Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	45	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	0.350	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	x
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
12		5.00	3.620	1200	494098.649	101499.328	0.620
13	0.026	5.00	3.650	1200	494099.603	101435.147	1.075
14			3.675	900	494100.533	101370.907	1.525
15	0.261	5.00	3.706	1200	494103.680	101363.570	1.761
16	0.487	5.00	3.704	1500	494124.534	101363.795	1.999
17		5.00	3.418	1200	494158.962	101354.803	2.113
18	0.254	5.00	3.700	1200	494178.252	101376.460	1.700
19			3.514	1500	494182.332	101363.615	2.259
20			3.579	1500	494220.134	101375.607	2.404
25	0.149	5.00	3.492	1200	494154.037	101349.088	1.734
26	0.059	5.00	3.519	900	494192.894	101378.147	1.069
27	0.019	5.00	3.340	1200	494197.388	101359.599	1.925
28	0.081	5.00	3.256	1200	494220.559	101365.203	1.946
29			3.235	1200	494226.507	101366.646	1.995
22	0.496	5.00	2.992	1500	494204.085	101432.443	1.642
23			3.126	1500	494204.244	101420.970	1.856
24			3.678	1500	494204.380	101394.589	2.478
30	0.009	5.00	3.623	1500	494225.866	101383.980	2.503
31			3.451	1800	494233.398	101386.902	2.391
1	0.051	5.00	3.376	900	494258.572	101373.022	1.176
2			3.862	900	494302.395	101383.250	1.962
3			3.050	900	494335.481	101390.919	1.380
4	0.203	5.00	3.054	900	494334.972	101429.136	1.574
5			2.975	1200	494323.972	101429.136	1.545
6			3.100	1500	494306.862	101439.388	1.840
7	0.082	5.00	3.250	1500	494292.142	101448.208	2.030
8	0.201	5.00	3.479	1350	494266.340	101447.867	2.319
9	0.107	5.00	3.290	1200	494258.481	101455.349	1.490
10			3.338	1500	494251.543	101455.258	2.138
11			3.593	1800	494239.341	101447.464	2.493
32	0.101	5.00	3.456	1800	494232.839	101447.511	2.526
33	0.062	5.00	3.456	1800	494232.393	101477.837	2.596
34	0.020	5.00	3.230	1800	494230.095	101517.661	2.450
35	0.013	5.00	3.634	900	494097.702	101564.737	1.064
36	0.140	5.00	3.699	1200	494100.770	101572.123	1.264
37	0.392	5.00	3.699	1500	494140.283	101572.672	1.724
38			3.707	1500	494173.595	101573.140	1.817
39		5.00	3.502	1500	494167.317	101582.554	2.612
40			3.499	1500	494175.985	101576.646	2.629
41			3.415	1500	494204.285	101557.358	2.615
45	0.133	5.00	3.600	900	494156.519	101590.413	1.710

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
46			3.450	900	494175.983	101582.619	2.078
47	0.057	5.00	3.371	1200	494200.191	101564.150	2.181
48			3.370	1200	494204.850	101560.596	2.250
43	0.225	5.00	3.050	1200	494201.716	101521.011	1.580
44			3.150	1200	494201.549	101531.374	1.760
49	0.020	5.00	3.348	1800	494213.587	101555.791	2.568
50	0.067	5.00	3.200	1800	494226.874	101555.916	2.500
Existing Outfall			2.840	1350	494226.798	101573.518	2.200

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)
S3.000	12	13	64.188	0.600	3.000	2.575	0.425	151.0	150	6.31	50.0
S3.001	13	14	64.247	0.600	2.575	2.150	0.425	151.2	150	7.63	50.0
S3.002	14	15	7.983	0.600	2.150	2.095	0.055	145.1	150	7.79	50.0
S3.003	15	16	20.855	0.600	1.945	1.855	0.090	231.7	300	8.12	50.0
S3.004	16	19	57.798	0.600	1.705	1.405	0.300	192.7	450	8.78	50.0
S4.000	17	19	24.976	0.600	1.305	1.255	0.050	499.5	600	5.38	50.0
S5.000	18	19	13.477	0.600	2.000	1.630	0.370	36.4	225	5.10	50.0
S3.005	19	20	39.659	0.600	1.255	1.175	0.080	495.7	600	9.39	50.0
S3.006	20	30	10.147	0.600	1.175	1.120	0.055	184.5	600	9.49	50.0
S6.000	25	27	44.607	0.600	1.758	1.490	0.268	166.4	225	5.74	50.0
S7.000	26	27	19.085	0.600	2.450	1.565	0.885	21.6	150	5.15	50.0
S6.001	27	28	23.839	0.600	1.415	1.310	0.105	227.0	300	6.12	50.0
S6.002	28	29	6.121	0.600	1.310	1.240	0.070	87.4	300	6.18	50.0
S6.003	29	30	17.346	0.600	1.240	1.120	0.120	144.6	300	6.40	50.0
S8.000	22	23	11.400	0.600	1.350	1.270	0.080	142.5	450	5.11	50.0
S8.001	23	24	26.307	0.600	1.270	1.200	0.070	375.8	450	5.53	50.0
S8.002	24	30	23.995	0.600	1.200	1.120	0.080	299.9	450	5.87	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)
S3.000	0.815	14.4	0.0	0.470	0.925	0.000	0.0	0	0.000
S3.001	0.815	14.4	5.1	0.925	1.375	0.026	0.0	61	0.743
S3.002	0.832	14.7	5.1	1.375	1.461	0.026	0.0	61	0.755
S3.003	1.028	72.7	56.3	1.461	1.549	0.287	0.0	199	1.132
S3.004	1.461	232.4	152.1	1.549	1.659	0.774	0.0	266	1.553
S4.000	1.082	306.1	0.0	1.513	1.659	0.000	0.0	0	0.000
S5.000	2.174	86.4	50.0	1.475	1.659	0.254	0.0	123	2.249
S3.005	1.087	307.2	202.0	1.659	1.804	1.028	0.0	356	1.156
S3.006	1.789	505.9	202.0	1.804	1.903	1.028	0.0	263	1.694
S6.000	1.010	40.2	29.2	1.509	1.625	0.149	0.0	143	1.100
S7.000	2.178	38.5	11.6	0.919	1.625	0.059	0.0	57	1.913
S6.001	1.039	73.4	44.6	1.625	1.646	0.227	0.0	169	1.088
S6.002	1.682	118.9	60.5	1.646	1.695	0.308	0.0	151	1.689
S6.003	1.305	92.3	60.5	1.695	2.203	0.308	0.0	178	1.390
S8.000	1.701	270.5	97.4	1.192	1.406	0.496	0.0	186	1.566
S8.001	1.042	165.8	97.4	1.406	2.028	0.496	0.0	248	1.083
S8.002	1.168	185.8	97.4	2.028	2.053	0.496	0.0	232	1.182

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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)
S3.007	30	31	8.079	0.600	1.120	1.060	0.060	134.7	225	9.61	50.0
S3.008	31	32	60.612	0.600	1.060	0.930	0.130	466.2	750	10.39	50.0
S1.000	1	2	45.001	0.600	2.200	1.900	0.300	150.0	150	5.92	50.0
S1.001	2	3	33.963	0.600	1.900	1.670	0.230	147.7	150	6.60	50.0
S1.002	3	4	38.220	0.600	1.670	1.480	0.190	201.2	225	7.30	50.0
S1.003	4	5	11.000	0.600	1.480	1.430	0.050	220.0	300	7.47	50.0
S1.004	5	6	19.946	0.600	1.430	1.260	0.170	117.3	300	7.70	50.0
S1.005	6	7	17.160	0.600	1.260	1.220	0.040	429.0	600	7.94	50.0
S1.006	7	8	25.804	0.600	1.220	1.160	0.060	430.1	600	8.31	50.0
S1.007	8	11	27.002	0.600	1.160	1.100	0.060	450.0	600	8.71	50.0
S2.000	9	10	6.939	0.600	1.800	1.425	0.375	18.5	225	5.04	50.0
S2.001	10	11	14.479	0.600	1.200	1.100	0.100	144.8	450	5.18	50.0
S1.008	11	32	6.502	0.600	1.100	1.080	0.020	325.1	600	8.79	50.0
S1.009	32	33	30.329	0.600	0.930	0.860	0.070	433.3	750	10.77	50.0
S1.010	33	34	39.890	0.600	0.860	0.780	0.080	498.6	750	11.30	50.0
S1.011	34	50	38.390	0.600	0.780	0.700	0.080	479.9	750	11.81	50.0
S9.000	12	35	65.364	0.600	3.000	2.570	0.430	152.0	150	6.34	50.0
S9.001	35	36	8.046	0.600	2.570	2.510	0.060	134.1	150	6.50	50.0
S9.002	36	37	39.517	0.600	2.435	2.200	0.235	168.2	225	7.15	50.0
S9.003	37	38	33.315	0.600	1.975	1.890	0.085	391.9	450	7.69	50.0
S9.004	38	40	4.243	0.600	1.890	1.020	0.870	4.9	450	7.70	50.0
S10.000	39	40	10.490	0.600	0.890	0.870	0.020	524.5	600	5.17	50.0
S9.005	40	41	34.248	0.600	0.870	0.800	0.070	489.3	600	8.22	50.0
S9.006	41	49	9.433	0.600	0.800	0.780	0.020	471.7	600	8.37	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)
S3.007	1.125	44.7	361.7	2.278	2.166	1.841	0.0	225	1.146
S3.008	1.289	569.5	361.7	1.641	1.776	1.841	0.0	435	1.361
S1.000	0.818	14.5	10.1	1.026	1.812	0.051	0.0	92	0.883
S1.001	0.825	14.6	10.1	1.812	1.230	0.051	0.0	92	0.888
S1.002	0.918	36.5	10.1	1.155	1.349	0.051	0.0	80	0.785
S1.003	1.056	74.6	50.0	1.274	1.245	0.254	0.0	180	1.129
S1.004	1.450	102.5	50.0	1.245	1.540	0.254	0.0	148	1.442
S1.005	1.169	330.5	50.0	1.240	1.430	0.254	0.0	156	0.852
S1.006	1.168	330.1	66.1	1.430	1.719	0.336	0.0	181	0.920
S1.007	1.141	322.6	105.6	1.719	1.893	0.537	0.0	235	1.026
S2.000	3.056	121.5	21.1	1.265	1.688	0.107	0.0	63	2.301
S2.001	1.687	268.3	21.1	1.688	2.043	0.107	0.0	85	1.024
S1.008	1.345	380.2	126.7	1.893	1.776	0.645	0.0	238	1.215
S1.009	1.338	591.0	508.3	1.776	1.846	2.586	0.0	539	1.494
S1.010	1.246	550.5	520.4	1.846	1.700	2.648	0.0	586	1.406
S1.011	1.270	561.3	524.4	1.700	1.750	2.668	0.0	579	1.433
S9.000	0.812	14.4	0.0	0.470	0.914	0.000	0.0	0	0.000
S9.001	0.866	15.3	2.6	0.914	1.039	0.013	0.0	42	0.647
S9.002	1.005	40.0	30.1	1.039	1.274	0.153	0.0	146	1.102
S9.003	1.021	162.3	107.1	1.274	1.367	0.545	0.0	268	1.087
S9.004	9.251	1471.3	107.1	1.367	2.029	0.545	0.0	81	5.498
S10.000	1.056	298.6	0.0	2.012	2.029	0.000	0.0	0	0.000
S9.005	1.094	309.3	107.1	2.029	2.015	0.545	0.0	243	0.998
S9.006	1.114	315.1	107.1	2.015	1.968	0.545	0.0	241	1.012

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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)
S12.000	45	46	20.966	0.600	1.890	1.372	0.518	40.5	225	5.17	50.0
S12.001	46	47	30.449	0.600	1.372	1.190	0.182	167.3	225	5.67	50.0
S12.002	47	48	5.860	0.600	1.190	1.120	0.070	83.7	225	5.74	50.0
S12.003	48	49	9.971	0.600	1.120	1.060	0.060	166.2	300	5.88	50.0
S11.000	43	44	10.364	0.600	1.470	1.390	0.080	129.6	225	5.15	50.0
S11.001	44	49	27.223	0.600	1.390	0.780	0.610	44.6	225	5.38	50.0
S9.007	49	50	13.288	0.600	0.780	0.700	0.080	166.1	225	8.58	50.0
S1.012	50	Existing Outfall	17.602	0.600	0.700	0.640	0.060	293.4	450	12.05	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)
S12.000	2.062	82.0	26.1	1.485	1.853	0.133	0.0	87	1.832
S12.001	1.008	40.1	26.1	1.853	1.956	0.133	0.0	132	1.071
S12.002	1.430	56.9	37.4	1.956	2.025	0.190	0.0	133	1.523
S12.003	1.217	86.0	37.4	1.950	1.988	0.190	0.0	138	1.174
S11.000	1.147	45.6	44.3	1.355	1.535	0.225	0.0	180	1.301
S11.001	1.963	78.1	44.3	1.535	2.343	0.225	0.0	122	2.025
S9.007	1.011	40.2	192.6	2.343	2.275	0.980	0.0	225	1.030
S1.012	1.182	187.9	730.1	2.050	1.750	3.715	0.0	450	1.197

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)
S3.000	64.188	151.0	150	Pipe	3.620	3.000	0.470	3.650	2.575	0.925
S3.001	64.247	151.2	150	Pipe	3.650	2.575	0.925	3.675	2.150	1.375
S3.002	7.983	145.1	150	Pipe	3.675	2.150	1.375	3.706	2.095	1.461
S3.003	20.855	231.7	300	Pipe	3.706	1.945	1.461	3.704	1.855	1.549
S3.004	57.798	192.7	450	Pipe	3.704	1.705	1.549	3.514	1.405	1.659
S4.000	24.976	499.5	600	Pipe	3.418	1.305	1.513	3.514	1.255	1.659
S5.000	13.477	36.4	225	Pipe	3.700	2.000	1.475	3.514	1.630	1.659
S3.005	39.659	495.7	600	Pipe	3.514	1.255	1.659	3.579	1.175	1.804
S3.006	10.147	184.5	600	Pipe	3.579	1.175	1.804	3.623	1.120	1.903
S6.000	44.607	166.4	225	Pipe	3.492	1.758	1.509	3.340	1.490	1.625
S7.000	19.085	21.6	150	Pipe	3.519	2.450	0.919	3.340	1.565	1.625
S6.001	23.839	227.0	300	Pipe	3.340	1.415	1.625	3.256	1.310	1.646

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S3.000	12	1200	Manhole	Adoptable	13	1200	Manhole	Adoptable
S3.001	13	1200	Manhole	Adoptable	14	900	Manhole	Adoptable
S3.002	14	900	Manhole	Adoptable	15	1200	Manhole	Adoptable
S3.003	15	1200	Manhole	Adoptable	16	1500	Manhole	Adoptable
S3.004	16	1500	Manhole	Adoptable	19	1500	Manhole	Adoptable
S4.000	17	1200	Manhole	Adoptable	19	1500	Manhole	Adoptable
S5.000	18	1200	Manhole	Adoptable	19	1500	Manhole	Adoptable
S3.005	19	1500	Manhole	Adoptable	20	1500	Manhole	Adoptable
S3.006	20	1500	Manhole	Adoptable	30	1500	Manhole	Adoptable
S6.000	25	1200	Manhole	Adoptable	27	1200	Manhole	Adoptable
S7.000	26	900	Manhole	Adoptable	27	1200	Manhole	Adoptable
S6.001	27	1200	Manhole	Adoptable	28	1200	Manhole	Adoptable

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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)
S6.002	6.121	87.4	300	Pipe	3.256	1.310	1.646	3.235	1.240	1.695
S6.003	17.346	144.6	300	Pipe	3.235	1.240	1.695	3.623	1.120	2.203
S8.000	11.400	142.5	450	Pipe	2.992	1.350	1.192	3.126	1.270	1.406
S8.001	26.307	375.8	450	Pipe	3.126	1.270	1.406	3.678	1.200	2.028
S8.002	23.995	299.9	450	Pipe	3.678	1.200	2.028	3.623	1.120	2.053
S3.007	8.079	134.7	225	Pipe	3.623	1.120	2.278	3.451	1.060	2.166
S3.008	60.612	466.2	750	Pipe	3.451	1.060	1.641	3.456	0.930	1.776
S1.000	45.001	150.0	150	Pipe	3.376	2.200	1.026	3.862	1.900	1.812
S1.001	33.963	147.7	150	Pipe	3.862	1.900	1.812	3.050	1.670	1.230
S1.002	38.220	201.2	225	Pipe	3.050	1.670	1.155	3.054	1.480	1.349
S1.003	11.000	220.0	300	Pipe	3.054	1.480	1.274	2.975	1.430	1.245
S1.004	19.946	117.3	300	Pipe	2.975	1.430	1.245	3.100	1.260	1.540
S1.005	17.160	429.0	600	Pipe	3.100	1.260	1.240	3.250	1.220	1.430
S1.006	25.804	430.1	600	Pipe	3.250	1.220	1.430	3.479	1.160	1.719
S1.007	27.002	450.0	600	Pipe	3.479	1.160	1.719	3.593	1.100	1.893
S2.000	6.939	18.5	225	Pipe	3.290	1.800	1.265	3.338	1.425	1.688
S2.001	14.479	144.8	450	Pipe	3.338	1.200	1.688	3.593	1.100	2.043
S1.008	6.502	325.1	600	Pipe	3.593	1.100	1.893	3.456	1.080	1.776
S1.009	30.329	433.3	750	Pipe	3.456	0.930	1.776	3.456	0.860	1.846
S1.010	39.890	498.6	750	Pipe	3.456	0.860	1.846	3.230	0.780	1.700
S1.011	38.390	479.9	750	Pipe	3.230	0.780	1.700	3.200	0.700	1.750
S9.000	65.364	152.0	150	Pipe	3.620	3.000	0.470	3.634	2.570	0.914
S9.001	8.046	134.1	150	Pipe	3.634	2.570	0.914	3.699	2.510	1.039
S9.002	39.517	168.2	225	Pipe	3.699	2.435	1.039	3.699	2.200	1.274
S9.003	33.315	391.9	450	Pipe	3.699	1.975	1.274	3.707	1.890	1.367

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S6.002	28	1200	Manhole	Adoptable	29	1200	Manhole	Adoptable
S6.003	29	1200	Manhole	Adoptable	30	1500	Manhole	Adoptable
S8.000	22	1500	Manhole	Adoptable	23	1500	Manhole	Adoptable
S8.001	23	1500	Manhole	Adoptable	24	1500	Manhole	Adoptable
S8.002	24	1500	Manhole	Adoptable	30	1500	Manhole	Adoptable
S3.007	30	1500	Manhole	Adoptable	31	1800	Manhole	Adoptable
S3.008	31	1800	Manhole	Adoptable	32	1800	Manhole	Adoptable
S1.000	1	900	Manhole	Adoptable	2	900	Manhole	Adoptable
S1.001	2	900	Manhole	Adoptable	3	900	Manhole	Adoptable
S1.002	3	900	Manhole	Adoptable	4	900	Manhole	Adoptable
S1.003	4	900	Manhole	Adoptable	5	1200	Manhole	Adoptable
S1.004	5	1200	Manhole	Adoptable	6	1500	Manhole	Adoptable
S1.005	6	1500	Manhole	Adoptable	7	1500	Manhole	Adoptable
S1.006	7	1500	Manhole	Adoptable	8	1350	Manhole	Adoptable
S1.007	8	1350	Manhole	Adoptable	11	1800	Manhole	Adoptable
S2.000	9	1200	Manhole	Adoptable	10	1500	Manhole	Adoptable
S2.001	10	1500	Manhole	Adoptable	11	1800	Manhole	Adoptable
S1.008	11	1800	Manhole	Adoptable	32	1800	Manhole	Adoptable
S1.009	32	1800	Manhole	Adoptable	33	1800	Manhole	Adoptable
S1.010	33	1800	Manhole	Adoptable	34	1800	Manhole	Adoptable
S1.011	34	1800	Manhole	Adoptable	50	1800	Manhole	Adoptable
S9.000	12	1200	Manhole	Adoptable	35	900	Manhole	Adoptable
S9.001	35	900	Manhole	Adoptable	36	1200	Manhole	Adoptable
S9.002	36	1200	Manhole	Adoptable	37	1500	Manhole	Adoptable
S9.003	37	1500	Manhole	Adoptable	38	1500	Manhole	Adoptable

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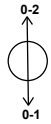
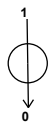
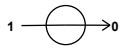
Pipeline Schedule

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)
S9.004	4.243	4.9	450	Pipe	3.707	1.890	1.367	3.499	1.020	2.029
S10.000	10.490	524.5	600	Pipe	3.502	0.890	2.012	3.499	0.870	2.029
S9.005	34.248	489.3	600	Pipe	3.499	0.870	2.029	3.415	0.800	2.015
S9.006	9.433	471.7	600	Pipe	3.415	0.800	2.015	3.348	0.780	1.968
S12.000	20.966	40.5	225	Pipe	3.600	1.890	1.485	3.450	1.372	1.853
S12.001	30.449	167.3	225	Pipe	3.450	1.372	1.853	3.371	1.190	1.956
S12.002	5.860	83.7	225	Pipe	3.371	1.190	1.956	3.370	1.120	2.025
S12.003	9.971	166.2	300	Pipe	3.370	1.120	1.950	3.348	1.060	1.988
S11.000	10.364	129.6	225	Pipe	3.050	1.470	1.355	3.150	1.390	1.535
S11.001	27.223	44.6	225	Pipe	3.150	1.390	1.535	3.348	0.780	2.343
S9.007	13.288	166.1	225	Pipe	3.348	0.780	2.343	3.200	0.700	2.275
S1.012	17.602	293.4	450	Pipe	3.200	0.700	2.050	2.840	0.640	1.750

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
S9.004	38	1500	Manhole	Adoptable	40	1500	Manhole	Adoptable
S10.000	39	1500	Manhole	Adoptable	40	1500	Manhole	Adoptable
S9.005	40	1500	Manhole	Adoptable	41	1500	Manhole	Adoptable
S9.006	41	1500	Manhole	Adoptable	49	1800	Manhole	Adoptable
S12.000	45	900	Manhole	Adoptable	46	900	Manhole	Adoptable
S12.001	46	900	Manhole	Adoptable	47	1200	Manhole	Adoptable
S12.002	47	1200	Manhole	Adoptable	48	1200	Manhole	Adoptable
S12.003	48	1200	Manhole	Adoptable	49	1800	Manhole	Adoptable
S11.000	43	1200	Manhole	Adoptable	44	1200	Manhole	Adoptable
S11.001	44	1200	Manhole	Adoptable	49	1800	Manhole	Adoptable
S9.007	49	1800	Manhole	Adoptable	50	1800	Manhole	Adoptable
S1.012	50	1800	Manhole	Adoptable	Existing Outfall	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
12	494098.649	101499.328	3.620	0.620	1200		0-1	S3.000	3.000	150
							0-2	S9.000	3.000	150
13	494099.603	101435.147	3.650	1.075	1200		1	S3.000	2.575	150
							0	S3.001	2.575	150
14	494100.533	101370.907	3.675	1.525	900		1	S3.001	2.150	150
							0	S3.002	2.150	150
15	494103.680	101363.570	3.706	1.761	1200		1	S3.002	2.095	150
							0	S3.003	1.945	300
16	494124.534	101363.795	3.704	1.999	1500		1	S3.003	1.855	300
							0	S3.004	1.705	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
17	494158.962	101354.803	3.418	2.113	1200		0	S4.000	1.305	600
18	494178.252	101376.460	3.700	1.700	1200		0	S5.000	2.000	225
19	494182.332	101363.615	3.514	2.259	1500		1	S5.000	1.630	225
							2	S4.000	1.255	600
							3	S3.004	1.405	450
							0	S3.005	1.255	600
20	494220.134	101375.607	3.579	2.404	1500		1	S3.005	1.175	600
							0	S3.006	1.175	600
25	494154.037	101349.088	3.492	1.734	1200		0	S6.000	1.758	225
26	494192.894	101378.147	3.519	1.069	900		0	S7.000	2.450	150
27	494197.388	101359.599	3.340	1.925	1200		1	S7.000	1.565	150
							2	S6.000	1.490	225
							0	S6.001	1.415	300
28	494220.559	101365.203	3.256	1.946	1200		1	S6.001	1.310	300
							0	S6.002	1.310	300
29	494226.507	101366.646	3.235	1.995	1200		1	S6.002	1.240	300
							0	S6.003	1.240	300
22	494204.085	101432.443	2.992	1.642	1500		0	S8.000	1.350	450
23	494204.244	101420.970	3.126	1.856	1500		1	S8.000	1.270	450
							0	S8.001	1.270	450
24	494204.380	101394.589	3.678	2.478	1500		1	S8.001	1.200	450
							0	S8.002	1.200	450
30	494225.866	101383.980	3.623	2.503	1500		1	S8.002	1.120	450
							2	S6.003	1.120	300
							3	S3.006	1.120	600
							0	S3.007	1.120	225

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
31	494233.398	101386.902	3.451	2.391	1800		1	S3.007	1.060	225
							0	S3.008	1.060	750
1	494258.572	101373.022	3.376	1.176	900		0	S1.000	2.200	150
2	494302.395	101383.250	3.862	1.962	900		1	S1.000	1.900	150
							0	S1.001	1.900	150
3	494335.481	101390.919	3.050	1.380	900		1	S1.001	1.670	150
							0	S1.002	1.670	225
4	494334.972	101429.136	3.054	1.574	900		1	S1.002	1.480	225
							0	S1.003	1.480	300
5	494323.972	101429.136	2.975	1.545	1200		1	S1.003	1.430	300
							0	S1.004	1.430	300
6	494306.862	101439.388	3.100	1.840	1500		1	S1.004	1.260	300
							0	S1.005	1.260	600
7	494292.142	101448.208	3.250	2.030	1500		1	S1.005	1.220	600
							0	S1.006	1.220	600
8	494266.340	101447.867	3.479	2.319	1350		1	S1.006	1.160	600
							0	S1.007	1.160	600
9	494258.481	101455.349	3.290	1.490	1200		0	S2.000	1.800	225
10	494251.543	101455.258	3.338	2.138	1500		1	S2.000	1.425	225
							0	S2.001	1.200	450
11	494239.341	101447.464	3.593	2.493	1800		1	S2.001	1.100	450
							2	S1.007	1.100	600
							0	S1.008	1.100	600
32	494232.839	101447.511	3.456	2.526	1800		1	S1.008	1.080	600
							2	S3.008	0.930	750
							0	S1.009	0.930	750

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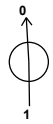
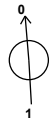
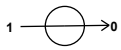
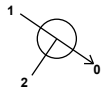
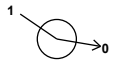
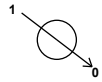
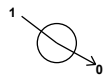
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
33	494232.393	101477.837	3.456	2.596	1800		1	S1.009	0.860	750
							0	S1.010	0.860	750
34	494230.095	101517.661	3.230	2.450	1800		1	S1.010	0.780	750
							0	S1.011	0.780	750
35	494097.702	101564.737	3.634	1.064	900		1	S9.000	2.570	150
							0	S9.001	2.570	150
36	494100.770	101572.123	3.699	1.264	1200		1	S9.001	2.510	150
							0	S9.002	2.435	225
37	494140.283	101572.672	3.699	1.724	1500		1	S9.002	2.200	225
							0	S9.003	1.975	450
38	494173.595	101573.140	3.707	1.817	1500		1	S9.003	1.890	450
							0	S9.004	1.890	450
39	494167.317	101582.554	3.502	2.612	1500		0	S10.000	0.890	600
40	494175.985	101576.646	3.499	2.629	1500		1	S10.000	0.870	600
							2	S9.004	1.020	450
							0	S9.005	0.870	600
41	494204.285	101557.358	3.415	2.615	1500		1	S9.005	0.800	600
							0	S9.006	0.800	600
45	494156.519	101590.413	3.600	1.710	900		0	S12.000	1.890	225
46	494175.983	101582.619	3.450	2.078	900		1	S12.000	1.372	225
							0	S12.001	1.372	225
47	494200.191	101564.150	3.371	2.181	1200		1	S12.001	1.190	225
							0	S12.002	1.190	225
48	494204.850	101560.596	3.370	2.250	1200		1	S12.002	1.120	225
							0	S12.003	1.120	300

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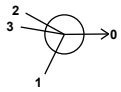
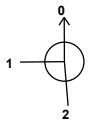
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections		Link	IL (m)	Dia (mm)
43	494201.716	101521.011	3.050	1.580	1200		0	S11.000	1.470	225
44	494201.549	101531.374	3.150	1.760	1200		1	S11.000	1.390	225
							0	S11.001	1.390	225
49	494213.587	101555.791	3.348	2.568	1800		1	S11.001	0.780	225
							2	S12.003	1.060	300
							3	S9.006	0.780	600
							0	S9.007	0.780	225
50	494226.874	101555.916	3.200	2.500	1800		1	S9.007	0.700	225
							2	S1.011	0.700	750
							0	S1.012	0.700	450
Existing Outfall	494226.798	101573.518	2.840	2.200	1350		1	S1.012	0.640	450

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	19.000	Drain Down Time (mins)	240
Ratio-R	0.350	Additional Storage (m³/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	0	0	0
30	40	0	0
100	45	0	0

Node 30 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	1.120	Product Number	CTL-SHE-0113-1000-3623-1000
Design Depth (m)	3.623	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	10.0	Min Node Diameter (mm)	1200

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Node 11 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	1.100	Product Number	CTL-SHE-0080-5000-3593-5000
Design Depth (m)	3.593	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node 49 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	0.780	Product Number	CTL-SHE-0081-5000-3348-5000
Design Depth (m)	3.348	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200

Node 50 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	0.700	Product Number	CTL-SHE-0131-1250-3200-1250
Design Depth (m)	3.200	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	12.5	Min Node Diameter (mm)	1500

Node 6 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	1.300
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	150.0	0.0	0.800	150.0	0.0	0.801	0.0	0.0

Node 10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	1.220
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	375.0	0.0	0.800	375.0	0.0	0.801	0.0	0.0

Node 23 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	1.270
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	500.0	0.0	0.800	500.0	0.0	0.801	0.0	0.0

Node 24 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	1.200
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

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Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	350.0	0.0	1.200	350.0	0.0	1.201	0.0	0.0

Node 17 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	1.320
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	770.0	0.0	0.800	770.0	0.0	0.801	0.0	0.0

Node 39 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	2.120
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	780.0	0.0	1.200	780.0	0.0	1.201	0.0	0.0

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Results for 1 year Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	12	1	3.000	0.000	0.0	0.0000	0.0000	OK
15 minute winter	13	11	2.623	0.048	3.3	0.0539	0.0000	OK
15 minute winter	14	12	2.198	0.048	3.1	0.0304	0.0000	OK
15 minute winter	15	10	2.100	0.155	35.5	0.1756	0.0000	OK
15 minute winter	16	10	1.913	0.208	97.0	0.3678	0.0000	OK
480 minute winter	17	456	1.430	0.125	14.3	81.1188	0.0000	OK
15 minute winter	18	10	2.103	0.103	32.5	0.1168	0.0000	OK
15 minute winter	19	11	1.646	0.391	126.8	0.6903	0.0000	OK
15 minute winter	20	11	1.644	0.469	52.5	0.8281	0.0000	OK
15 minute winter	25	10	1.867	0.109	19.0	0.1232	0.0000	OK
15 minute winter	26	10	2.495	0.045	7.5	0.0287	0.0000	OK
15 minute winter	27	11	1.698	0.283	29.4	0.3198	0.0000	OK
15 minute winter	28	11	1.690	0.380	37.1	0.4301	0.0000	SURCHARGED
15 minute winter	29	11	1.674	0.434	38.7	0.4905	0.0000	SURCHARGED
15 minute summer	22	8	1.782	0.432	60.3	0.7634	0.0000	OK
480 minute winter	23	456	1.430	0.160	12.5	76.3678	0.0000	OK
480 minute winter	24	456	1.430	0.230	12.6	76.9347	0.0000	OK
15 minute winter	30	11	1.635	0.515	110.4	0.9097	0.0000	SURCHARGED
480 minute winter	31	368	1.314	0.254	6.1	0.6465	0.0000	OK
15 minute winter	1	10	2.271	0.071	6.6	0.0454	0.0000	OK
15 minute winter	2	11	1.972	0.072	6.4	0.0457	0.0000	OK
15 minute winter	3	12	1.732	0.062	6.4	0.0397	0.0000	OK
15 minute winter	4	11	1.620	0.140	30.9	0.0893	0.0000	OK
15 minute winter	5	11	1.551	0.121	30.7	0.1366	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	12	S3.000	13	0.0	0.000	0.000	0.1490	
15 minute summer	12	S9.000	35	0.0	0.000	0.000	0.0925	
15 minute winter	13	S3.001	14	3.1	0.665	0.214	0.3028	
15 minute winter	14	S3.002	15	3.0	0.634	0.201	0.0372	
15 minute winter	15	S3.003	16	34.7	0.998	0.478	0.7299	
15 minute winter	16	S3.004	19	95.9	1.309	0.413	4.5139	
480 minute winter	17	S4.000	19	-14.3	-0.390	-0.047	1.3849	
15 minute winter	18	S5.000	19	32.2	1.920	0.373	0.2264	
15 minute winter	19	S3.005	20	52.5	0.708	0.171	8.5350	
15 minute winter	20	S3.006	30	70.1	0.516	0.139	2.5039	
15 minute winter	25	S6.000	27	19.4	0.934	0.482	1.2617	
15 minute winter	26	S7.000	27	7.5	1.619	0.196	0.1982	
15 minute winter	27	S6.001	28	29.7	0.728	0.404	1.6598	
15 minute winter	28	S6.002	29	38.7	0.935	0.326	0.4310	
15 minute winter	29	S6.003	30	43.6	0.620	0.473	1.2215	
15 minute summer	22	S8.000	23	76.5	2.084	0.283	0.8958	
480 minute winter	23	S8.001	24	4.3	0.282	0.026	1.7376	
480 minute winter	24	S8.002	30	-11.8	-0.224	-0.064	2.3767	
15 minute winter	30	Hydro-Brake®	31	7.0				
480 minute winter	31	S3.008	32	6.0	0.349	0.011	10.8512	
15 minute winter	1	S1.000	2	6.4	0.794	0.444	0.3694	
15 minute winter	2	S1.001	3	6.4	0.849	0.438	0.2554	
15 minute winter	3	S1.002	4	6.2	0.402	0.171	0.6634	
15 minute winter	4	S1.003	5	30.7	1.043	0.411	0.3239	
15 minute winter	5	S1.004	6	31.0	1.579	0.302	0.4356	

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Results for 1 year Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	6	456	1.386	0.126	4.5	12.4935	0.0000	OK
480 minute winter	7	456	1.386	0.166	5.4	0.2926	0.0000	OK
480 minute winter	8	456	1.386	0.226	8.8	0.3229	0.0000	OK
15 minute winter	9	10	1.855	0.055	13.7	0.0622	0.0000	OK
480 minute winter	10	456	1.386	0.186	8.1	59.5127	0.0000	OK
480 minute winter	11	456	1.386	0.286	8.5	0.7269	0.0000	OK
480 minute winter	32	368	1.314	0.384	10.0	0.9773	0.0000	OK
480 minute winter	33	368	1.314	0.454	9.4	1.1554	0.0000	OK
480 minute winter	34	368	1.314	0.534	8.4	1.3590	0.0000	OK
15 minute winter	35	11	2.604	0.034	1.7	0.0215	0.0000	OK
15 minute winter	36	11	2.546	0.111	19.4	0.1256	0.0000	OK
360 minute winter	37	344	2.234	0.259	11.8	0.4580	0.0000	OK
360 minute winter	38	344	2.234	0.344	12.9	0.6083	0.0000	OK
360 minute winter	39	344	2.234	1.344	18.3	87.3983	0.0000	SURCHARGED
360 minute winter	40	344	2.234	1.364	18.2	2.4106	0.0000	SURCHARGED
360 minute winter	41	344	2.234	1.434	6.5	2.5343	0.0000	SURCHARGED
30 minute winter	45	19	2.344	0.454	13.3	0.2885	0.0000	SURCHARGED
30 minute winter	46	19	2.309	0.937	21.8	0.5961	0.0000	SURCHARGED
360 minute winter	47	344	2.234	1.044	4.1	1.1810	0.0000	SURCHARGED
360 minute winter	48	344	2.234	1.114	4.1	1.2602	0.0000	SURCHARGED
30 minute winter	43	19	2.252	0.782	22.6	0.8847	0.0000	SURCHARGED
360 minute winter	44	344	2.234	0.844	4.9	0.9549	0.0000	SURCHARGED
360 minute winter	49	344	2.234	1.454	9.3	3.7010	0.0000	SURCHARGED
480 minute winter	50	368	1.314	0.614	10.5	1.5625	0.0000	SURCHARGED
15 minute summer	Existing Outfall	1	0.640	0.000	9.7	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)
480 minute winter	6	S1.005	7	4.0	0.339	0.012	0.9090	
480 minute winter	7	S1.006	8	5.2	0.235	0.016	2.0646	
480 minute winter	8	S1.007	11	8.5	0.181	0.026	3.0926	
15 minute winter	9	S2.000	10	13.6	1.924	0.112	0.0492	
480 minute winter	10	S2.001	11	-6.2	0.155	-0.023	1.2145	
480 minute winter	11	Hydro-Brake®	32	2.6				
480 minute winter	32	S1.009	33	8.6	0.439	0.015	7.6665	
480 minute winter	33	S1.010	34	8.1	0.404	0.015	12.2476	
480 minute winter	34	S1.011	50	7.0	0.184	0.013	13.8430	
15 minute winter	35	S9.001	36	1.6	0.543	0.105	0.0250	
15 minute winter	36	S9.002	37	18.9	0.987	0.473	0.7564	
360 minute winter	37	S9.003	38	12.9	0.893	0.079	3.7422	
360 minute winter	38	S9.004	40	12.8	1.709	0.009	0.6122	
360 minute winter	39	S10.000	40	-18.3	-0.065	-0.061	2.9548	
360 minute winter	40	S9.005	41	-6.5	0.265	-0.021	9.6469	
360 minute winter	41	S9.006	49	-6.5	0.108	-0.021	2.6571	
30 minute winter	45	S12.000	46	15.5	1.127	0.189	0.8338	
30 minute winter	46	S12.001	47	14.4	0.733	0.361	1.2110	
360 minute winter	47	S12.002	48	4.1	0.543	0.071	0.2331	
360 minute winter	48	S12.003	49	4.1	0.397	0.047	0.7022	
30 minute winter	43	S11.000	44	25.4	1.275	0.557	0.4122	
360 minute winter	44	S11.001	49	4.8	0.279	0.062	1.0827	
360 minute winter	49	Hydro-Brake®	50	3.1				
480 minute winter	50	Hydro-Brake®	Existing Outfall	9.8				391.7

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Results for 30 year Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	12	1	3.000	0.000	0.0	0.0000	0.0000	OK
15 minute winter	13	11	2.652	0.077	8.1	0.0876	0.0000	OK
15 minute winter	14	10	2.438	0.288	10.9	0.1834	0.0000	SURCHARGED
15 minute winter	15	10	2.411	0.466	91.1	0.5271	0.0000	SURCHARGED
15 minute summer	16	10	2.277	0.572	227.3	1.0109	0.0000	SURCHARGED
960 minute winter	17	945	1.727	0.422	21.1	298.2887	0.0000	OK
15 minute winter	18	10	2.354	0.354	79.7	0.4004	0.0000	SURCHARGED
15 minute summer	19	10	1.947	0.692	314.2	1.2229	0.0000	SURCHARGED
15 minute winter	20	9	1.944	0.769	105.7	1.3592	0.0000	SURCHARGED
15 minute winter	25	10	2.675	0.917	46.5	1.0372	0.0000	SURCHARGED
15 minute winter	26	10	2.548	0.098	18.5	0.0622	0.0000	OK
15 minute winter	27	10	2.296	0.881	70.6	0.9966	0.0000	SURCHARGED
15 minute winter	28	10	2.173	0.863	98.4	0.9758	0.0000	SURCHARGED
15 minute winter	29	10	2.080	0.840	100.9	0.9498	0.0000	SURCHARGED
15 minute winter	22	6	1.940	0.590	155.1	1.0417	0.0000	SURCHARGED
960 minute winter	23	945	1.727	0.457	11.2	217.7075	0.0000	SURCHARGED
960 minute winter	24	945	1.727	0.527	8.4	176.0325	0.0000	SURCHARGED
15 minute winter	30	9	1.957	0.837	225.0	1.4795	0.0000	SURCHARGED
960 minute winter	31	930	1.621	0.561	5.6	1.4289	0.0000	OK
15 minute winter	1	11	2.347	0.147	16.0	0.0935	0.0000	OK
15 minute winter	2	12	2.036	0.136	15.3	0.0864	0.0000	OK
15 minute winter	3	12	1.769	0.099	14.9	0.0630	0.0000	OK
15 minute winter	4	10	1.737	0.257	76.5	0.1637	0.0000	OK
960 minute winter	5	930	1.691	0.261	5.8	0.2948	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	12	S3.000	13	0.0	0.000	0.000	0.2845	
15 minute summer	12	S9.000	35	0.0	0.000	0.000	0.3274	
15 minute winter	13	S3.001	14	7.7	0.798	0.532	0.8602	
15 minute winter	14	S3.002	15	14.2	0.859	0.964	0.1405	
15 minute winter	15	S3.003	16	93.8	1.332	1.290	1.4686	
15 minute summer	16	S3.004	19	236.0	1.685	1.016	9.1577	
960 minute winter	17	S4.000	19	-21.1	-0.412	-0.069	5.6102	
15 minute winter	18	S5.000	19	80.4	2.233	0.930	0.5360	
15 minute summer	19	S3.005	20	103.8	0.773	0.338	11.1710	
15 minute winter	20	S3.006	30	128.6	0.574	0.254	2.8582	
15 minute winter	25	S6.000	27	46.8	1.177	1.165	1.7741	
15 minute winter	26	S7.000	27	18.1	1.789	0.469	0.2841	
15 minute winter	27	S6.001	28	74.5	1.059	1.015	1.6787	
15 minute winter	28	S6.002	29	100.9	1.433	0.849	0.4310	
15 minute winter	29	S6.003	30	103.0	1.463	1.116	1.2215	
15 minute winter	22	S8.000	23	155.8	2.663	0.576	0.9093	
960 minute winter	23	S8.001	24	2.9	0.274	0.018	4.1682	
960 minute winter	24	S8.002	30	-8.4	-0.120	-0.045	3.8019	
15 minute winter	30	Hydro-Brake®	31	7.0				
960 minute winter	31	S3.008	32	5.5	0.332	0.010	23.5795	
15 minute winter	1	S1.000	2	15.3	0.933	1.060	0.7689	
15 minute winter	2	S1.001	3	14.9	1.027	1.025	0.4945	
15 minute winter	3	S1.002	4	14.9	0.514	0.408	1.0817	
15 minute winter	4	S1.003	5	75.3	1.294	1.008	0.6381	
960 minute winter	5	S1.004	6	5.8	0.632	0.057	1.3504	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	6	930	1.691	0.431	5.8	56.4951	0.0000	OK
960 minute winter	7	930	1.691	0.471	3.9	0.8316	0.0000	OK
960 minute winter	8	930	1.691	0.531	8.2	0.7593	0.0000	OK
15 minute winter	9	10	1.892	0.092	33.6	0.1039	0.0000	OK
960 minute winter	10	930	1.691	0.491	9.0	168.7041	0.0000	SURCHARGED
960 minute winter	11	930	1.691	0.591	7.7	1.5031	0.0000	OK
960 minute winter	32	930	1.621	0.691	8.5	1.7597	0.0000	OK
960 minute winter	33	930	1.621	0.761	8.1	1.9379	0.0000	SURCHARGED
960 minute winter	34	930	1.621	0.841	7.5	2.1414	0.0000	SURCHARGED
15 minute winter	35	11	2.675	0.105	4.1	0.0668	0.0000	OK
15 minute winter	36	11	2.668	0.233	46.0	0.2631	0.0000	SURCHARGED
720 minute winter	37	705	2.543	0.568	15.5	1.0034	0.0000	SURCHARGED
720 minute winter	38	705	2.543	0.653	15.1	1.1536	0.0000	SURCHARGED
720 minute winter	39	705	2.543	1.653	24.1	316.6380	0.0000	SURCHARGED
720 minute winter	40	705	2.543	1.673	24.2	2.9560	0.0000	SURCHARGED
720 minute winter	41	705	2.543	1.743	9.3	3.0796	0.0000	SURCHARGED
15 minute summer	45	10	2.788	0.898	44.5	0.5711	0.0000	SURCHARGED
15 minute summer	46	10	2.624	1.252	40.4	0.7965	0.0000	SURCHARGED
720 minute winter	47	705	2.543	1.353	5.2	1.5301	0.0000	SURCHARGED
720 minute winter	48	705	2.543	1.423	5.2	1.6093	0.0000	SURCHARGED
15 minute winter	43	11	3.041	1.571	70.6	1.7764	0.0000	FLOOD RISK
15 minute winter	44	11	2.788	1.398	67.7	1.5813	0.0000	SURCHARGED
720 minute winter	49	705	2.543	1.763	12.1	4.4865	0.0000	SURCHARGED
960 minute winter	50	930	1.621	0.921	10.2	2.3450	0.0000	SURCHARGED
15 minute summer	Existing Outfall	1	0.640	0.000	9.8	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)
960 minute winter	6	S1.005	7	2.9	0.320	0.009	3.8921	
960 minute winter	7	S1.006	8	3.8	0.229	0.012	6.4613	
960 minute winter	8	S1.007	11	7.7	0.153	0.024	7.3498	
15 minute winter	9	S2.000	10	33.5	2.398	0.275	0.0969	
960 minute winter	10	S2.001	11	-6.5	-0.120	-0.024	2.2941	
960 minute winter	11	Hydro-Brake®	32	2.5				
960 minute winter	32	S1.009	33	7.8	0.442	0.013	13.1105	
960 minute winter	33	S1.010	34	7.4	0.387	0.014	17.5564	
960 minute winter	34	S1.011	50	6.8	0.182	0.012	16.8962	
15 minute winter	35	S9.001	36	5.6	0.572	0.366	0.1238	
15 minute winter	36	S9.002	37	42.9	1.175	1.074	1.4348	
720 minute winter	37	S9.003	38	15.1	0.759	0.093	5.2785	
720 minute winter	38	S9.004	40	14.9	1.797	0.010	0.6723	
720 minute winter	39	S10.000	40	-24.1	-0.086	-0.081	2.9548	
720 minute winter	40	S9.005	41	-9.2	0.187	-0.030	9.6469	
720 minute winter	41	S9.006	49	-9.3	0.058	-0.029	2.6571	
15 minute summer	45	S12.000	46	40.4	1.468	0.493	0.8338	
15 minute summer	46	S12.001	47	42.0	1.056	1.048	1.2110	
720 minute winter	47	S12.002	48	5.2	0.507	0.091	0.2331	
720 minute winter	48	S12.003	49	5.2	0.409	0.060	0.7022	
15 minute winter	43	S11.000	44	67.7	1.703	1.485	0.4122	
15 minute winter	44	S11.001	49	67.5	1.697	0.865	1.0827	
720 minute winter	49	Hydro-Brake®	50	3.1				
960 minute winter	50	Hydro-Brake®	Existing Outfall	9.8				651.1

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Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	12	12	3.040	0.040	4.2	0.0447	0.0000	OK
15 minute winter	13	11	3.046	0.471	17.9	0.5325	0.0000	SURCHARGED
15 minute winter	14	10	2.911	0.761	20.1	0.4838	0.0000	SURCHARGED
15 minute winter	15	10	2.923	0.978	116.7	1.1056	0.0000	SURCHARGED
15 minute winter	16	9	2.666	0.961	321.6	1.6977	0.0000	SURCHARGED
1440 minute winter	17	1410	2.021	0.716	18.7	513.7442	0.0000	SURCHARGED
15 minute summer	18	10	2.815	0.815	106.1	0.9215	0.0000	SURCHARGED
15 minute summer	19	9	2.132	0.877	417.0	1.5499	0.0000	SURCHARGED
15 minute summer	20	9	2.115	0.940	118.4	1.6607	0.0000	SURCHARGED
15 minute winter	25	10	3.413	1.655	65.2	1.8723	0.0000	FLOOD RISK
15 minute winter	26	11	3.093	0.643	25.9	0.4091	0.0000	SURCHARGED
15 minute winter	27	10	2.674	1.259	98.1	1.4239	0.0000	SURCHARGED
15 minute summer	28	10	2.460	1.150	129.8	1.3010	0.0000	SURCHARGED
15 minute winter	29	9	2.308	1.068	135.4	1.2073	0.0000	SURCHARGED
15 minute winter	22	5	2.091	0.741	217.3	1.3091	0.0000	SURCHARGED
1440 minute winter	23	1410	2.021	0.751	12.1	357.9128	0.0000	SURCHARGED
1440 minute winter	24	1410	2.021	0.821	9.1	274.3342	0.0000	SURCHARGED
15 minute summer	30	9	2.098	0.978	261.9	1.7286	0.0000	SURCHARGED
180 minute winter	31	120	2.015	0.955	8.7	2.4304	0.0000	SURCHARGED
15 minute winter	1	12	2.913	0.713	22.5	0.4537	0.0000	SURCHARGED
15 minute winter	2	12	2.343	0.443	19.2	0.2816	0.0000	SURCHARGED
1440 minute winter	3	1410	1.997	0.327	1.2	0.2080	0.0000	SURCHARGED
1440 minute winter	4	1410	1.997	0.517	6.0	0.3288	0.0000	SURCHARGED
1440 minute winter	5	1410	1.997	0.567	5.8	0.6413	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	12	S3.000	13	1.8	0.147	0.128	0.6839	
15 minute winter	12	S9.000	35	-3.3	-0.255	-0.228	0.6964	
15 minute winter	13	S3.001	14	15.0	0.851	1.040	1.1311	
15 minute winter	14	S3.002	15	18.7	1.064	1.274	0.1405	
15 minute winter	15	S3.003	16	118.6	1.684	1.632	1.4686	
15 minute winter	16	S3.004	19	324.3	2.047	1.396	9.1577	
1440 minute winter	17	S4.000	19	-18.7	-0.331	-0.061	7.0352	
15 minute summer	18	S5.000	19	108.0	2.717	1.250	0.5360	
15 minute summer	19	S3.005	20	118.4	0.834	0.385	11.1710	
15 minute summer	20	S3.006	30	133.8	0.537	0.265	2.8582	
15 minute winter	25	S6.000	27	64.3	1.617	1.600	1.7741	
15 minute winter	26	S7.000	27	25.8	1.773	0.671	0.3360	
15 minute winter	27	S6.001	28	100.1	1.422	1.364	1.6787	
15 minute summer	28	S6.002	29	132.4	1.881	1.114	0.4310	
15 minute winter	29	S6.003	30	137.0	1.946	1.485	1.2215	
15 minute winter	22	S8.000	23	217.7	2.854	0.805	0.9154	
1440 minute winter	23	S8.001	24	2.2	0.277	0.014	4.1682	
1440 minute winter	24	S8.002	30	-9.1	-0.118	-0.049	3.8019	
15 minute summer	30	Hydro-Brake®	31	7.0				
180 minute winter	31	S3.008	32	-8.7	0.369	-0.015	26.6766	
15 minute winter	1	S1.000	2	19.2	1.090	1.327	0.7922	
15 minute winter	2	S1.001	3	19.2	1.090	1.317	0.5979	
1440 minute winter	3	S1.002	4	1.2	0.235	0.033	1.5201	
1440 minute winter	4	S1.003	5	5.8	0.677	0.078	0.7746	
1440 minute winter	5	S1.004	6	5.7	0.539	0.056	1.4046	

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Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	6	1410	1.997	0.737	5.7	100.6943	0.0000	SURCHARGED
1440 minute winter	7	1410	1.997	0.777	3.8	1.3729	0.0000	SURCHARGED
1440 minute winter	8	1410	1.997	0.837	8.1	1.1977	0.0000	SURCHARGED
1440 minute winter	9	1410	1.997	0.197	2.5	0.2228	0.0000	OK
1440 minute winter	10	1410	1.997	0.797	9.4	278.3897	0.0000	SURCHARGED
1440 minute winter	11	1410	1.997	0.897	7.7	2.2828	0.0000	SURCHARGED
180 minute winter	32	120	2.015	1.085	15.0	2.7612	0.0000	SURCHARGED
180 minute winter	33	120	2.013	1.153	13.1	2.9350	0.0000	SURCHARGED
180 minute winter	34	120	2.015	1.235	12.2	3.1420	0.0000	SURCHARGED
15 minute winter	35	11	3.099	0.529	13.4	0.3363	0.0000	SURCHARGED
15 minute winter	36	11	3.096	0.661	61.3	0.7474	0.0000	SURCHARGED
1440 minute winter	37	1380	2.809	0.834	12.8	1.4734	0.0000	SURCHARGED
1440 minute winter	38	1380	2.809	0.919	12.7	1.6236	0.0000	SURCHARGED
1440 minute winter	39	1380	2.809	1.919	19.8	514.1822	0.0000	SURCHARGED
1440 minute winter	40	1380	2.809	1.939	19.9	3.4259	0.0000	SURCHARGED
1440 minute winter	41	1380	2.809	2.009	7.3	3.5496	0.0000	SURCHARGED
15 minute winter	45	11	3.331	1.441	58.2	0.9162	0.0000	FLOOD RISK
15 minute winter	46	11	3.037	1.665	55.2	1.0591	0.0000	SURCHARGED
1440 minute winter	47	1380	2.809	1.619	4.3	1.8309	0.0000	SURCHARGED
1440 minute winter	48	1380	2.809	1.689	4.3	1.9101	0.0000	SURCHARGED
15 minute winter	43	9	3.050	1.580	98.8	1.7870	5.9554	FLOOD
30 minute winter	44	20	2.828	1.438	67.2	1.6259	0.0000	SURCHARGED
1440 minute winter	49	1380	2.809	2.029	10.0	5.1634	0.0000	SURCHARGED
180 minute winter	50	120	2.014	1.314	13.8	3.3440	0.0000	SURCHARGED
15 minute summer	Existing Outfall	1	0.640	0.000	9.8	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)
1440 minute winter	6	S1.005	7	2.2	0.281	0.007	4.8336	
1440 minute winter	7	S1.006	8	3.5	0.234	0.011	7.2684	
1440 minute winter	8	S1.007	11	7.7	0.139	0.024	7.6058	
1440 minute winter	9	S2.000	10	2.5	1.144	0.021	0.2659	
1440 minute winter	10	S2.001	11	-6.9	-0.080	-0.026	2.2941	
1440 minute winter	11	Hydro-Brake®	32	2.5				
180 minute winter	32	S1.009	33	11.2	0.501	0.019	13.3484	
180 minute winter	33	S1.010	34	11.8	0.521	0.021	17.5564	
180 minute winter	34	S1.011	50	8.0	0.235	0.014	16.8962	
15 minute winter	35	S9.001	36	14.0	0.792	0.912	0.1416	
15 minute winter	36	S9.002	37	57.3	1.440	1.433	1.5716	
1440 minute winter	37	S9.003	38	12.7	0.680	0.078	5.2785	
1440 minute winter	38	S9.004	40	12.6	1.666	0.009	0.6723	
1440 minute winter	39	S10.000	40	-19.8	-0.070	-0.066	2.9548	
1440 minute winter	40	S9.005	41	-7.2	0.143	-0.023	9.6469	
1440 minute winter	41	S9.006	49	-7.3	0.045	-0.023	2.6571	
15 minute winter	45	S12.000	46	55.2	1.389	0.674	0.8338	
15 minute winter	46	S12.001	47	55.0	1.383	1.373	1.2110	
1440 minute winter	47	S12.002	48	4.3	0.474	0.076	0.2331	
1440 minute winter	48	S12.003	49	4.3	0.375	0.050	0.7022	
15 minute winter	43	S11.000	44	67.9	1.709	1.490	0.4122	
30 minute winter	44	S11.001	49	66.4	1.671	0.851	1.0827	
1440 minute winter	49	Hydro-Brake®	50	3.1				
180 minute winter	50	Hydro-Brake®	Existing Outfall	9.8				220.3

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Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	12	11	3.620	0.620	18.9	0.7012	1.0956	FLOOD
15 minute winter	13	11	3.650	1.075	27.7	1.2158	0.5522	FLOOD
15 minute winter	14	10	3.616	1.466	32.1	0.9324	0.0000	FLOOD RISK
15 minute winter	15	10	3.674	1.729	153.1	1.9555	0.0000	FLOOD RISK
15 minute winter	16	10	3.231	1.526	424.3	2.6959	0.0000	SURCHARGED
720 minute winter	17	615	3.004	1.699	47.1	587.8531	0.0000	SURCHARGED
15 minute winter	18	10	3.542	1.542	149.3	1.7436	0.0000	FLOOD RISK
720 minute winter	19	615	3.004	1.749	54.1	3.0913	0.0000	SURCHARGED
720 minute winter	20	615	3.004	1.829	16.2	3.2319	0.0000	SURCHARGED
15 minute winter	25	9	3.492	1.734	87.3	1.9612	5.0658	FLOOD
15 minute winter	26	10	3.519	1.069	34.6	0.6799	0.4141	FLOOD
720 minute winter	27	615	3.004	1.589	11.9	1.7967	0.0000	SURCHARGED
720 minute winter	28	615	3.004	1.694	15.9	1.9162	0.0000	FLOOD RISK
720 minute winter	29	615	3.004	1.764	15.9	1.9954	0.0000	FLOOD RISK
960 minute winter	22	705	2.992	1.642	20.9	2.9014	177.5252	FLOOD
960 minute winter	23	705	2.995	1.725	99.0	383.2855	0.0000	FLOOD RISK
720 minute winter	24	615	2.998	1.798	112.8	402.3430	0.0000	SURCHARGED
720 minute winter	30	615	3.003	1.883	29.4	3.3279	0.0000	SURCHARGED
120 minute winter	31	82	3.202	2.142	19.9	5.4523	0.0000	FLOOD RISK
15 minute winter	1	10	3.376	1.176	30.1	0.7479	1.1659	FLOOD
1440 minute winter	2	900	2.986	1.086	1.6	0.6907	0.0000	SURCHARGED
1440 minute winter	3	900	2.983	1.313	1.6	0.8351	0.0000	FLOOD RISK
1440 minute winter	4	900	2.979	1.499	7.6	0.9531	0.0000	FLOOD RISK
960 minute winter	5	615	2.975	1.545	16.4	1.7474	103.4049	FLOOD

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 winter	12	S3.000	13	-8.9	-0.636	-0.615	1.1300	
15 minute winter	12	S9.000	35	-10.1	-0.724	-0.702	1.1507	
15 minute winter	13	S3.001	14	16.7	0.947	1.158	1.1311	
15 minute winter	14	S3.002	15	-27.5	-1.564	-1.873	0.1405	
15 minute winter	15	S3.003	16	148.6	2.110	2.044	1.4686	
15 minute winter	16	S3.004	19	424.4	2.679	1.827	9.1577	
720 minute winter	17	S4.000	19	-47.1	-0.462	-0.154	7.0352	
15 minute winter	18	S5.000	19	149.1	3.750	1.725	0.5360	
720 minute winter	19	S3.005	20	16.2	0.418	0.053	11.1710	
720 minute winter	20	S3.006	30	22.9	0.231	0.045	2.8582	
15 minute winter	25	S6.000	27	64.1	1.613	1.597	1.7741	
15 minute winter	26	S7.000	27	31.2	1.773	0.811	0.3360	
720 minute winter	27	S6.001	28	11.6	0.503	0.158	1.6787	
720 minute winter	28	S6.002	29	15.9	0.638	0.133	0.4310	
720 minute winter	29	S6.003	30	15.8	0.224	0.171	1.2215	
960 minute winter	22	S8.000	23	52.3	0.910	0.193	1.8063	
960 minute winter	23	S8.001	24	-46.7	-0.295	-0.282	4.1682	
720 minute winter	24	S8.002	30	-25.2	-0.286	-0.136	3.8019	
720 minute winter	30	Hydro-Brake®	31	6.4				
120 minute winter	31	S3.008	32	-19.9	0.360	-0.035	26.6766	
15 minute winter	1	S1.000	2	22.2	1.261	1.535	0.7922	
1440 minute winter	2	S1.001	3	1.6	0.548	0.110	0.5979	
1440 minute winter	3	S1.002	4	1.5	0.230	0.041	1.5201	
1440 minute winter	4	S1.003	5	7.4	0.673	0.099	0.7746	
960 minute winter	5	S1.004	6	10.3	0.545	0.100	1.4046	

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Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 88.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	6	900	2.980	1.720	13.9	117.1813	0.0000	FLOOD RISK
1440 minute winter	7	900	2.981	1.761	10.3	3.1115	0.0000	FLOOD RISK
1440 minute winter	8	900	2.983	1.823	10.1	2.6088	0.0000	SURCHARGED
1440 minute winter	9	900	2.981	1.181	3.3	1.3356	0.0000	SURCHARGED
1440 minute winter	10	900	2.981	1.781	14.1	288.5040	0.0000	SURCHARGED
1440 minute winter	11	900	2.981	1.881	10.9	4.7869	0.0000	SURCHARGED
120 minute winter	32	82	3.202	2.272	34.0	5.7825	0.0000	FLOOD RISK
120 minute winter	33	82	3.201	2.341	22.6	5.9576	0.0000	FLOOD RISK
120 minute winter	34	82	3.205	2.425	15.6	6.1710	0.0000	FLOOD RISK
15 minute winter	35	11	3.634	1.064	22.5	0.6767	0.3366	FLOOD
15 minute winter	36	11	3.649	1.214	82.1	1.3729	0.0000	FLOOD RISK
720 minute winter	37	675	3.051	1.076	28.2	1.9017	0.0000	SURCHARGED
720 minute winter	38	675	3.051	1.161	28.0	2.0518	0.0000	SURCHARGED
720 minute winter	39	675	3.051	2.161	47.4	694.2045	0.0000	SURCHARGED
720 minute winter	40	675	3.051	2.181	47.5	3.8542	0.0000	SURCHARGED
720 minute winter	41	675	3.051	2.251	19.7	3.9778	0.0000	SURCHARGED
15 minute winter	45	9	3.600	1.710	77.9	1.0876	2.6090	FLOOD
15 minute winter	46	11	3.266	1.894	64.9	1.2049	0.0000	FLOOD RISK
720 minute winter	47	675	3.051	1.861	9.9	2.1051	0.0000	SURCHARGED
720 minute winter	48	675	3.051	1.931	9.8	2.1842	0.0000	SURCHARGED
960 minute winter	43	795	3.050	1.580	9.5	1.7870	21.4245	FLOOD
720 minute winter	44	675	3.050	1.660	11.7	1.8779	0.0000	FLOOD RISK
720 minute winter	49	675	3.051	2.271	22.4	5.7801	0.0000	FLOOD RISK
120 minute winter	50	80	3.200	2.500	18.2	6.3625	0.6906	FLOOD
15 minute summer	Existing Outfall	1	0.640	0.000	9.8	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)
1440 minute winter	6	S1.005	7	-8.8	0.272	-0.027	4.8336	
1440 minute winter	7	S1.006	8	-8.4	0.220	-0.025	7.2684	
1440 minute winter	8	S1.007	11	9.9	0.139	0.031	7.6058	
1440 minute winter	9	S2.000	10	5.4	1.159	0.044	0.2760	
1440 minute winter	10	S2.001	11	-10.8	-0.068	-0.040	2.2941	
1440 minute winter	11	Hydro-Brake®	32	2.9				
120 minute winter	32	S1.009	33	-13.7	0.521	-0.023	13.3484	
120 minute winter	33	S1.010	34	14.9	0.547	0.027	17.5564	
120 minute winter	34	S1.011	50	10.9	0.208	0.019	16.8962	
15 minute winter	35	S9.001	36	18.5	1.050	1.208	0.1416	
15 minute winter	36	S9.002	37	72.1	1.813	1.804	1.5716	
720 minute winter	37	S9.003	38	28.0	0.772	0.173	5.2785	
720 minute winter	38	S9.004	40	27.9	2.000	0.019	0.6723	
720 minute winter	39	S10.000	40	-47.4	-0.168	-0.159	2.9548	
720 minute winter	40	S9.005	41	-19.6	0.169	-0.063	9.6469	
720 minute winter	41	S9.006	49	-19.7	-0.070	-0.063	2.6571	
15 minute winter	45	S12.000	46	64.9	1.631	0.791	0.8338	
15 minute winter	46	S12.001	47	59.3	1.492	1.481	1.2110	
720 minute winter	47	S12.002	48	9.8	0.580	0.172	0.2331	
720 minute winter	48	S12.003	49	9.7	0.449	0.113	0.7022	
960 minute winter	43	S11.000	44	9.4	0.632	0.207	0.4122	
720 minute winter	44	S11.001	49	11.7	0.293	0.149	1.0827	
720 minute winter	49	Hydro-Brake®	50	3.1				
120 minute winter	50	Hydro-Brake®	Existing Outfall	11.1				181.2

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