	Manhole	Adoptable	S55	1350	Manhole	Adoptable
10.001	S55	1350	Manhole	Adoptable	S56	1350	Manhole	Adoptable
10.002	S56	1350	Manhole	Adoptable	S57	1350	Manhole	Adoptable

Pipeline Schedule

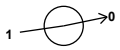
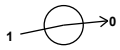
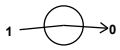
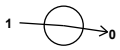
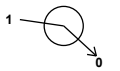
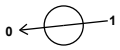
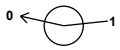
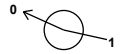
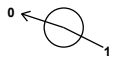
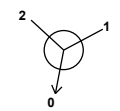
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
7.007	61.005	10.0	450	Circular	42.554	40.367	1.737	36.645	34.267	1.928
11.000	21.731	18.5	300	Circular	37.990	36.423	1.267	37.072	35.247	1.525
11.001	18.416	34.0	450	Circular	37.072	35.097	1.525	36.566	34.556	1.560
11.002	18.416	85.3	525	Circular	36.566	34.481	1.560	36.390	34.265	1.600
11.003	23.345	319.8	525	Circular	36.390	34.265	1.600	36.645	34.192	1.928
12.000	22.208	64.6	300	Circular	38.042	35.154	2.588	37.570	34.810	2.460
12.001	25.283	86.0	300	Circular	37.570	34.810	2.460	37.023	34.516	2.207
12.002	20.925	211.4	300	Circular	37.023	34.516	2.207	36.645	34.417	1.928
7.008	11.044	12.6	525	Circular	36.645	34.192	1.928	35.320	33.313	1.482
7.009	11.630	132.2	750	Circular	35.320	33.088	1.482	34.600	33.000	0.850
1.018	4.999	50.0	825	Circular	34.600	33.000	0.775	34.600	32.900	0.875
1.019	13.527	11.4	300	Circular	34.600	32.900	1.400	33.138	31.713	1.125
1.020	83.568	25.1	225	Circular	33.138	31.713	1.200	29.804	28.379	1.200
1.021	39.494	34.9	225	Circular	29.804	28.379	1.200	28.948	27.247	1.476

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
7.007	S57	1350	Manhole	Adoptable	S65	1500	Manhole	Adoptable
11.000	S58	1350	Manhole	Adoptable	S59	1350	Manhole	Adoptable
11.001	S59	1350	Manhole	Adoptable	S60	1500	Manhole	Adoptable
11.002	S60	1500	Manhole	Adoptable	S61	1500	Manhole	Adoptable
11.003	S61	1500	Manhole	Adoptable	S65	1500	Manhole	Adoptable
12.000	S62	1350	Manhole	Adoptable	S63	1350	Manhole	Adoptable
12.001	S63	1350	Manhole	Adoptable	S64	1350	Manhole	Adoptable
12.002	S64	1350	Manhole	Adoptable	S65	1500	Manhole	Adoptable
7.008	S65	1500	Manhole	Adoptable	S66	1500	Manhole	Adoptable
7.009	S66	1500	Manhole	Adoptable	S67	1000	Manhole	Adoptable
1.018	S68	1000	Manhole	Adoptable	S69	1800	Manhole	Adoptable
1.019	S69	1800	Manhole	Adoptable	S70	1800	Manhole	Adoptable
1.020	S70	1800	Manhole	Adoptable	S71	1350	Manhole	Adoptable
1.021	S71	1350	Manhole	Adoptable	S72	1000	Manhole	Adoptable

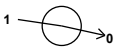
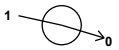
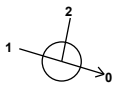
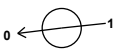
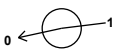
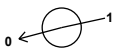
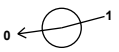
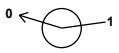
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	445277.297	404966.851	45.518	1.950	1350				
						0	1.000	43.568	450
S2	445310.101	404971.522	44.685	1.778	1350	1	1.000	42.907	450
									
						0	1.001	42.907	450
S3	445336.687	404970.863	44.176	1.652	1350	1	1.001	42.524	450
									
						0	1.002	42.524	450
S4	445365.237	404970.156	43.650	1.652	1350	1	1.002	41.998	450
									
						0	1.003	41.998	450

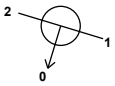
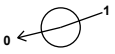
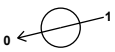
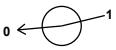
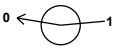
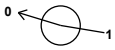
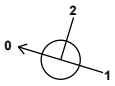
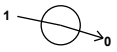
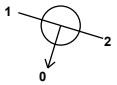
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S5	445396.281	404974.650	43.147	1.735	1350	1	1.003	41.412	450
									
						0	1.004	41.412	450
S6	445416.448	404978.819	42.688	1.662	1350	1	1.004	41.026	450
									
						0	1.005	41.026	450
S7	445429.096	404980.051	42.459	1.658	1350	1	1.005	40.801	450
									
						0	1.006	40.801	450
S8	445442.865	404979.160	42.192	2.688	1500	1	1.006	39.654	450
									
						0	1.007	39.504	600
S9	445456.819	404977.141	41.934	2.571	1500	1	1.007	39.363	600
									
						0	1.008	39.363	600
S10	445569.748	404951.094	43.952	1.669	1350				
						0	2.000	42.283	225
S11	445552.305	404949.242	43.733	1.625	1350	1	2.000	42.108	225
									
						0	2.001	42.108	225
S12	445541.005	404948.043	43.585	1.591	1350	1	2.001	41.994	225
									
						0	2.002	41.994	225
S13	445512.593	404954.326	42.713	1.595	1350	1	2.002	41.193	225
									
						0	2.003	41.118	300
S14	445493.438	404962.983	41.791	1.521	1350	1	2.003	40.270	300
									
						0	2.004	40.270	300
S15	445477.843	404970.792	41.577	1.892	1200	1	2.004	39.685	300
									
						0	2.005	39.685	300
S16	445467.906	404974.025	41.716	2.401	1500	1	2.005	39.615	300
									
						0	2.006	39.315	600
S17	445463.044	404971.430	41.772	2.494	1500	1	2.006	39.278	600
							2	1.008	39.279	600
						0	1.009	39.278	600

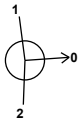
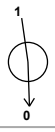
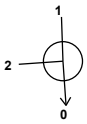
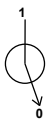
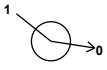
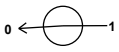
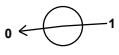
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S18	445460.250	404956.873	41.713	2.533	1500	 1	1.009	39.180	600
						0	1.010	39.180	600
S19	445457.160	404900.619	41.337	2.345	1500	 1	1.010	38.992	600
						0	1.011	38.992	600
S20	445397.051	404941.416	43.884	1.650	1350				
						0	3.000	42.234	450
S21	445392.618	404892.801	43.295	1.722	1350	 1	3.000	41.573	450
						0	3.001	41.573	450
S22	445413.250	404889.767	42.655	1.653	1350	 1	3.001	41.002	450
						0	3.002	41.002	450
S23	445442.854	404883.250	41.223	2.078	1350	 1	3.002	39.145	450
						0	3.003	39.145	450
S24	445453.111	404880.173	40.688	2.763	1500	 1	3.003	38.075	450
						2	1.011	37.925	600
						0	1.012	37.925	600
S25	445607.584	404893.769	41.470	1.650	1350				
						0	4.000	39.820	450
S26	445544.872	404887.110	42.711	3.268	1350	 1	4.000	39.443	450
						0	4.001	39.443	450
S27	445526.530	404884.856	42.244	2.912	1350	 1	4.001	39.332	450
						0	4.002	39.332	450
S28	445507.222	404880.666	41.358	2.109	1350	 1	4.002	39.249	450
						0	4.003	39.249	450
S29	445485.727	404874.970	40.446	2.278	1500	 1	4.003	38.168	450
						0	4.004	38.168	450
S30	445475.141	404873.509	40.274	2.775	1350	 1	4.004	37.649	450
						0	4.005	37.499	600

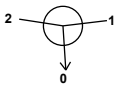
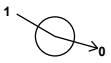
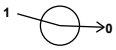
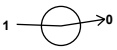
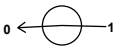
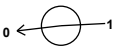
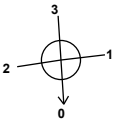
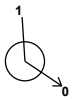
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S31	445464.429	404876.763	40.348	3.159	1500		1	4.005	37.189	600
							2	1.012	37.189	600
							0	1.013	37.189	600
S32	445571.606	404832.127	38.708	2.465	1350		0	5.000	36.243	450
S33	445563.816	404829.356	38.521	2.445	1350		1	5.000	36.076	450
							0	5.001	36.076	450
S34	445532.481	404821.772	37.711	3.171	1350		1	5.001	34.840	450
							0	5.002	34.540	750
S35	445492.336	404812.056	36.606	2.486	1350		1	5.002	34.120	750
							0	5.003	34.120	750
S36	445475.943	404810.566	36.565	2.612	1350		1	5.003	33.953	750
							0	5.004	33.953	750
S37	445464.628	404812.442	36.692	2.855	1500		1	5.004	33.837	750
							0	5.005	33.837	750
S38	445446.557	404817.931	37.135	3.490	1800		1	5.005	33.645	750
							2	1.013	33.795	600
							0	1.014	33.645	750
S39	445391.851	404831.654	38.328	2.749	1350		0	6.000	35.579	300
S40	445421.179	404825.641	37.868	2.830	1350		1	6.000	35.038	300
							0	6.001	35.038	300
S41	445441.173	404819.567	37.288	3.681	1800		1	6.001	34.057	300
							2	1.014	33.607	750
							0	1.015	33.607	750
S42	445432.140	404789.831	35.704	2.304	1800		1	1.015	33.400	750
							0	1.016	33.400	750
S43	445418.993	404791.495	34.600	1.600	1000		1	1.016	33.000	750

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S44	445203.529	404914.932	45.028	1.575	1350		0	7.000	43.453	300
S45	445202.925	404942.470	46.389	1.985	1200		0	8.000	44.404	150
S46	445204.188	404932.760	45.901	2.626	1200		1 2 0	8.000 7.000 7.001	43.425 43.275 43.275	150 300 300
S47	445255.936	404973.820	46.499	1.425	1350		0	9.000	45.074	225
S48	445259.793	404946.886	45.959	1.921	1200		1 0	9.000 9.001	44.038 44.038	225 225
S49	445260.137	404936.652	45.601	2.812	1350		1 2 0	9.001 7.001 7.002	43.014 42.939 42.789	225 300 450
S50	445260.695	404928.625	45.056	2.559	1350		1 0	7.002 7.003	42.497 42.497	450 450
S51	445260.634	404911.328	43.828	1.959	1350		1 0	7.003 7.004	41.869 41.869	450 450
S52	445264.746	404899.632	43.190	1.772	1350		1 0	7.004 7.005	41.418 41.418	450 450
S53	445271.014	404894.638	42.879	1.752	1350		1 0	7.005 7.006	41.127 41.127	450 450
S54	445344.854	404896.454	43.150	1.499	1350		0	10.000	41.651	300
S55	445325.046	404896.374	42.661	1.620	1350		1 0	10.000 10.001	41.041 41.041	300 300
S56	445297.390	404894.703	42.334	1.650	1350		1 0	10.001 10.002	40.684 40.684	300 300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S57	445282.321	404892.906	42.554	2.187	1350	 1	10.002	40.517	300
						2	7.006	40.367	450
						0	7.007	40.367	450
S58	445208.275	404845.069	37.990	1.567	1350				
						0	11.000	36.423	300
S59	445227.034	404834.099	37.072	1.975	1350	 1	11.000	35.247	300
						0	11.001	35.097	450
S60	445244.773	404829.153	36.566	2.085	1500	 1	11.001	34.556	450
						0	11.002	34.481	525
S61	445263.177	404828.490	36.390	2.125	1500	 1	11.002	34.265	525
						0	11.003	34.265	525
S62	445354.486	404835.190	38.042	2.888	1350				
						0	12.000	35.154	300
S63	445332.285	404835.760	37.570	2.760	1350	 1	12.000	34.810	300
						0	12.001	34.810	300
S64	445307.034	404834.471	37.023	2.507	1350	 1	12.001	34.516	300
						0	12.002	34.516	300
S65	445286.252	404832.028	36.645	2.453	1500	 1	12.002	34.417	300
						2	11.003	34.192	525
						3	7.007	34.267	450
						0	7.008	34.192	525
S66	445286.964	404821.007	35.320	2.232	1500	 1	7.008	33.313	525
						0	7.009	33.088	750
S67	445296.631	404814.541	34.600	1.600	1000	 1	7.009	33.000	750
S68	445299.824	404801.943	34.600	1.600	1000				
						0	1.018	33.000	825
S69	445298.283	404797.187	34.600	1.700	1800	 1	1.018	32.900	825
						0	1.019	32.900	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S70	445287.194	404789.442	33.138	1.425	1800	1	1.019	31.713	300
						0	1.020	31.713	225
S71	445286.491	404705.877	29.804	1.425	1350	1	1.020	28.379	225
						0	1.021	28.379	225
S72	445251.741	404687.110	28.948	1.701	1000	1	1.021	27.247	225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	19.000	Additional Storage (m³/ha)	20.0
Ratio-R	0.380	Starting Level (m)	
Summer CV	1.000	Check Discharge Rate(s)	x
Winter CV	1.000	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	0	0	0
100	45	0	0

Node S69 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	32.900	Product Number	CTL-SHE-0233-2960-1200-2960
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	29.6	Min Node Diameter (mm)	1800

Node S68 Pond Storage Structure

Invert Level (m)	33.000	Time to half empty (mins)		Analyse flow through structure	x

Inlets

S43	S67

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	2856.7	1.600	4265.7

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	102.083	28.886
1 year 15 minute winter	71.637	28.886
1 year 30 minute summer	66.886	18.927
1 year 30 minute winter	46.938	18.927
1 year 60 minute summer	45.726	12.084
1 year 60 minute winter	30.379	12.084
1 year 120 minute summer	28.629	7.566
1 year 120 minute winter	19.021	7.566
1 year 180 minute summer	22.256	5.727
1 year 180 minute winter	14.467	5.727
1 year 240 minute summer	17.770	4.696
1 year 240 minute winter	11.806	4.696
1 year 360 minute summer	13.744	3.537
1 year 360 minute winter	8.934	3.537
1 year 480 minute summer	10.893	2.879
1 year 480 minute winter	7.237	2.879
1 year 600 minute summer	8.971	2.454
1 year 600 minute winter	6.130	2.454
1 year 720 minute summer	8.036	2.154
1 year 720 minute winter	5.400	2.154
1 year 960 minute summer	6.658	1.753
1 year 960 minute winter	4.410	1.753
1 year 1440 minute summer	4.897	1.312
1 year 1440 minute winter	3.291	1.312
30 year 15 minute summer	250.125	70.777
30 year 15 minute winter	175.526	70.777
30 year 30 minute summer	164.299	46.491
30 year 30 minute winter	115.298	46.491
30 year 60 minute summer	110.635	29.238
30 year 60 minute winter	73.503	29.238
30 year 120 minute summer	67.583	17.860
30 year 120 minute winter	44.901	17.860
30 year 180 minute summer	51.478	13.247
30 year 180 minute winter	33.462	13.247
30 year 240 minute summer	40.374	10.670
30 year 240 minute winter	26.823	10.670
30 year 360 minute summer	30.435	7.832
30 year 360 minute winter	19.784	7.832
30 year 480 minute summer	23.798	6.289
30 year 480 minute winter	15.811	6.289
30 year 600 minute summer	19.383	5.302
30 year 600 minute winter	13.243	5.302
30 year 720 minute summer	17.199	4.609
30 year 720 minute winter	11.559	4.609
30 year 960 minute summer	14.028	3.694
30 year 960 minute winter	9.293	3.694
30 year 1440 minute summer	10.077	2.701
30 year 1440 minute winter	6.772	2.701
100 year +45% CC 15 minute summer	469.509	132.855
100 year +45% CC 15 minute winter	329.480	132.855
100 year +45% CC 30 minute summer	311.257	88.075
100 year +45% CC 30 minute winter	218.426	88.075
100 year +45% CC 60 minute summer	210.766	55.699
100 year +45% CC 60 minute winter	140.028	55.699
100 year +45% CC 120 minute summer	128.858	34.053
100 year +45% CC 120 minute winter	85.610	34.053
100 year +45% CC 180 minute summer	97.908	25.195
100 year +45% CC 180 minute winter	63.643	25.195
100 year +45% CC 240 minute summer	76.520	20.222
100 year +45% CC 240 minute winter	50.838	20.222
100 year +45% CC 360 minute summer	57.309	14.748
100 year +45% CC 360 minute winter	37.253	14.748
100 year +45% CC 480 minute summer	44.627	11.794
100 year +45% CC 480 minute winter	29.649	11.794
100 year +45% CC 600 minute summer	36.225	9.908
100 year +45% CC 600 minute winter	24.751	9.908
100 year +45% CC 720 minute summer	32.051	8.590
100 year +45% CC 720 minute winter	21.541	8.590
100 year +45% CC 960 minute summer	26.020	6.852
100 year +45% CC 960 minute winter	17.236	6.852
100 year +45% CC 1440 minute summer	18.558	4.974
100 year +45% CC 1440 minute winter	12.472	4.974

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	43.606	0.038	6.8	0.0700	0.0000	OK
15 minute summer	S2	10	42.977	0.070	21.5	0.1712	0.0000	OK
15 minute summer	S3	10	42.615	0.091	39.9	0.2549	0.0000	OK
15 minute summer	S4	11	42.106	0.108	55.2	0.2792	0.0000	OK
15 minute summer	S5	11	41.533	0.121	64.9	0.2587	0.0000	OK
15 minute summer	S6	11	41.171	0.145	75.3	0.3177	0.0000	OK
15 minute summer	S7	11	40.894	0.093	75.6	0.1326	0.0000	OK
15 minute summer	S8	11	39.661	0.157	79.7	0.3059	0.0000	OK
15 minute summer	S9	11	39.550	0.187	86.2	0.3878	0.0000	OK
15 minute summer	S10	10	42.337	0.054	6.7	0.1031	0.0000	OK
15 minute summer	S11	10	42.199	0.091	16.1	0.1951	0.0000	OK
15 minute summer	S12	11	42.074	0.080	22.7	0.1567	0.0000	OK
15 minute summer	S13	10	41.197	0.079	33.9	0.1831	0.0000	OK
15 minute summer	S14	11	40.363	0.093	43.9	0.2087	0.0000	OK
15 minute summer	S15	11	39.847	0.162	43.7	0.1833	0.0000	OK
15 minute summer	S16	11	39.525	0.210	51.6	0.4547	0.0000	OK
15 minute summer	S17	11	39.520	0.242	137.5	0.4278	0.0000	OK
15 minute summer	S18	11	39.438	0.258	149.2	0.6093	0.0000	OK
15 minute summer	S19	11	39.124	0.132	160.6	0.3238	0.0000	OK
15 minute summer	S20	10	42.307	0.073	22.0	0.2198	0.0000	OK
15 minute summer	S21	10	41.653	0.080	35.0	0.1896	0.0000	OK
15 minute summer	S22	10	41.078	0.076	49.5	0.1912	0.0000	OK
15 minute summer	S23	10	39.226	0.081	61.9	0.1750	0.0000	OK
15 minute summer	S24	11	38.090	0.165	227.4	0.3450	0.0000	OK
15 minute summer	S25	10	39.925	0.105	31.7	0.3928	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	6.7	0.624	0.015	0.3659	
15 minute summer	S2	1.001	S3	21.1	1.099	0.054	0.5141	
15 minute summer	S3	1.002	S4	39.4	1.520	0.090	0.7441	
15 minute summer	S4	1.003	S5	55.0	1.739	0.124	0.9929	
15 minute summer	S5	1.004	S6	65.3	1.674	0.147	0.8053	
15 minute summer	S6	1.005	S7	75.6	2.263	0.175	0.4295	
15 minute summer	S7	1.006	S8	75.7	3.417	0.081	0.3059	
15 minute summer	S8	1.007	S9	79.8	1.201	0.116	0.9382	
15 minute summer	S9	1.008	S17	86.1	0.956	0.125	0.7624	
15 minute summer	S10	2.000	S11	6.6	0.597	0.127	0.1967	
15 minute summer	S11	2.001	S12	15.9	1.143	0.305	0.1581	
15 minute summer	S12	2.002	S13	22.5	1.808	0.260	0.3626	
15 minute summer	S13	2.003	S14	33.8	2.019	0.151	0.3522	
15 minute summer	S14	2.004	S15	43.7	1.541	0.214	0.5015	
15 minute summer	S15	2.005	S16	44.0	1.211	0.484	0.3795	
15 minute summer	S16	2.006	S17	51.5	0.557	0.091	0.5350	
15 minute summer	S17	1.009	S18	137.3	1.235	0.246	1.6485	
15 minute summer	S18	1.010	S19	147.9	1.878	0.373	4.5614	
15 minute summer	S19	1.011	S24	158.9	2.971	0.102	1.1362	
15 minute summer	S20	3.000	S21	21.7	1.221	0.058	0.8684	
15 minute summer	S21	3.001	S22	34.5	1.887	0.064	0.3826	
15 minute summer	S22	3.002	S23	49.1	2.673	0.061	0.5577	
15 minute summer	S23	3.003	S24	61.5	3.413	0.060	0.1932	
15 minute summer	S24	1.012	S31	226.8	3.422	0.132	0.7840	
15 minute summer	S25	4.000	S26	30.9	0.881	0.124	2.2470	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S26	11	39.586	0.143	46.9	0.2886	0.0000	OK
15 minute summer	S27	11	39.493	0.161	55.6	0.2934	0.0000	OK
15 minute summer	S28	11	39.336	0.087	59.4	0.1427	0.0000	OK
15 minute summer	S29	11	38.283	0.115	81.8	0.3444	0.0000	OK
15 minute summer	S30	11	37.618	0.119	85.5	0.1898	0.0000	OK
15 minute summer	S31	11	37.366	0.177	323.1	0.3898	0.0000	OK
15 minute summer	S32	10	36.317	0.074	23.2	0.1906	0.0000	OK
15 minute summer	S33	10	36.140	0.064	27.3	0.1048	0.0000	OK
15 minute summer	S34	10	34.639	0.099	48.6	0.2239	0.0000	OK
15 minute summer	S35	11	34.390	0.270	67.0	0.6356	0.0000	OK
15 minute summer	S36	11	34.377	0.424	118.1	0.9120	0.0000	OK
15 minute summer	S37	11	34.334	0.497	178.1	0.8777	0.0000	OK
15 minute summer	S38	11	34.314	0.669	480.3	1.7025	0.0000	OK
15 minute summer	S39	10	35.638	0.059	12.0	0.1144	0.0000	OK
15 minute summer	S40	10	35.093	0.055	17.9	0.0921	0.0000	OK
15 minute summer	S41	11	34.284	0.677	570.0	1.8206	0.0000	OK
15 minute winter	S42	10	34.252	0.852	589.9	2.7084	0.0000	SURCHARGED
480 minute summer	S43	328	33.198	0.198	82.5	0.0000	0.0000	OK
15 minute summer	S44	10	43.524	0.071	14.0	0.1774	0.0000	OK
15 minute summer	S45	10	44.454	0.050	12.2	0.0929	0.0000	OK
15 minute summer	S46	11	43.411	0.136	36.0	0.2164	0.0000	OK
15 minute summer	S47	10	45.124	0.050	10.7	0.1154	0.0000	OK
15 minute summer	S48	10	44.089	0.051	16.8	0.0769	0.0000	OK
15 minute summer	S49	11	42.890	0.101	54.0	0.1553	0.0000	OK
15 minute summer	S50	11	42.590	0.093	54.1	0.1333	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S26	4.001	S27	46.5	0.989	0.186	0.8697	
15 minute summer	S27	4.002	S28	55.7	1.576	0.267	0.7128	
15 minute summer	S28	4.003	S29	59.4	2.252	0.083	0.5895	
15 minute summer	S29	4.004	S30	81.8	2.804	0.114	0.3121	
15 minute summer	S30	4.005	S31	85.5	1.595	0.074	0.6103	
15 minute summer	S31	1.013	S38	321.4	3.577	0.198	10.1016	
15 minute summer	S32	5.000	S33	23.1	1.497	0.050	0.1278	
15 minute summer	S33	5.001	S34	26.9	1.992	0.042	0.4356	
15 minute summer	S34	5.002	S35	47.8	1.232	0.038	3.6374	
15 minute summer	S35	5.003	S36	105.8	1.181	0.085	3.2836	
15 minute summer	S36	5.004	S37	178.1	1.313	0.143	3.2465	
15 minute summer	S37	5.005	S38	167.3	0.680	0.134	6.8381	
15 minute summer	S38	1.014	S41	551.2	1.681	0.543	2.3430	
15 minute summer	S39	6.000	S40	11.9	1.292	0.079	0.2754	
15 minute summer	S40	6.001	S41	17.7	1.909	0.073	0.6868	
15 minute summer	S41	1.015	S42	615.4	1.980	0.611	13.3367	
15 minute winter	S42	1.016	S43	630.2	4.160	0.293	2.9393	
15 minute summer	S44	7.000	S46	13.9	0.675	0.125	0.3891	
15 minute summer	S45	8.000	S46	12.1	2.463	0.214	0.0482	
15 minute summer	S46	7.001	S49	35.2	1.153	0.410	1.7106	
15 minute summer	S47	9.000	S48	10.6	1.613	0.104	0.1788	
15 minute summer	S48	9.001	S49	16.7	2.590	0.101	0.0659	
15 minute summer	S49	7.002	S50	54.1	2.164	0.088	0.2012	
15 minute summer	S50	7.003	S51	54.2	2.186	0.088	0.4287	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S51	11	41.968	0.099	60.7	0.1839	0.0000	OK
15 minute summer	S52	11	41.541	0.123	75.6	0.3058	0.0000	OK
15 minute summer	S53	11	41.227	0.100	80.2	0.1752	0.0000	OK
15 minute summer	S54	10	41.708	0.057	15.5	0.1511	0.0000	OK
15 minute summer	S55	10	41.142	0.101	31.4	0.2643	0.0000	OK
15 minute summer	S56	10	40.834	0.150	50.8	0.4313	0.0000	OK
15 minute summer	S57	11	40.477	0.110	130.5	0.1572	0.0000	OK
15 minute summer	S58	10	36.479	0.056	19.0	0.1617	0.0000	OK
15 minute summer	S59	10	35.163	0.066	24.1	0.1151	0.0000	OK
15 minute summer	S60	10	34.556	0.075	23.9	0.1322	0.0000	OK
15 minute summer	S61	11	34.418	0.153	47.9	0.4788	0.0000	OK
15 minute summer	S62	10	35.228	0.074	19.0	0.1647	0.0000	OK
15 minute summer	S63	10	34.916	0.106	31.1	0.2081	0.0000	OK
15 minute summer	S64	11	34.656	0.140	30.8	0.1997	0.0000	OK
15 minute summer	S65	12	34.348	0.156	211.9	0.3030	0.0000	OK
15 minute summer	S66	9	34.088	1.000	210.4	1.7675	0.0000	SURCHARGED
480 minute summer	S67	328	33.196	0.196	39.1	0.0000	0.0000	OK
480 minute summer	S68	336	33.191	0.191	80.7	573.9265	0.0000	OK
480 minute winter	S69	368	33.268	0.368	93.6	0.9356	0.0000	SURCHARGED
360 minute summer	S70	248	31.791	0.078	29.7	0.1973	0.0000	OK
600 minute summer	S71	405	28.465	0.086	26.6	0.1227	0.0000	OK
480 minute summer	S72	336	27.330	0.083	26.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S51	7.004	S52	60.8	1.994	0.098	0.3788	
15 minute summer	S52	7.005	S53	75.7	2.473	0.122	0.2459	
15 minute summer	S53	7.006	S57	80.2	2.863	0.096	0.3208	
15 minute summer	S54	10.000	S55	15.4	1.045	0.079	0.2971	
15 minute summer	S55	10.001	S56	31.0	1.111	0.246	0.7764	
15 minute summer	S56	10.002	S57	50.3	1.517	0.431	0.5030	
15 minute summer	S57	7.007	S65	130.7	4.458	0.127	1.7892	
15 minute summer	S58	11.000	S59	18.8	2.120	0.072	0.1928	
15 minute summer	S59	11.001	S60	23.9	1.729	0.043	0.2546	
15 minute summer	S60	11.002	S61	23.8	0.693	0.045	0.6531	
15 minute summer	S61	11.003	S65	47.0	0.984	0.174	1.2071	
15 minute summer	S62	12.000	S63	18.8	1.062	0.136	0.3963	
15 minute summer	S63	12.001	S64	30.8	1.152	0.257	0.6811	
15 minute summer	S64	12.002	S65	30.9	1.001	0.405	0.6456	
15 minute summer	S65	7.008	S66	210.4	4.131	0.153	1.4324	
15 minute summer	S66	7.009	S67	301.7	2.630	0.281	2.5753	
480 minute summer	S68	1.018	S69	99.2	0.728	0.044	0.7877	
480 minute winter	S69	1.019	S70	29.8	2.523	0.090	0.1634	
360 minute summer	S70	1.020	S71	26.9	2.077	0.257	1.0808	
600 minute summer	S71	1.021	S72	26.1	1.917	0.295	0.5376	790.2

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	43.626	0.058	16.7	0.1072	0.0000	OK
15 minute summer	S2	10	43.020	0.113	52.9	0.2739	0.0000	OK
15 minute summer	S3	10	42.673	0.149	98.5	0.4158	0.0000	OK
15 minute summer	S4	10	42.176	0.178	136.3	0.4594	0.0000	OK
15 minute summer	S5	10	41.618	0.206	160.4	0.4413	0.0000	OK
15 minute summer	S6	11	41.270	0.244	185.0	0.5353	0.0000	OK
15 minute summer	S7	11	40.954	0.153	185.9	0.2195	0.0000	OK
15 minute summer	S8	11	39.790	0.286	195.9	0.5592	0.0000	OK
15 minute summer	S9	11	39.739	0.376	212.0	0.7816	0.0000	OK
15 minute summer	S10	10	42.369	0.086	16.3	0.1635	0.0000	OK
15 minute summer	S11	10	42.269	0.161	39.4	0.3437	0.0000	OK
15 minute summer	S12	10	42.132	0.138	55.6	0.2682	0.0000	OK
15 minute summer	S13	10	41.248	0.130	83.4	0.2993	0.0000	OK
15 minute summer	S14	11	40.441	0.171	108.0	0.3810	0.0000	OK
15 minute summer	S15	11	40.038	0.353	107.3	0.3988	0.0000	SURCHARGED
15 minute summer	S16	11	39.725	0.410	126.5	0.8880	0.0000	OK
15 minute summer	S17	11	39.716	0.438	338.5	0.7742	0.0000	OK
15 minute summer	S18	11	39.610	0.430	367.6	1.0149	0.0000	OK
15 minute summer	S19	11	39.214	0.222	398.2	0.5428	0.0000	OK
15 minute summer	S20	10	42.348	0.114	53.9	0.3461	0.0000	OK
15 minute summer	S21	10	41.702	0.129	86.0	0.3056	0.0000	OK
15 minute summer	S22	10	41.122	0.120	122.0	0.3036	0.0000	OK
15 minute summer	S23	10	39.276	0.131	152.6	0.2839	0.0000	OK
15 minute summer	S24	11	38.220	0.295	564.6	0.6146	0.0000	OK
15 minute summer	S25	10	39.988	0.168	77.5	0.6256	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	16.5	0.795	0.036	0.7095	
15 minute summer	S2	1.001	S3	52.3	1.377	0.135	1.0179	
15 minute summer	S3	1.002	S4	97.6	1.887	0.222	1.4828	
15 minute summer	S4	1.003	S5	135.1	2.107	0.305	2.0202	
15 minute summer	S5	1.004	S6	160.5	2.026	0.362	1.6316	
15 minute summer	S6	1.005	S7	185.9	2.753	0.431	0.8615	
15 minute summer	S7	1.006	S8	186.2	4.231	0.199	0.6078	
15 minute summer	S8	1.007	S9	196.4	1.264	0.285	2.2458	
15 minute summer	S9	1.008	S17	212.0	1.043	0.309	1.7145	
15 minute summer	S10	2.000	S11	16.2	0.726	0.311	0.3883	
15 minute summer	S11	2.001	S12	38.9	1.391	0.748	0.3176	
15 minute summer	S12	2.002	S13	55.0	2.247	0.636	0.7132	
15 minute summer	S13	2.003	S14	83.1	2.371	0.371	0.7388	
15 minute summer	S14	2.004	S15	107.3	1.730	0.525	0.9747	
15 minute summer	S15	2.005	S16	107.8	1.542	1.187	0.6995	
15 minute summer	S16	2.006	S17	126.5	0.608	0.224	1.1727	
15 minute summer	S17	1.009	S18	338.4	1.550	0.605	3.2372	
15 minute summer	S18	1.010	S19	367.0	2.364	0.926	8.7545	
15 minute summer	S19	1.011	S24	396.6	3.479	0.254	2.4196	
15 minute summer	S20	3.000	S21	53.3	1.541	0.142	1.6899	
15 minute summer	S21	3.001	S22	85.2	2.377	0.159	0.7478	
15 minute summer	S22	3.002	S23	121.1	3.402	0.151	1.0949	
15 minute summer	S23	3.003	S24	152.9	4.140	0.149	0.4315	
15 minute summer	S24	1.012	S31	563.9	4.115	0.327	1.6360	
15 minute summer	S25	4.000	S26	76.2	1.081	0.306	4.4807	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S26	11	39.690	0.247	115.4	0.4980	0.0000	OK
15 minute summer	S27	11	39.592	0.260	136.5	0.4733	0.0000	OK
15 minute summer	S28	11	39.388	0.139	146.0	0.2295	0.0000	OK
15 minute summer	S29	11	38.364	0.196	201.3	0.5902	0.0000	OK
15 minute summer	S30	11	37.710	0.211	210.9	0.3376	0.0000	OK
15 minute summer	S31	11	37.486	0.297	801.6	0.6531	0.0000	OK
15 minute summer	S32	10	36.364	0.121	56.8	0.3107	0.0000	OK
15 minute summer	S33	10	36.173	0.097	66.7	0.1590	0.0000	OK
15 minute summer	S34	10	35.065	0.525	119.8	1.1814	0.0000	OK
15 minute summer	S35	11	35.065	0.945	218.0	2.2279	0.0000	SURCHARGED
15 minute summer	S36	11	35.056	1.103	286.3	2.3716	0.0000	SURCHARGED
15 minute summer	S37	11	35.039	1.202	303.0	2.1247	0.0000	SURCHARGED
15 minute summer	S38	11	35.006	1.361	1063.7	3.4640	0.0000	SURCHARGED
15 minute summer	S39	10	35.672	0.093	29.4	0.1823	0.0000	OK
15 minute summer	S40	10	35.124	0.086	43.8	0.1443	0.0000	OK
15 minute summer	S41	10	34.842	1.235	1163.7	3.3237	0.0000	SURCHARGED
15 minute winter	S42	9	34.631	1.231	1138.0	3.9128	0.0000	SURCHARGED
360 minute winter	S43	344	33.475	0.475	148.9	0.0000	0.0000	OK
15 minute summer	S44	10	43.566	0.113	34.3	0.2818	0.0000	OK
15 minute summer	S45	9	44.486	0.082	29.8	0.1523	0.0000	OK
15 minute summer	S46	11	43.535	0.260	88.3	0.4124	0.0000	OK
15 minute summer	S47	10	45.153	0.079	26.1	0.1834	0.0000	OK
15 minute summer	S48	10	44.121	0.083	41.0	0.1258	0.0000	OK
15 minute summer	S49	11	42.958	0.169	131.5	0.2612	0.0000	OK
15 minute summer	S50	11	42.648	0.151	131.6	0.2165	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S26	4.001	S27	114.3	1.245	0.457	1.6968	
15 minute summer	S27	4.002	S28	137.0	2.023	0.656	1.3465	
15 minute summer	S28	4.003	S29	146.4	2.721	0.205	1.2012	
15 minute summer	S29	4.004	S30	201.9	3.446	0.282	0.6270	
15 minute summer	S30	4.005	S31	211.2	1.914	0.184	1.2750	
15 minute summer	S31	1.013	S38	804.8	3.569	0.496	12.9375	
15 minute summer	S32	5.000	S33	56.5	1.904	0.123	0.2462	
15 minute summer	S33	5.001	S34	66.8	2.497	0.105	1.6807	
15 minute summer	S34	5.002	S35	181.1	1.162	0.145	15.8867	
15 minute summer	S35	5.003	S36	256.1	1.094	0.206	7.2444	
15 minute summer	S36	5.004	S37	303.0	1.334	0.244	5.0477	
15 minute summer	S37	5.005	S38	324.9	0.738	0.261	8.3121	
15 minute summer	S38	1.014	S41	1118.3	2.541	1.102	2.4766	
15 minute summer	S39	6.000	S40	29.2	1.657	0.195	0.5268	
15 minute summer	S40	6.001	S41	43.6	1.756	0.180	0.9086	
15 minute summer	S41	1.015	S42	1184.8	2.692	1.176	13.6781	
15 minute winter	S42	1.016	S43	1170.8	4.887	0.544	3.1828	
15 minute summer	S44	7.000	S46	34.0	0.818	0.307	0.7890	
15 minute summer	S45	8.000	S46	29.8	3.008	0.527	0.1117	
15 minute summer	S46	7.001	S49	85.6	1.396	0.997	3.4295	
15 minute summer	S47	9.000	S48	25.9	2.021	0.254	0.3489	
15 minute summer	S48	9.001	S49	40.7	3.261	0.246	0.1280	
15 minute summer	S49	7.002	S50	131.6	2.604	0.213	0.4070	
15 minute summer	S50	7.003	S51	131.7	2.629	0.213	0.8672	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S51	11	42.036	0.167	147.8	0.3091	0.0000	OK
15 minute summer	S52	11	41.628	0.210	184.2	0.5218	0.0000	OK
15 minute summer	S53	11	41.296	0.169	195.4	0.2961	0.0000	OK
15 minute summer	S54	10	41.740	0.089	38.0	0.2369	0.0000	OK
15 minute summer	S55	11	41.208	0.167	76.9	0.4375	0.0000	OK
15 minute summer	S56	11	41.047	0.363	125.0	1.0439	0.0000	SURCHARGED
15 minute summer	S57	11	40.537	0.170	318.0	0.2438	0.0000	OK
15 minute summer	S58	10	36.513	0.090	46.6	0.2588	0.0000	OK
15 minute summer	S59	10	35.202	0.105	59.3	0.1841	0.0000	OK
15 minute summer	S60	10	34.597	0.116	58.9	0.2056	0.0000	OK
15 minute winter	S61	9	34.539	0.274	110.3	0.8590	0.0000	OK
15 minute summer	S62	10	35.277	0.123	46.6	0.2737	0.0000	OK
15 minute summer	S63	10	34.999	0.189	76.4	0.3715	0.0000	OK
15 minute summer	S64	11	34.777	0.261	76.0	0.3734	0.0000	OK
15 minute winter	S65	8	34.507	0.315	483.3	0.6100	0.0000	OK
15 minute winter	S66	8	34.447	1.359	480.5	2.4012	0.0000	SURCHARGED
360 minute winter	S67	352	33.472	0.472	71.2	0.0000	0.0000	OK
360 minute winter	S68	352	33.467	0.467	168.8	1445.9510	0.0000	OK
360 minute summer	S69	320	33.512	0.612	131.1	1.5582	0.0000	SURCHARGED
120 minute winter	S70	194	31.795	0.082	29.6	0.2075	0.0000	OK
240 minute summer	S71	396	28.471	0.092	29.5	0.1314	0.0000	OK
240 minute summer	S72	400	27.336	0.089	29.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S51	7.004	S52	147.9	2.348	0.239	0.7821	
15 minute summer	S52	7.005	S53	184.5	2.907	0.299	0.5091	
15 minute summer	S53	7.006	S57	195.5	3.577	0.234	0.6254	
15 minute summer	S54	10.000	S55	37.8	1.323	0.193	0.5701	
15 minute summer	S55	10.001	S56	76.4	1.291	0.605	1.5344	
15 minute summer	S56	10.002	S57	122.5	1.742	1.051	1.0356	
15 minute summer	S57	7.007	S65	319.0	5.143	0.311	3.8045	
15 minute summer	S58	11.000	S59	46.2	2.715	0.178	0.3701	
15 minute summer	S59	11.001	S60	58.9	2.213	0.106	0.4906	
15 minute summer	S60	11.002	S61	58.7	0.808	0.112	1.3692	
15 minute winter	S61	11.003	S65	109.5	1.047	0.406	2.8105	
15 minute summer	S62	12.000	S63	46.2	1.252	0.334	0.8210	
15 minute summer	S63	12.001	S64	76.0	1.360	0.634	1.3969	
15 minute summer	S64	12.002	S65	75.9	1.266	0.996	1.2460	
15 minute winter	S65	7.008	S66	480.5	4.897	0.350	1.9390	
15 minute winter	S66	7.009	S67	500.9	3.387	0.466	2.6071	
360 minute winter	S68	1.018	S69	132.3	0.731	0.059	1.8184	
360 minute summer	S69	1.019	S70	29.8	2.440	0.090	0.1725	
120 minute winter	S70	1.020	S71	29.5	2.098	0.283	1.1771	
240 minute summer	S71	1.021	S72	29.5	1.981	0.334	0.5890	701.3

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.53%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S1	10	43.647	0.079	31.4	0.1455	0.0000	OK
15 minute summer	S2	10	43.068	0.161	99.3	0.3929	0.0000	OK
15 minute summer	S3	10	42.741	0.217	184.8	0.6077	0.0000	OK
15 minute summer	S4	10	42.265	0.267	256.1	0.6901	0.0000	OK
15 minute summer	S5	10	41.741	0.329	301.6	0.7065	0.0000	OK
15 minute summer	S6	11	41.405	0.379	347.5	0.8300	0.0000	OK
15 minute summer	S7	12	41.064	0.263	348.9	0.3757	0.0000	OK
15 minute summer	S8	12	40.639	1.135	366.3	2.2174	0.0000	SURCHARGED
15 minute summer	S9	12	40.572	1.209	391.1	2.5118	0.0000	SURCHARGED
15 minute summer	S10	12	42.871	0.588	30.7	1.1229	0.0000	SURCHARGED
15 minute summer	S11	12	42.821	0.713	68.4	1.5214	0.0000	SURCHARGED
15 minute summer	S12	12	42.615	0.621	93.1	1.2089	0.0000	SURCHARGED
15 minute summer	S13	12	41.726	0.608	139.4	1.4038	0.0000	SURCHARGED
15 minute summer	S14	12	41.376	1.106	178.6	2.4691	0.0000	SURCHARGED
15 minute summer	S15	12	40.874	1.189	166.4	1.3450	0.0000	SURCHARGED
15 minute summer	S16	12	40.524	1.209	199.0	2.6194	0.0000	SURCHARGED
15 minute summer	S17	12	40.508	1.230	578.2	2.1739	0.0000	SURCHARGED
15 minute summer	S18	12	40.320	1.140	626.8	2.6902	0.0000	SURCHARGED
15 minute summer	S19	12	39.794	0.802	663.8	1.9640	0.0000	SURCHARGED
15 minute summer	S20	10	42.394	0.160	101.1	0.4857	0.0000	OK
15 minute summer	S21	10	41.758	0.185	161.5	0.4374	0.0000	OK
15 minute summer	S22	10	41.172	0.170	228.9	0.4277	0.0000	OK
15 minute summer	S23	12	39.605	0.460	291.7	0.9984	0.0000	SURCHARGED
15 minute summer	S24	12	39.482	1.557	911.9	3.2481	0.0000	SURCHARGED
15 minute summer	S25	10	40.060	0.240	145.6	0.8948	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S1	1.000	S2	31.1	0.920	0.068	1.1532	
15 minute summer	S2	1.001	S3	98.2	1.561	0.253	1.6860	
15 minute summer	S3	1.002	S4	183.4	2.119	0.417	2.4813	
15 minute summer	S4	1.003	S5	254.1	2.286	0.574	3.4876	
15 minute summer	S5	1.004	S6	301.3	2.253	0.680	2.7454	
15 minute summer	S6	1.005	S7	348.9	3.095	0.810	1.4633	
15 minute summer	S7	1.006	S8	348.0	4.213	0.372	1.7553	
15 minute summer	S8	1.007	S9	361.8	1.284	0.525	3.9714	
15 minute summer	S9	1.008	S17	385.9	1.370	0.562	2.3796	
15 minute summer	S10	2.000	S11	24.9	0.776	0.480	0.6976	
15 minute summer	S11	2.001	S12	61.7	1.552	1.185	0.4519	
15 minute summer	S12	2.002	S13	85.7	2.451	0.991	1.1573	
15 minute summer	S13	2.003	S14	131.8	2.340	0.588	1.4802	
15 minute summer	S14	2.004	S15	166.4	2.363	0.815	1.2282	
15 minute summer	S15	2.005	S16	169.2	2.403	1.864	0.7359	
15 minute summer	S16	2.006	S17	207.0	0.735	0.367	1.5523	
15 minute summer	S17	1.009	S18	571.9	2.031	1.023	4.1753	
15 minute summer	S18	1.010	S19	605.2	2.540	1.528	15.8691	
15 minute summer	S19	1.011	S24	667.8	3.722	0.427	5.8713	
15 minute summer	S20	3.000	S21	100.2	1.789	0.266	2.7357	
15 minute summer	S21	3.001	S22	160.0	2.831	0.298	1.2114	
15 minute summer	S22	3.002	S23	232.8	3.835	0.290	3.0931	
15 minute summer	S23	3.003	S24	273.1	4.339	0.266	1.6966	
15 minute summer	S24	1.012	S31	929.6	4.171	0.539	3.3297	
15 minute summer	S25	4.000	S26	143.5	1.224	0.575	7.3909	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.53%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S26	11	39.846	0.403	217.1	0.8144	0.0000	OK
15 minute summer	S27	11	39.727	0.395	254.4	0.7192	0.0000	OK
15 minute summer	S28	12	39.530	0.281	270.1	0.4634	0.0000	OK
15 minute summer	S29	12	39.321	1.153	372.3	3.4646	0.0000	SURCHARGED
15 minute summer	S30	12	39.077	1.578	358.9	2.5206	0.0000	SURCHARGED
15 minute summer	S31	12	39.005	1.816	1314.8	3.9924	0.0000	SURCHARGED
15 minute summer	S32	11	36.508	0.265	106.5	0.6775	0.0000	OK
15 minute summer	S33	11	36.486	0.410	127.3	0.6700	0.0000	OK
15 minute summer	S34	11	36.431	1.891	240.9	4.2559	0.0000	SURCHARGED
15 minute summer	S35	11	36.414	2.294	365.0	5.4060	0.0000	FLOOD RISK
15 minute summer	S36	11	36.391	2.438	448.6	5.2442	0.0000	FLOOD RISK
15 minute summer	S37	11	36.360	2.523	458.6	4.4576	0.0000	SURCHARGED
15 minute summer	S38	11	36.318	2.673	1697.3	6.8022	0.0000	SURCHARGED
15 minute summer	S39	10	36.207	0.628	55.2	1.2269	0.0000	SURCHARGED
15 minute summer	S40	10	36.079	1.041	85.8	1.7552	0.0000	SURCHARGED
15 minute summer	S41	10	35.905	2.298	1801.5	6.1828	0.0000	SURCHARGED
15 minute winter	S42	9	35.198	1.798	1805.9	5.7155	0.0000	SURCHARGED
720 minute winter	S43	705	33.971	0.971	425.8	0.0000	0.0000	OK
15 minute summer	S44	11	44.370	0.917	64.4	2.2919	0.0000	SURCHARGED
15 minute summer	S45	12	45.254	0.850	56.0	1.5861	0.0000	SURCHARGED
15 minute summer	S46	11	44.302	1.027	148.8	1.6314	0.0000	SURCHARGED
15 minute summer	S47	10	45.187	0.113	49.1	0.2626	0.0000	OK
15 minute summer	S48	10	44.161	0.123	77.2	0.1863	0.0000	OK
15 minute summer	S49	11	43.034	0.245	232.9	0.3782	0.0000	OK
15 minute summer	S50	11	42.711	0.214	232.8	0.3057	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S26	4.001	S27	212.6	1.443	0.850	2.7455	
15 minute summer	S27	4.002	S28	253.3	2.346	1.213	2.4368	
15 minute summer	S28	4.003	S29	264.3	2.850	0.369	2.9182	
15 minute summer	S29	4.004	S30	345.0	3.740	0.483	1.6930	
15 minute summer	S30	4.005	S31	360.5	1.929	0.314	3.1537	
15 minute summer	S31	1.013	S38	1327.6	4.714	0.818	17.3192	
15 minute summer	S32	5.000	S33	109.0	2.186	0.237	1.0272	
15 minute summer	S33	5.001	S34	139.1	2.402	0.219	4.9954	
15 minute summer	S34	5.002	S35	345.3	1.286	0.277	18.1792	
15 minute summer	S35	5.003	S36	432.5	1.172	0.347	7.2444	
15 minute summer	S36	5.004	S37	458.6	1.447	0.369	5.0477	
15 minute summer	S37	5.005	S38	467.3	1.062	0.375	8.3121	
15 minute summer	S38	1.014	S41	1705.0	3.874	1.680	2.4766	
15 minute summer	S39	6.000	S40	58.3	1.784	0.389	2.1083	
15 minute summer	S40	6.001	S41	86.4	1.911	0.357	1.4715	
15 minute summer	S41	1.015	S42	1810.2	4.113	1.796	13.6781	
15 minute winter	S42	1.016	S43	1822.7	5.564	0.847	4.2984	
15 minute summer	S44	7.000	S46	57.5	0.861	0.518	1.2564	
15 minute summer	S45	8.000	S46	48.8	2.952	0.861	0.1724	
15 minute summer	S46	7.001	S49	146.5	2.080	1.707	3.8919	
15 minute summer	S47	9.000	S48	48.8	2.320	0.479	0.5721	
15 minute summer	S48	9.001	S49	76.7	3.763	0.464	0.2087	
15 minute summer	S49	7.002	S50	232.8	2.870	0.377	0.6528	
15 minute summer	S50	7.003	S51	232.6	2.860	0.376	1.4142	

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.53%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S51	11	42.117	0.248	262.6	0.4582	0.0000	OK
15 minute summer	S52	11	41.733	0.315	330.3	0.7806	0.0000	OK
15 minute summer	S53	11	41.376	0.249	350.8	0.4364	0.0000	OK
15 minute summer	S54	11	42.218	0.567	71.2	1.5143	0.0000	SURCHARGED
15 minute summer	S55	11	42.126	1.085	134.5	2.8388	0.0000	SURCHARGED
15 minute summer	S56	11	41.630	0.946	218.3	2.7187	0.0000	SURCHARGED
15 minute summer	S57	11	40.601	0.234	567.3	0.3352	0.0000	OK
15 minute summer	S58	10	36.551	0.128	87.3	0.3695	0.0000	OK
15 minute summer	S59	10	35.242	0.145	111.3	0.2552	0.0000	OK
15 minute winter	S60	8	34.833	0.352	103.2	0.6224	0.0000	OK
15 minute winter	S61	8	34.844	0.579	213.3	1.8137	0.0000	SURCHARGED
15 minute summer	S62	11	35.757	0.603	87.3	1.3401	0.0000	SURCHARGED
15 minute summer	S63	11	35.594	0.784	136.8	1.5425	0.0000	SURCHARGED
15 minute summer	S64	11	35.102	0.586	136.0	0.8389	0.0000	SURCHARGED
15 minute winter	S65	8	34.804	0.612	874.9	1.1862	0.0000	SURCHARGED
15 minute winter	S66	7	34.629	1.541	875.7	2.7230	0.0000	SURCHARGED
720 minute winter	S67	705	33.967	0.967	77.6	0.0000	0.0000	OK
720 minute winter	S68	705	33.961	0.961	112.5	3174.4350	0.0000	SURCHARGED
720 minute winter	S69	705	33.986	1.086	114.6	2.7642	0.0000	SURCHARGED
15 minute summer	S70	102	31.795	0.082	29.6	0.2075	0.0000	OK
15 minute summer	S71	110	28.471	0.092	29.5	0.1314	0.0000	OK
15 minute summer	S72	107	27.336	0.089	29.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S51	7.004	S52	262.3	2.545	0.424	1.2878	
15 minute summer	S52	7.005	S53	330.3	3.161	0.535	0.8354	
15 minute summer	S53	7.006	S57	350.8	4.045	0.419	0.9921	
15 minute summer	S54	10.000	S55	65.1	1.288	0.333	1.3949	
15 minute summer	S55	10.001	S56	131.4	1.866	1.041	1.9510	
15 minute summer	S56	10.002	S57	216.4	3.074	1.856	1.0579	
15 minute summer	S57	7.007	S65	566.8	4.997	0.552	6.9712	
15 minute summer	S58	11.000	S59	86.8	3.185	0.334	0.5923	
15 minute summer	S59	11.001	S60	111.5	2.471	0.201	0.8961	
15 minute winter	S60	11.002	S61	109.1	0.788	0.208	3.4073	
15 minute winter	S61	11.003	S65	225.6	1.157	0.836	5.0433	
15 minute summer	S62	12.000	S63	82.6	1.296	0.597	1.5639	
15 minute summer	S63	12.001	S64	136.0	1.932	1.135	1.7804	
15 minute summer	S64	12.002	S65	135.6	1.926	1.781	1.4439	
15 minute winter	S65	7.008	S66	875.7	5.283	0.638	2.3859	
15 minute winter	S66	7.009	S67	893.1	3.895	0.831	2.7449	
720 minute winter	S68	1.018	S69	114.6	0.736	0.051	2.6651	
720 minute winter	S69	1.019	S70	29.6	2.509	0.089	0.1725	
15 minute summer	S70	1.020	S71	29.5	2.100	0.283	1.1772	
15 minute summer	S71	1.021	S72	29.5	1.981	0.334	0.5890	431.3