

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	30	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)	20.000	Minimum Backdrop Height (m)	0.000
Ratio-R	0.400	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)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S100	0.075	5.00		118.250	1200	442100.572	295733.584	1.525
S101	0.113	5.00		117.275	1200	442163.672	295743.132	1.465
S102	0.000			116.280	1200	442201.112	295753.750	1.500
S103	0.123	5.00		115.680	1200	442216.851	295763.486	1.500
S104	0.101	5.00		113.525	1200	442267.351	295803.800	1.500
S105	0.057	5.00	8.8	111.795	1350	442302.339	295842.624	1.650
S106	0.084	5.00		111.190	1350	442316.483	295853.072	1.680
S107	0.127	5.00		109.595	1350	442358.252	295876.365	1.680
S108	0.220	5.00		109.625	1200	442315.056	295987.432	2.075
S109	0.055	5.00		111.850	1200	442288.912	295905.629	1.500
S110	0.215	5.00		109.735	1200	442325.478	295934.819	1.500
S111	0.176	5.00		109.035	1350	442344.766	295950.216	1.870
S112	0.236	5.00		108.360	1800	442429.251	295933.043	1.780
S113	0.142	5.00		108.915	1800	442386.023	295898.534	2.415
HW8	0.000			108.600	1800	442398.876	295883.130	2.160
S114	0.139	5.00		116.360	1200	442198.588	295727.923	1.870
S115	0.081	5.00		116.180	1200	442207.145	295711.108	1.881
S116	0.108	5.00		116.270	1350	442229.847	295680.540	2.505
S117	0.141	5.00		113.870	1200	442300.491	295692.636	1.990
S118	0.126	5.00		112.920	1350	442323.796	295709.943	2.010
S119	0.187	5.00		113.040	1350	442304.473	295735.962	2.940
S120	0.077	5.00		110.880	1350	442350.216	295769.934	2.280
S121	0.000			110.590	1350	442367.678	295746.421	2.290
S122	0.060	5.00		110.455	1350	442379.692	295740.656	2.335
S123	0.046	5.00		110.265	1500	442392.290	295743.074	2.467
S124	0.155	5.00		117.745	1200	442197.318	295615.167	2.300
S125	0.182	5.00		115.970	1200	442249.468	295653.897	2.385
S126	0.149	5.00		114.710	1200	442280.224	295612.484	2.375
S127	0.025	5.00		114.335	1350	442290.767	295611.937	2.200
S128	0.124	5.00		112.980	1350	442323.593	295634.721	2.200
S129	0.085	5.00		111.085	1350	442374.816	295672.762	2.200
S130	0.073	5.00		110.560	1350	442394.145	295682.958	2.200
S131	0.039	5.00		109.620	1500	442432.125	295711.165	2.370
S132	0.096	5.00		109.530	1500	442433.669	295721.620	2.330
S133	0.101	5.00		109.895	1500	442408.691	295755.254	2.925
S134	0.000			109.130	1500	442441.211	295779.405	2.414
S135	0.109	5.00		109.000	1500	442444.865	295785.254	2.334
S136	0.000			108.890	1800	442443.503	295794.351	2.274
S137	0.079	5.00		108.665	1800	442423.008	295821.947	2.099
S138	0.186	5.00		111.935	1200	442304.876	295807.843	1.655
S139	0.097	5.00		111.330	1200	442325.160	295803.014	1.815

Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S140	0.088	5.00		111.170	1200	442334.429	295794.545	1.896
S141	0.034	5.00		111.005	1350	442344.756	295780.640	2.200
S142	0.097	5.00		109.730	1350	442380.293	295807.032	1.808
S143	0.105	5.00		108.645	1800	442415.828	295833.423	2.129
HW9	0.000	5.00		108.600	1800	442426.491	295841.341	2.160
HW10	0.000	5.00		108.000	1800	442432.059	295891.261	1.630
S144	0.000			108.000	2700	442435.778	295898.908	1.680
HW11	0.000			108.000	1200	442441.183	295901.293	1.730

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)
10.000	S100	S101	63.818	0.600	116.725	115.810	0.915	69.7	225	5.68	50.0
10.001	S101	S102	38.917	0.600	115.810	114.855	0.955	40.8	225	5.99	50.0
10.002	S102	S103	18.507	0.600	114.780	114.180	0.600	30.8	300	6.10	50.0
10.003	S103	S104	64.618	0.600	114.180	112.070	2.110	30.6	300	6.48	50.0
10.004	S104	S105	52.263	0.600	112.025	110.295	1.730	30.2	300	6.78	50.0
10.005	S105	S106	17.584	0.600	110.145	109.510	0.635	27.7	450	6.86	50.0
10.006	S106	S107	47.825	0.600	109.510	107.915	1.595	30.0	450	7.07	50.0
10.007	S107	S113	35.534	0.600	107.915	106.800	1.115	31.9	450	7.24	50.0
11.000	S108	S111	47.621	0.600	107.550	107.310	0.240	198.4	300	5.71	50.0
12.000	S109	S110	46.788	0.600	110.350	108.235	2.115	22.1	300	5.23	50.0
12.001	S110	S111	24.680	0.600	108.235	107.315	0.920	26.8	300	5.37	50.0
11.001	S111	S113	66.130	0.600	107.165	106.800	0.365	181.2	450	6.44	50.0
13.000	S112	S113	55.313	0.600	106.580	106.500	0.080	691.4	750	5.87	50.0
10.008	S113	HW8	20.062	0.600	106.500	106.440	0.060	334.4	750	7.46	50.0
14.000	S114	S115	18.867	0.600	114.490	114.299	0.191	98.8	300	5.20	50.0
14.001	S115	S116	38.076	0.600	114.299	113.915	0.384	99.2	300	5.60	50.0
14.002	S116	S119	92.955	0.600	113.765	110.100	3.665	25.4	450	5.98	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)
10.000	1.568	62.3	10.2	1.300	1.240	0.075	0.0
10.001	2.055	81.7	25.5	1.240	1.200	0.188	0.0
10.002	2.841	200.8	25.5	1.200	1.200	0.188	0.0
10.003	2.851	201.5	42.1	1.200	1.155	0.311	0.0
10.004	2.871	202.9	55.8	1.200	1.200	0.412	0.0
10.005	3.874	616.2	72.4	1.200	1.230	0.469	8.8
10.006	3.723	592.1	83.7	1.230	1.230	0.553	8.8
10.007	3.611	574.3	101.0	1.230	1.665	0.680	8.8
11.000	1.112	78.6	29.8	1.775	1.425	0.220	0.0
12.000	3.357	237.3	7.5	1.200	1.200	0.055	0.0
12.001	3.047	215.4	36.6	1.200	1.420	0.270	0.0
11.001	1.507	239.7	90.3	1.420	1.665	0.666	0.0
13.000	1.056	466.7	32.0	1.030	1.665	0.236	0.0
10.008	1.524	673.5	242.4	1.665	1.410	1.724	8.8
14.000	1.582	111.8	18.8	1.570	1.581	0.139	0.0
14.001	1.579	111.6	29.8	1.581	2.055	0.220	0.0
14.002	4.049	644.0	44.5	2.055	2.490	0.328	0.0

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)
15.000	S117	S118	29.029	0.600	111.880	111.135	0.745	39.0	225	5.23	50.0
15.001	S118	S119	32.409	0.600	110.910	110.100	0.810	40.0	450	5.40	50.0
14.003	S119	S120	56.978	0.600	110.100	108.600	1.500	38.0	450	6.27	50.0
14.004	S120	S121	29.288	0.600	108.600	108.300	0.300	97.6	450	6.51	50.0
14.005	S121	S122	13.326	0.600	108.300	108.120	0.180	74.0	450	6.60	50.0
14.006	S122	S123	12.828	0.600	108.120	107.948	0.172	74.6	450	6.69	50.0
14.007	S123	S133	20.429	0.600	107.798	107.120	0.678	30.1	600	6.77	50.0
16.000	S124	S125	64.959	0.600	115.445	113.585	1.860	34.9	300	5.41	50.0
16.001	S125	S126	51.585	0.600	113.585	112.335	1.250	41.3	300	5.76	50.0
16.002	S126	S127	10.557	0.600	112.335	112.285	0.050	211.1	300	5.92	50.0
16.003	S127	S128	39.958	0.600	112.135	110.780	1.355	29.5	450	6.10	50.0
16.004	S128	S129	63.804	0.600	110.780	108.885	1.895	33.7	450	6.40	50.0
16.005	S129	S130	21.853	0.600	108.885	108.360	0.525	41.6	450	6.51	50.0
16.006	S130	S131	47.309	0.600	108.360	107.400	0.960	49.3	450	6.79	50.0
16.007	S131	S132	10.568	0.600	107.250	107.200	0.050	211.4	600	6.89	50.0
16.008	S132	S133	41.894	0.600	107.200	107.120	0.080	523.7	600	7.55	50.0
14.008	S133	S134	40.507	0.600	106.970	106.716	0.254	159.5	750	7.86	50.0
14.009	S134	S135	6.897	0.600	106.716	106.666	0.050	137.9	750	7.91	50.0
14.010	S135	S136	9.198	0.600	106.666	106.616	0.050	184.0	750	7.98	50.0
14.011	S136	S137	34.374	0.600	106.616	106.566	0.050	687.5	750	8.52	50.0
14.012	S137	S143	13.537	0.600	106.566	106.516	0.050	270.7	750	8.65	50.0
17.000	S138	S139	20.851	0.600	110.280	109.590	0.690	30.2	225	5.15	50.0
17.001	S139	S140	12.555	0.600	109.515	109.274	0.241	52.1	300	5.24	50.0
17.002	S140	S141	17.320	0.600	109.274	108.955	0.319	54.3	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)
15.000	2.102	83.6	19.1	1.765	1.560	0.141	0.0
15.001	3.221	512.3	36.2	1.560	2.490	0.267	0.0
14.003	3.306	525.8	106.0	2.490	1.830	0.782	0.0
14.004	2.057	327.2	116.4	1.830	1.840	0.859	0.0
14.005	2.365	376.1	116.4	1.840	1.885	0.859	0.0
14.006	2.356	374.7	124.5	1.885	1.867	0.919	0.0
14.007	4.447	1257.2	130.8	1.867	2.175	0.965	0.0
16.000	2.669	188.7	21.0	2.000	2.085	0.155	0.0
16.001	2.454	173.5	45.7	2.085	2.075	0.337	0.0
16.002	1.078	76.2	65.9	2.075	1.750	0.486	0.0
16.003	3.754	597.1	69.3	1.750	1.750	0.511	0.0
16.004	3.513	558.6	86.1	1.750	1.750	0.635	0.0
16.005	3.158	502.2	97.6	1.750	1.750	0.720	0.0
16.006	2.901	461.4	107.5	1.750	1.770	0.793	0.0
16.007	1.671	472.4	112.8	1.770	1.730	0.832	0.0
16.008	1.057	298.8	125.8	1.730	2.175	0.928	0.0
14.008	2.213	977.7	270.2	2.175	1.664	1.994	0.0
14.009	2.381	1051.7	270.2	1.664	1.584	1.994	0.0
14.010	2.060	909.9	285.0	1.584	1.524	2.103	0.0
14.011	1.059	468.0	285.0	1.524	1.349	2.103	0.0
14.012	1.696	749.1	295.7	1.349	1.379	2.182	0.0
17.000	2.388	95.0	25.2	1.430	1.515	0.186	0.0
17.001	2.183	154.3	38.4	1.515	1.596	0.283	0.0
17.002	2.138	151.1	50.3	1.596	1.750	0.371	0.0

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)
17.003	S141	S142	44.265	0.600	108.805	107.922	0.883	50.1	450	5.63	50.0
17.004	S142	S143	44.263	0.600	107.922	106.816	1.106	40.0	450	5.86	50.0
14.013	S143	HW9	13.281	0.600	106.516	106.466	0.050	265.6	750	8.78	50.0
10.010	HW10	S144	8.503	0.600	106.370	106.320	0.050	170.1	900	5.06	50.0
10.011	S144	HW11	5.908	0.600	106.320	106.270	0.050	118.2	300	5.13	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)
17.003	2.876	457.5	54.9	1.750	1.358	0.405	0.0
17.004	3.221	512.2	68.0	1.358	1.379	0.502	0.0
14.013	1.712	756.3	378.0	1.379	1.384	2.789	0.0
10.010	2.399	1526.4	0.0	0.730	0.780	0.000	0.0
10.011	1.445	102.1	0.0	1.380	1.430	0.000	0.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
10.000	63.818	69.7	225	Circular	118.250	116.725	1.300	117.275	115.810	1.240
10.001	38.917	40.8	225	Circular	117.275	115.810	1.240	116.280	114.855	1.200
10.002	18.507	30.8	300	Circular	116.280	114.780	1.200	115.680	114.180	1.200
10.003	64.618	30.6	300	Circular	115.680	114.180	1.200	113.525	112.070	1.155
10.004	52.263	30.2	300	Circular	113.525	112.025	1.200	111.795	110.295	1.200
10.005	17.584	27.7	450	Circular	111.795	110.145	1.200	111.190	109.510	1.230
10.006	47.825	30.0	450	Circular	111.190	109.510	1.230	109.595	107.915	1.230
10.007	35.534	31.9	450	Circular	109.595	107.915	1.230	108.915	106.800	1.665
11.000	47.621	198.4	300	Circular	109.625	107.550	1.775	109.035	107.310	1.425
12.000	46.788	22.1	300	Circular	111.850	110.350	1.200	109.735	108.235	1.200
12.001	24.680	26.8	300	Circular	109.735	108.235	1.200	109.035	107.315	1.420
11.001	66.130	181.2	450	Circular	109.035	107.165	1.420	108.915	106.800	1.665
13.000	55.313	691.4	750	Circular	108.360	106.580	1.030	108.915	106.500	1.665
10.008	20.062	334.4	750	Circular	108.915	106.500	1.665	108.600	106.440	1.410
14.000	18.867	98.8	300	Circular	116.360	114.490	1.570	116.180	114.299	1.581

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
10.000	S100	1200	Manhole	Adoptable	S101	1200	Manhole	Adoptable
10.001	S101	1200	Manhole	Adoptable	S102	1200	Manhole	Adoptable
10.002	S102	1200	Manhole	Adoptable	S103	1200	Manhole	Adoptable
10.003	S103	1200	Manhole	Adoptable	S104	1200	Manhole	Adoptable
10.004	S104	1200	Manhole	Adoptable	S105	1350	Manhole	Adoptable
10.005	S105	1350	Manhole	Adoptable	S106	1350	Manhole	Adoptable
10.006	S106	1350	Manhole	Adoptable	S107	1350	Manhole	Adoptable
10.007	S107	1350	Manhole	Adoptable	S113	1800	Manhole	Adoptable
11.000	S108	1200	Manhole	Adoptable	S111	1350	Manhole	Adoptable
12.000	S109	1200	Manhole	Adoptable	S110	1200	Manhole	Adoptable
12.001	S110	1200	Manhole	Adoptable	S111	1350	Manhole	Adoptable
11.001	S111	1350	Manhole	Adoptable	S113	1800	Manhole	Adoptable
13.000	S112	1800	Manhole	Adoptable	S113	1800	Manhole	Adoptable
10.008	S113	1800	Manhole	Adoptable	HW8	1800	Manhole	Adoptable
14.000	S114	1200	Manhole	Adoptable	S115	1200	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
14.001	38.076	99.2	300	Circular	116.180	114.299	1.581	116.270	113.915	2.055
14.002	92.955	25.4	450	Circular	116.270	113.765	2.055	113.040	110.100	2.490
15.000	29.029	39.0	225	Circular	113.870	111.880	1.765	112.920	111.135	1.560
15.001	32.409	40.0	450	Circular	112.920	110.910	1.560	113.040	110.100	2.490
14.003	56.978	38.0	450	Circular	113.040	110.100	2.490	110.880	108.600	1.830
14.004	29.288	97.6	450	Circular	110.880	108.600	1.830	110.590	108.300	1.840
14.005	13.326	74.0	450	Circular	110.590	108.300	1.840	110.455	108.120	1.885
14.006	12.828	74.6	450	Circular	110.455	108.120	1.885	110.265	107.948	1.867
14.007	20.429	30.1	600	Circular	110.265	107.798	1.867	109.895	107.120	2.175
16.000	64.959	34.9	300	Circular	117.745	115.445	2.000	115.970	113.585	2.085
16.001	51.585	41.3	300	Circular	115.970	113.585	2.085	114.710	112.335	2.075
16.002	10.557	211.1	300	Circular	114.710	112.335	2.075	114.335	112.285	1.750
16.003	39.958	29.5	450	Circular	114.335	112.135	1.750	112.980	110.780	1.750
16.004	63.804	33.7	450	Circular	112.980	110.780	1.750	111.085	108.885	1.750
16.005	21.853	41.6	450	Circular	111.085	108.885	1.750	110.560	108.360	1.750
16.006	47.309	49.3	450	Circular	110.560	108.360	1.750	109.620	107.400	1.770
16.007	10.568	211.4	600	Circular	109.620	107.250	1.770	109.530	107.200	1.730
16.008	41.894	523.7	600	Circular	109.530	107.200	1.730	109.895	107.120	2.175
14.008	40.507	159.5	750	Circular	109.895	106.970	2.175	109.130	106.716	1.664
14.009	6.897	137.9	750	Circular	109.130	106.716	1.664	109.000	106.666	1.584
14.010	9.198	184.0	750	Circular	109.000	106.666	1.584	108.890	106.616	1.524
14.011	34.374	687.5	750	Circular	108.890	106.616	1.524	108.665	106.566	1.349
14.012	13.537	270.7	750	Circular	108.665	106.566	1.349	108.645	106.516	1.379
17.000	20.851	30.2	225	Circular	111.935	110.280	1.430	111.330	109.590	1.515
17.001	12.555	52.1	300	Circular	111.330	109.515	1.515	111.170	109.274	1.596

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
14.001	S115	1200	Manhole	Adoptable	S116	1350	Manhole	Adoptable
14.002	S116	1350	Manhole	Adoptable	S119	1350	Manhole	Adoptable
15.000	S117	1200	Manhole	Adoptable	S118	1350	Manhole	Adoptable
15.001	S118	1350	Manhole	Adoptable	S119	1350	Manhole	Adoptable
14.003	S119	1350	Manhole	Adoptable	S120	1350	Manhole	Adoptable
14.004	S120	1350	Manhole	Adoptable	S121	1350	Manhole	Adoptable
14.005	S121	1350	Manhole	Adoptable	S122	1350	Manhole	Adoptable
14.006	S122	1350	Manhole	Adoptable	S123	1500	Manhole	Adoptable
14.007	S123	1500	Manhole	Adoptable	S133	1500	Manhole	Adoptable
16.000	S124	1200	Manhole	Adoptable	S125	1200	Manhole	Adoptable
16.001	S125	1200	Manhole	Adoptable	S126	1200	Manhole	Adoptable
16.002	S126	1200	Manhole	Adoptable	S127	1350	Manhole	Adoptable
16.003	S127	1350	Manhole	Adoptable	S128	1350	Manhole	Adoptable
16.004	S128	1350	Manhole	Adoptable	S129	1350	Manhole	Adoptable
16.005	S129	1350	Manhole	Adoptable	S130	1350	Manhole	Adoptable
16.006	S130	1350	Manhole	Adoptable	S131	1500	Manhole	Adoptable
16.007	S131	1500	Manhole	Adoptable	S132	1500	Manhole	Adoptable
16.008	S132	1500	Manhole	Adoptable	S133	1500	Manhole	Adoptable
14.008	S133	1500	Manhole	Adoptable	S134	1500	Manhole	Adoptable
14.009	S134	1500	Manhole	Adoptable	S135	1500	Manhole	Adoptable
14.010	S135	1500	Manhole	Adoptable	S136	1800	Manhole	Adoptable
14.011	S136	1800	Manhole	Adoptable	S137	1800	Manhole	Adoptable
14.012	S137	1800	Manhole	Adoptable	S143	1800	Manhole	Adoptable
17.000	S138	1200	Manhole	Adoptable	S139	1200	Manhole	Adoptable
17.001	S139	1200	Manhole	Adoptable	S140	1200	Manhole	Adoptable

Pipeline Schedule

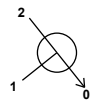
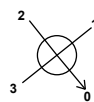
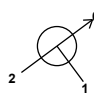
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
17.002	17.320	54.3	300	Circular	111.170	109.274	1.596	111.005	108.955	1.750
17.003	44.265	50.1	450	Circular	111.005	108.805	1.750	109.730	107.922	1.358
17.004	44.263	40.0	450	Circular	109.730	107.922	1.358	108.645	106.816	1.379
14.013	13.281	265.6	750	Circular	108.645	106.516	1.379	108.600	106.466	1.384
10.010	8.503	170.1	900	Circular	108.000	106.370	0.730	108.000	106.320	0.780
10.011	5.908	118.2	300	Circular	108.000	106.320	1.380	108.000	106.270	1.430

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
17.002	S140	1200	Manhole	Adoptable	S141	1350	Manhole	Adoptable
17.003	S141	1350	Manhole	Adoptable	S142	1350	Manhole	Adoptable
17.004	S142	1350	Manhole	Adoptable	S143	1800	Manhole	Adoptable
14.013	S143	1800	Manhole	Adoptable	HW9	1800	Manhole	Adoptable
10.010	HW10	1800	Manhole	Adoptable	S144	2700	Manhole	Adoptable
10.011	S144	2700	Manhole	Adoptable	HW11	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S100	442100.572	295733.584	118.250	1.525	1200		0	10.000	116.725	225
S101	442163.672	295743.132	117.275	1.465	1200		1	10.000	115.810	225
						0	10.001	115.810	225	
S102	442201.112	295753.750	116.280	1.500	1200		1	10.001	114.855	225
						0	10.002	114.780	300	
S103	442216.851	295763.486	115.680	1.500	1200		1	10.002	114.180	300
						0	10.003	114.180	300	
S104	442267.351	295803.800	113.525	1.500	1200		1	10.003	112.070	300
						0	10.004	112.025	300	
S105	442302.339	295842.624	111.795	1.650	1350		1	10.004	110.295	300
						0	10.005	110.145	450	
S106	442316.483	295853.072	111.190	1.680	1350		1	10.005	109.510	450
						0	10.006	109.510	450	
S107	442358.252	295876.365	109.595	1.680	1350		1	10.006	107.915	450
						0	10.007	107.915	450	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S108	442315.056	295987.432	109.625	2.075	1200	 0	11.000	107.550	300
S109	442288.912	295905.629	111.850	1.500	1200	 0	12.000	110.350	300
S110	442325.478	295934.819	109.735	1.500	1200	 1 0	12.000 12.001	108.235 108.235	300 300
S111	442344.766	295950.216	109.035	1.870	1350	 2 1 0	12.001 12.001 11.000	107.315 107.315 107.310	300 300 300
S112	442429.251	295933.043	108.360	1.780	1800	 0	11.001	107.165	450
S113	442386.023	295898.534	108.915	2.415	1800	 2 1 3 0	13.000 13.000 11.001 10.007 10.008	106.580 106.500 106.800 106.800 106.500	750 750 450 450 750
HW8	442398.876	295883.130	108.600	2.160	1800	 1	10.008	106.440	750
S114	442198.588	295727.923	116.360	1.870	1200	 0	14.000	114.490	300
S115	442207.145	295711.108	116.180	1.881	1200	 1 0	14.000 14.001	114.299 114.299	300 300
S116	442229.847	295680.540	116.270	2.505	1350	 1 0	14.001 14.002	113.915 113.765	300 450
S117	442300.491	295692.636	113.870	1.990	1200	 0	15.000	111.880	225
S118	442323.796	295709.943	112.920	2.010	1350	 0 1 0	15.000 15.001	111.135 110.910	225 450
S119	442304.473	295735.962	113.040	2.940	1350	 2 1 0	15.001 14.002 14.003	110.100 110.100 110.100	450 450 450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S120	442350.216	295769.934	110.880	2.280	1350	 1	14.003	108.600	450
						 0	14.004	108.600	450
S121	442367.678	295746.421	110.590	2.290	1350	 1	14.004	108.300	450
						 0	14.005	108.300	450
S122	442379.692	295740.656	110.455	2.335	1350	 1	14.005	108.120	450
						 0	14.006	108.120	450
S123	442392.290	295743.074	110.265	2.467	1500	 1	14.006	107.948	450
						 0	14.007	107.798	600
S124	442197.318	295615.167	117.745	2.300	1200	 0	16.000	115.445	300
S125	442249.468	295653.897	115.970	2.385	1200	 1	16.000	113.585	300
						 0	16.001	113.585	300
S126	442280.224	295612.484	114.710	2.375	1200	 1	16.001	112.335	300
						 0	16.002	112.335	300
S127	442290.767	295611.937	114.335	2.200	1350	 1	16.002	112.285	300
						 0	16.003	112.135	450
S128	442323.593	295634.721	112.980	2.200	1350	 1	16.003	110.780	450
						 0	16.004	110.780	450
S129	442374.816	295672.762	111.085	2.200	1350	 1	16.004	108.885	450
						 0	16.005	108.885	450
S130	442394.145	295682.958	110.560	2.200	1350	 1	16.005	108.360	450
						 0	16.006	108.360	450
S131	442432.125	295711.165	109.620	2.370	1500	 1	16.006	107.400	450
						 0	16.007	107.250	600
S132	442433.669	295721.620	109.530	2.330	1500	 0	16.007	107.200	600
						 1	16.008	107.200	600

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S133	442408.691	295755.254	109.895	2.925	1500		1	16.008	107.120	600
							2	14.007	107.120	600
							0	14.008	106.970	750
S134	442441.211	295779.405	109.130	2.414	1500		1	14.008	106.716	750
							0	14.009	106.716	750
S135	442444.865	295785.254	109.000	2.334	1500		1	14.009	106.666	750
							0	14.010	106.666	750
S136	442443.503	295794.351	108.890	2.274	1800		1	14.010	106.616	750
							0	14.011	106.616	750
S137	442423.008	295821.947	108.665	2.099	1800		1	14.011	106.566	750
							0	14.012	106.566	750
S138	442304.876	295807.843	111.935	1.655	1200		0	17.000	110.280	225
S139	442325.160	295803.014	111.330	1.815	1200		1	17.000	109.590	225
							0	17.001	109.515	300
S140	442334.429	295794.545	111.170	1.896	1200		1	17.001	109.274	300
							0	17.002	109.274	300
S141	442344.756	295780.640	111.005	2.200	1350		1	17.002	108.955	300
							0	17.003	108.805	450
S142	442380.293	295807.032	109.730	1.808	1350		1	17.003	107.922	450
							0	17.004	107.922	450
S143	442415.828	295833.423	108.645	2.129	1800		1	17.004	106.816	450
							2	14.012	106.516	750
							0	14.013	106.516	750
HW9	442426.491	295841.341	108.600	2.160	1800		1	14.013	106.466	750
HW10	442432.059	295891.261	108.000	1.630	1800		0	10.010	106.370	900

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S144	442435.778	295898.908	108.000	1.680	2700		1	10.010	106.320	900
							0	10.011	106.320	300
HW11	442441.183	295901.293	108.000	1.730	1200		1	10.011	106.270	300

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Detailed
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	20.000	Drain Down Time (mins)	240
Ratio-R	0.400	Additional Storage (m³/ha)	20.0
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
100	40	0	0

Node S144 Online Hydro-Brake® Control

Flap Valve	✓	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	106.320	Product Number	CTL-SHE-0245-3480-1550-3480
Design Depth (m)	1.550	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	34.8	Min Node Diameter (mm)	1800

Node HW10 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	35.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	106.370	Main Channel Slope (1:X)	500.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.250

Inlets

HW9 | HW8

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	1352.7	0.0	1.800	2517.5	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S100	10	116.787	0.061	10.6	0.1300	0.0000	OK
15 minute winter	S101	11	115.898	0.088	26.2	0.2364	0.0000	OK
15 minute winter	S102	11	114.852	0.072	25.6	0.0813	0.0000	OK
15 minute winter	S103	11	114.274	0.094	41.9	0.2607	0.0000	OK
15 minute winter	S104	11	112.134	0.109	55.4	0.2708	0.0000	OK
15 minute winter	S105	11	110.254	0.109	71.7	0.2310	0.0000	OK
15 minute winter	S106	11	109.622	0.112	82.8	0.2731	0.0000	OK
15 minute winter	S107	11	108.046	0.131	99.7	0.3868	0.0000	OK
15 minute winter	S108	11	107.681	0.131	31.0	0.4257	0.0000	OK
15 minute winter	S109	10	110.387	0.037	7.8	0.0686	0.0000	OK
15 minute winter	S110	10	108.323	0.088	37.9	0.3501	0.0000	OK
15 minute winter	S111	11	107.362	0.196	91.1	0.6510	0.0000	OK
15 minute winter	S112	12	106.862	0.282	33.3	1.4653	0.0000	OK
15 minute winter	S113	12	106.858	0.358	229.9	1.3336	0.0000	OK
15 minute winter	HW8	12	106.805	0.365	225.1	0.9289	0.0000	OK
15 minute winter	S114	10	114.577	0.087	19.6	0.2282	0.0000	OK
15 minute winter	S115	11	114.408	0.109	30.7	0.2174	0.0000	OK
15 minute winter	S116	11	113.844	0.079	44.8	0.1822	0.0000	OK
15 minute winter	S117	10	111.956	0.076	19.9	0.1941	0.0000	OK
15 minute winter	S118	10	110.991	0.081	37.3	0.2170	0.0000	OK
15 minute winter	S119	11	110.235	0.135	107.0	0.3655	0.0000	OK
15 minute winter	S120	11	108.798	0.198	116.6	0.4175	0.0000	OK
15 minute winter	S121	11	108.498	0.198	116.6	0.2834	0.0000	OK
15 minute winter	S122	11	108.323	0.203	124.0	0.3950	0.0000	OK
15 minute winter	S123	11	107.936	0.138	129.2	0.2958	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 winter	S100	10.000	S101	10.3	0.899	0.165	0.7399	
15 minute winter	S101	10.001	S102	25.6	1.802	0.313	0.5526	
15 minute winter	S102	10.002	S103	25.6	1.617	0.128	0.2944	
15 minute winter	S103	10.003	S104	42.0	2.256	0.208	1.2033	
15 minute winter	S104	10.004	S105	55.3	2.434	0.273	1.1882	
15 minute winter	S105	10.005	S106	71.7	2.376	0.116	0.5308	
15 minute winter	S106	10.006	S107	82.8	2.390	0.140	1.6582	
15 minute winter	S107	10.007	S113	99.2	2.674	0.173	1.3190	
15 minute winter	S108	11.000	S111	30.1	1.038	0.382	1.3786	
15 minute winter	S109	12.000	S110	7.7	0.728	0.032	0.5150	
15 minute winter	S110	12.001	S111	37.1	2.241	0.172	0.4085	
15 minute winter	S111	11.001	S113	90.8	1.405	0.379	4.2756	
15 minute winter	S112	13.000	S113	28.1	0.208	0.060	9.9263	
15 minute winter	S113	10.008	HW8	225.1	1.105	0.334	4.2156	
15 minute winter	HW8	Flow through pond	HW10	439.5	0.074	0.020	274.1260	
15 minute winter	S114	14.000	S115	19.3	0.969	0.173	0.3775	
15 minute winter	S115	14.001	S116	30.2	1.335	0.271	0.8615	
15 minute winter	S116	14.002	S119	44.8	1.550	0.070	2.7335	
15 minute winter	S117	15.000	S118	19.5	1.691	0.234	0.3352	
15 minute winter	S118	15.001	S119	37.0	1.292	0.072	0.9554	
15 minute winter	S119	14.003	S120	106.4	1.994	0.202	3.0550	
15 minute winter	S120	14.004	S121	116.6	1.736	0.356	1.9676	
15 minute winter	S121	14.005	S122	116.0	1.702	0.309	0.9100	
15 minute winter	S122	14.006	S123	123.1	1.958	0.329	0.8094	
15 minute winter	S123	14.007	S133	129.0	2.696	0.103	0.9832	

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S124	10	115.513	0.068	21.9	0.1684	0.0000	OK
15 minute winter	S125	11	113.690	0.104	47.2	0.2775	0.0000	OK
15 minute winter	S126	11	112.572	0.237	66.8	0.5655	0.0000	OK
15 minute winter	S127	11	112.238	0.103	69.7	0.1714	0.0000	OK
15 minute winter	S128	11	110.898	0.118	86.3	0.3012	0.0000	OK
15 minute winter	S129	11	109.026	0.141	97.3	0.3112	0.0000	OK
15 minute winter	S130	11	108.511	0.151	106.6	0.3164	0.0000	OK
15 minute winter	S131	12	107.502	0.252	110.3	0.5280	0.0000	OK
15 minute winter	S132	12	107.469	0.268	122.1	0.6957	0.0000	OK
15 minute winter	S133	12	107.257	0.287	261.0	0.7051	0.0000	OK
15 minute winter	S134	12	107.117	0.401	264.1	0.7081	0.0000	OK
15 minute winter	S135	13	107.087	0.421	271.5	1.1370	0.0000	OK
15 minute winter	S136	13	107.059	0.442	269.0	1.1261	0.0000	OK
15 minute winter	S137	13	106.997	0.431	271.9	1.4197	0.0000	OK
15 minute winter	S138	10	110.364	0.084	26.2	0.2833	0.0000	OK
15 minute winter	S139	10	109.626	0.111	39.5	0.2450	0.0000	OK
15 minute winter	S140	10	109.404	0.130	51.7	0.2678	0.0000	OK
15 minute winter	S141	10	108.912	0.107	55.8	0.1855	0.0000	OK
15 minute winter	S142	11	108.036	0.114	69.0	0.2859	0.0000	OK
15 minute winter	S143	13	106.958	0.442	337.5	1.5596	0.0000	OK
15 minute winter	HW9	13	106.891	0.451	335.6	1.1479	0.0000	OK
240 minute winter	HW10	196	106.752	0.382	85.9	0.9721	0.0000	OK
240 minute winter	S144	196	106.752	0.432	41.8	2.4721	0.0000	SURCHARGED
15 minute summer	HW11	1	106.270	0.000	32.7	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)
15 minute winter	S124	16.000	S125	21.5	1.288	0.114	1.0957	
15 minute winter	S125	16.001	S126	45.9	1.133	0.265	2.1022	
15 minute winter	S126	16.002	S127	66.4	1.204	0.871	0.5799	
15 minute winter	S127	16.003	S128	69.8	2.314	0.117	1.2062	
15 minute winter	S128	16.004	S129	86.1	2.286	0.154	2.4069	
15 minute winter	S129	16.005	S130	96.9	2.176	0.193	0.9739	
15 minute winter	S130	16.006	S131	105.1	2.339	0.228	2.1344	
15 minute winter	S131	16.007	S132	109.4	0.948	0.232	1.2377	
15 minute winter	S132	16.008	S133	122.2	1.124	0.409	4.5609	
15 minute winter	S133	14.008	S134	264.1	1.363	0.270	7.9825	
15 minute winter	S134	14.009	S135	259.5	1.068	0.247	1.6997	
15 minute winter	S135	14.010	S136	269.0	1.050	0.296	2.4128	
15 minute winter	S136	14.011	S137	265.5	1.010	0.567	9.1397	
15 minute winter	S137	14.012	S143	274.0	1.032	0.366	3.5955	
15 minute winter	S138	17.000	S139	25.8	1.984	0.272	0.2716	
15 minute winter	S139	17.001	S140	39.3	1.482	0.255	0.3330	
15 minute winter	S140	17.002	S141	51.0	1.851	0.337	0.4785	
15 minute winter	S141	17.003	S142	55.7	1.861	0.122	1.3290	
15 minute winter	S142	17.004	S143	69.4	2.250	0.135	1.4925	
15 minute winter	S143	14.013	HW9	335.6	1.301	0.444	3.5002	
15 minute winter	HW9	Flow through pond	HW10	439.5	0.074	0.020	274.1260	
240 minute winter	HW10	10.010	S144	41.8	0.351	0.027	2.3665	
240 minute winter	S144	Hydro-Brake®	HW11	34.7				811.8

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S100	10	116.824	0.099	25.9	0.2098	0.0000	OK
15 minute winter	S101	11	115.965	0.155	64.4	0.4148	0.0000	OK
15 minute winter	S102	11	114.898	0.118	62.9	0.1339	0.0000	OK
15 minute winter	S103	11	114.337	0.157	103.9	0.4345	0.0000	OK
15 minute winter	S104	11	112.214	0.189	136.9	0.4687	0.0000	OK
15 minute winter	S105	11	110.319	0.174	164.8	0.3694	0.0000	OK
15 minute winter	S106	11	109.690	0.180	192.4	0.4366	0.0000	OK
15 minute winter	S107	11	108.112	0.197	233.9	0.5802	0.0000	OK
15 minute winter	S108	11	107.791	0.241	76.1	0.7826	0.0000	OK
15 minute winter	S109	10	110.407	0.057	19.0	0.1058	0.0000	OK
15 minute winter	S110	10	108.374	0.139	93.2	0.5537	0.0000	OK
15 minute winter	S111	11	107.529	0.364	225.4	1.2054	0.0000	OK
360 minute winter	S112	352	107.221	0.640	11.2	3.3278	0.0000	OK
360 minute winter	S113	352	107.220	0.720	88.0	2.6807	0.0000	OK
360 minute winter	HW8	352	107.223	0.783	84.2	1.9924	0.0000	OK
15 minute winter	S114	10	114.641	0.151	48.1	0.3959	0.0000	OK
15 minute winter	S115	10	114.487	0.188	75.6	0.3744	0.0000	OK
15 minute winter	S116	11	113.889	0.124	110.7	0.2847	0.0000	OK
15 minute winter	S117	10	112.009	0.129	48.8	0.3289	0.0000	OK
15 minute winter	S118	10	111.037	0.127	91.6	0.3398	0.0000	OK
15 minute winter	S119	11	110.321	0.221	264.7	0.5962	0.0000	OK
15 minute winter	S120	11	108.988	0.388	287.3	0.8180	0.0000	OK
15 minute winter	S121	11	108.690	0.390	287.2	0.5576	0.0000	OK
15 minute winter	S122	11	108.497	0.377	305.7	0.7327	0.0000	OK
15 minute summer	S123	11	108.021	0.223	306.2	0.4774	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 winter	S100	10.000	S101	25.3	1.102	0.407	1.4618	
15 minute winter	S101	10.001	S102	62.9	2.222	0.770	1.1021	
15 minute winter	S102	10.002	S103	63.1	2.002	0.314	0.5836	
15 minute winter	S103	10.003	S104	104.0	2.855	0.516	2.3544	
15 minute winter	S104	10.004	S105	137.4	3.033	0.677	2.3679	
15 minute winter	S105	10.005	S106	165.0	2.855	0.268	1.0162	
15 minute winter	S106	10.006	S107	192.5	3.063	0.325	3.0073	
15 minute winter	S107	10.007	S113	235.2	2.909	0.410	3.6799	
15 minute winter	S108	11.000	S111	73.3	1.271	0.932	2.7533	
15 minute winter	S109	12.000	S110	18.8	0.953	0.079	0.9595	
15 minute winter	S110	12.001	S111	92.7	2.584	0.430	1.0358	
15 minute winter	S111	11.001	S113	223.2	1.669	0.931	9.1798	
360 minute winter	S112	13.000	S113	8.8	0.132	0.019	23.0913	
360 minute winter	S113	10.008	HW8	84.2	0.787	0.125	8.7728	
360 minute winter	HW8	Flow through pond	HW10	122.6	0.024	0.006	1316.7146	
15 minute winter	S114	14.000	S115	47.6	1.159	0.426	0.7737	
15 minute winter	S115	14.001	S116	74.1	1.661	0.664	1.6997	
15 minute winter	S116	14.002	S119	110.2	1.978	0.171	5.2408	
15 minute winter	S117	15.000	S118	48.0	2.116	0.575	0.6591	
15 minute winter	S118	15.001	S119	91.0	1.637	0.178	1.8296	
15 minute winter	S119	14.003	S120	262.2	2.352	0.499	6.3429	
15 minute winter	S120	14.004	S121	287.2	1.973	0.878	4.2650	
15 minute winter	S121	14.005	S122	286.2	1.992	0.761	1.9161	
15 minute winter	S122	14.006	S123	304.5	2.381	0.813	1.6310	
15 minute summer	S123	14.007	S133	302.9	2.694	0.241	3.6870	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S124	10	115.553	0.108	53.6	0.2672	0.0000	OK
15 minute winter	S125	11	113.772	0.187	115.9	0.4965	0.0000	OK
15 minute winter	S126	11	112.937	0.602	162.2	1.4358	0.0000	SURCHARGED
15 minute winter	S127	11	112.303	0.168	170.4	0.2783	0.0000	OK
15 minute winter	S128	11	110.969	0.189	211.1	0.4829	0.0000	OK
15 minute winter	S129	11	109.130	0.245	239.2	0.5398	0.0000	OK
15 minute winter	S130	11	108.610	0.250	263.3	0.5241	0.0000	OK
15 minute winter	S131	12	108.094	0.844	277.7	1.7698	0.0000	SURCHARGED
15 minute winter	S132	12	108.042	0.842	286.4	2.1811	0.0000	SURCHARGED
15 minute winter	S133	12	107.960	0.990	617.1	2.4335	0.0000	SURCHARGED
15 minute winter	S134	12	107.809	1.093	616.7	1.9311	0.0000	SURCHARGED
15 minute winter	S135	12	107.742	1.076	645.7	2.9056	0.0000	SURCHARGED
15 minute winter	S136	12	107.662	1.046	645.1	2.6631	0.0000	SURCHARGED
15 minute winter	S137	12	107.517	0.951	665.8	3.1349	0.0000	SURCHARGED
15 minute winter	S138	10	110.427	0.147	64.3	0.4951	0.0000	OK
15 minute winter	S139	10	109.722	0.207	97.1	0.4562	0.0000	OK
15 minute winter	S140	10	109.516	0.242	126.8	0.4983	0.0000	OK
15 minute winter	S141	10	108.979	0.174	136.9	0.3034	0.0000	OK
15 minute winter	S142	11	108.097	0.175	169.5	0.4389	0.0000	OK
15 minute winter	S143	12	107.420	0.904	845.4	3.1908	0.0000	SURCHARGED
15 minute winter	HW9	12	107.264	0.824	837.6	2.0981	0.0000	OK
360 minute winter	HW10	352	107.220	0.849	122.6	2.1619	0.0000	OK
360 minute winter	S144	352	107.219	0.899	35.6	5.1499	0.0000	SURCHARGED
15 minute summer	HW11	1	106.270	0.000	34.8	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)
15 minute winter	S124	16.000	S125	52.9	1.605	0.281	2.2186	
15 minute winter	S125	16.001	S126	112.6	1.745	0.649	3.0060	
15 minute winter	S126	16.002	S127	162.3	2.305	2.131	0.7359	
15 minute winter	S127	16.003	S128	170.7	2.924	0.286	2.3343	
15 minute winter	S128	16.004	S129	211.5	2.799	0.379	4.8231	
15 minute winter	S129	16.005	S130	239.5	2.682	0.477	1.9521	
15 minute winter	S130	16.006	S131	265.0	2.656	0.574	5.8428	
15 minute winter	S131	16.007	S132	258.8	1.136	0.548	2.9768	
15 minute winter	S132	16.008	S133	283.8	1.334	0.950	11.8006	
15 minute winter	S133	14.008	S134	616.7	1.481	0.631	17.8280	
15 minute winter	S134	14.009	S135	616.2	1.400	0.586	3.0355	
15 minute winter	S135	14.010	S136	645.1	1.466	0.709	4.0482	
15 minute winter	S136	14.011	S137	644.5	1.464	1.377	15.1287	
15 minute winter	S137	14.012	S143	664.0	1.509	0.886	5.9579	
15 minute winter	S138	17.000	S139	63.5	2.445	0.669	0.5413	
15 minute winter	S139	17.001	S140	96.4	1.703	0.625	0.7085	
15 minute winter	S140	17.002	S141	125.1	2.230	0.828	0.9723	
15 minute winter	S141	17.003	S142	136.6	2.410	0.299	2.5087	
15 minute winter	S142	17.004	S143	169.6	2.494	0.331	4.7704	
15 minute winter	S143	14.013	HW9	837.6	1.903	1.107	5.8452	
15 minute winter	HW9	Flow through pond	HW10	1202.9	0.112	0.055	661.5624	
360 minute winter	HW10	10.010	S144	35.6	0.326	0.023	5.3285	
360 minute winter	S144	Hydro-Brake®	HW11	34.8				1056.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S100	12	116.994	0.269	47.1	0.5680	0.0000	SURCHARGED
15 minute winter	S101	11	116.625	0.814	113.9	2.1779	0.0000	SURCHARGED
15 minute winter	S102	11	114.937	0.157	98.6	0.1776	0.0000	OK
15 minute winter	S103	11	114.396	0.216	171.2	0.5992	0.0000	OK
15 minute winter	S104	12	112.771	0.745	230.5	1.8473	0.0000	SURCHARGED
15 minute winter	S105	12	110.373	0.228	251.1	0.4831	0.0000	OK
15 minute summer	S106	10	109.738	0.228	299.7	0.5538	0.0000	OK
15 minute winter	S107	11	108.254	0.339	373.9	0.9979	0.0000	OK
15 minute winter	S108	11	109.306	1.756	138.3	5.7090	0.0000	SURCHARGED
15 minute winter	S109	10	110.427	0.077	34.6	0.1427	0.0000	OK
15 minute winter	S110	12	109.150	0.915	169.4	3.6564	0.0000	SURCHARGED
15 minute winter	S111	11	108.616	1.451	363.4	4.8080	0.0000	SURCHARGED
600 minute winter	S112	585	107.899	1.319	13.4	6.8530	0.0000	SURCHARGED
600 minute winter	S113	585	107.899	1.399	103.7	5.2050	0.0000	SURCHARGED
600 minute winter	HW8	585	107.901	1.461	102.2	3.7190	0.0000	OK
15 minute winter	S114	11	114.926	0.436	87.4	1.1402	0.0000	SURCHARGED
15 minute winter	S115	11	114.783	0.483	131.8	0.9631	0.0000	SURCHARGED
15 minute winter	S116	11	113.932	0.167	194.3	0.3830	0.0000	OK
15 minute winter	S117	11	112.213	0.333	88.6	0.8492	0.0000	SURCHARGED
15 minute winter	S118	13	111.530	0.619	157.7	1.6633	0.0000	SURCHARGED
15 minute winter	S119	13	111.483	1.383	463.6	3.7392	0.0000	SURCHARGED
15 minute winter	S120	13	110.645	2.045	407.9	4.3086	0.0000	FLOOD RISK
15 minute winter	S121	13	110.060	1.760	389.1	2.5185	0.0000	SURCHARGED
15 minute winter	S122	13	109.705	1.585	413.2	3.0827	0.0000	SURCHARGED
15 minute winter	S123	12	109.334	1.536	433.3	3.2873	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	S100	10.000	S101	42.9	1.185	0.688	2.5381	
15 minute winter	S101	10.001	S102	98.6	2.480	1.207	1.5473	
15 minute winter	S102	10.002	S103	98.4	2.324	0.490	0.8483	
15 minute winter	S103	10.003	S104	167.6	2.926	0.832	4.0317	
15 minute winter	S104	10.004	S105	214.3	3.143	1.056	3.6798	
15 minute winter	S105	10.005	S106	251.5	3.188	0.408	1.3961	
15 minute summer	S106	10.006	S107	302.2	3.333	0.510	4.7839	
15 minute winter	S107	10.007	S113	371.3	3.019	0.647	5.0918	
15 minute winter	S108	11.000	S111	122.9	1.746	1.564	3.3534	
15 minute winter	S109	12.000	S110	34.3	0.999	0.144	1.9783	
15 minute winter	S110	12.001	S111	146.4	2.565	0.680	1.7379	
15 minute winter	S111	11.001	S113	359.9	2.272	1.502	10.4779	
600 minute winter	S112	13.000	S113	12.5	0.123	0.027	24.3444	
600 minute winter	S113	10.008	HW8	102.2	0.774	0.152	8.8297	
600 minute winter	HW8	Flow through pond	HW10	142.9	0.024	0.007	2741.2200	
15 minute winter	S114	14.000	S115	82.4	1.249	0.737	1.3286	
15 minute winter	S115	14.001	S116	130.4	1.854	1.169	2.6166	
15 minute winter	S116	14.002	S119	194.6	2.069	0.302	9.8492	
15 minute winter	S117	15.000	S118	82.5	2.275	0.987	1.1545	
15 minute winter	S118	15.001	S119	158.0	1.798	0.308	5.1350	
15 minute winter	S119	14.003	S120	362.3	2.402	0.689	9.0278	
15 minute winter	S120	14.004	S121	389.1	2.456	1.189	4.6405	
15 minute winter	S121	14.005	S122	391.6	2.472	1.041	2.1114	
15 minute winter	S122	14.006	S123	416.7	2.630	1.112	2.0325	
15 minute winter	S123	14.007	S133	437.1	2.719	0.348	5.7544	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S124	11	115.618	0.173	97.4	0.4287	0.0000	OK
15 minute winter	S125	12	115.084	1.499	207.0	3.9820	0.0000	SURCHARGED
15 minute winter	S126	11	113.523	1.188	262.9	2.8337	0.0000	SURCHARGED
15 minute winter	S127	10	112.351	0.216	275.6	0.3589	0.0000	OK
15 minute winter	S128	13	111.267	0.487	349.6	1.2470	0.0000	SURCHARGED
15 minute winter	S129	12	110.656	1.771	376.0	3.9027	0.0000	SURCHARGED
15 minute winter	S130	12	110.292	1.932	376.4	4.0483	0.0000	FLOOD RISK
15 minute winter	S131	12	109.510	2.260	390.9	4.7361	0.0000	FLOOD RISK
15 minute winter	S132	12	109.427	2.227	435.3	5.7694	0.0000	FLOOD RISK
15 minute winter	S133	12	109.199	2.229	904.3	5.4782	0.0000	SURCHARGED
15 minute winter	S134	12	108.878	2.162	902.2	3.8208	0.0000	FLOOD RISK
15 minute winter	S135	12	108.736	2.070	953.1	5.5898	0.0000	FLOOD RISK
15 minute winter	S136	12	108.563	1.947	950.9	4.9544	0.0000	SURCHARGED
15 minute winter	S137	12	108.243	1.677	987.9	5.5286	0.0000	SURCHARGED
15 minute winter	S138	11	111.502	1.222	116.9	4.1299	0.0000	SURCHARGED
15 minute winter	S139	11	110.481	0.966	159.8	2.1253	0.0000	SURCHARGED
15 minute winter	S140	11	110.087	0.813	210.0	1.6731	0.0000	SURCHARGED
15 minute winter	S141	11	109.034	0.229	229.2	0.3988	0.0000	OK
15 minute winter	S142	12	108.315	0.393	286.8	0.9836	0.0000	OK
15 minute winter	S143	12	108.029	1.513	1297.1	5.3439	0.0000	SURCHARGED
600 minute winter	HW9	585	107.899	1.459	148.0	3.7130	0.0000	OK
600 minute winter	HW10	585	107.898	1.528	142.9	3.8879	0.0000	FLOOD RISK
600 minute winter	S144	585	107.898	1.578	35.7	9.0332	0.0000	FLOOD RISK
15 minute summer	HW11	1	106.270	0.000	34.8	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)
15 minute winter	S124	16.000	S125	92.6	1.649	0.491	3.6528	
15 minute winter	S125	16.001	S126	180.7	2.566	1.042	3.6326	
15 minute winter	S126	16.002	S127	260.8	3.705	3.424	0.7359	
15 minute winter	S127	16.003	S128	276.2	3.164	0.463	4.5138	
15 minute winter	S128	16.004	S129	324.7	2.924	0.581	10.1093	
15 minute winter	S129	16.005	S130	348.7	2.645	0.694	3.4625	
15 minute winter	S130	16.006	S131	373.1	2.618	0.809	7.4958	
15 minute winter	S131	16.007	S132	388.4	1.379	0.822	2.9768	
15 minute winter	S132	16.008	S133	432.1	1.534	1.446	11.8006	
15 minute winter	S133	14.008	S134	902.2	2.050	0.923	17.8280	
15 minute winter	S134	14.009	S135	904.8	2.056	0.860	3.0355	
15 minute winter	S135	14.010	S136	950.9	2.161	1.045	4.0482	
15 minute winter	S136	14.011	S137	950.5	2.160	2.031	15.1287	
15 minute winter	S137	14.012	S143	986.4	2.241	1.317	5.9579	
15 minute winter	S138	17.000	S139	103.4	2.600	1.089	0.8293	
15 minute winter	S139	17.001	S140	157.9	2.243	1.024	0.8841	
15 minute winter	S140	17.002	S141	209.1	2.969	1.383	1.2073	
15 minute winter	S141	17.003	S142	229.4	2.571	0.501	4.9590	
15 minute winter	S142	17.004	S143	267.6	2.543	0.522	6.7553	
15 minute winter	S143	14.013	HW9	1295.7	2.944	1.713	5.8452	
600 minute winter	HW9	Flow through pond	HW10	142.9	0.024	0.007	2741.2200	
600 minute winter	HW10	10.010	S144	35.7	0.320	0.023	5.3890	
600 minute winter	S144	Hydro-Brake®	HW11	35.1				1548.1